



**UWI**  
ST. AUGUSTINE  
CAMPUS

# CREATING VALUE

faculty  
report  
2019/2020



**ANNIVERSARY**  
1960-2020



**ABOUT THE COVER** As funding challenges deepen for higher education institutions across the world, we look at the impact of the St. Augustine Campus and the value it creates for the communities it serves.

# CREATING VALUE



A Publication of  
The Marketing & Communications Office  
The University of the West Indies,  
St. Augustine Campus

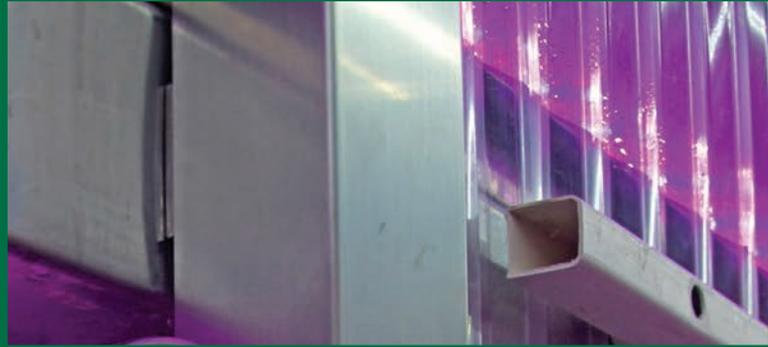
Website: <http://sta.uwi.edu>  
UWI Today: <http://sta.uwi.edu/uwitoday>



For information on how your business or organisation can tap into our wealth of research and expertise, visit <https://sta.uwi.edu/stacie/>

# Contents

- 2** Faculty of Engineering
- 8** Faculty of Food & Agriculture
- 14** Faculty of Humanities & Education
- 26** Faculty of Law
- 32** Faculty of Medical Sciences
- 42** Faculty of Science & Technology
- 52** Faculty of Social Sciences
- 56** Faculty of Sport



- 58** Centres & Units
- 58** ANSA McAl Psychological Research Centre
- 61** Centre for Health Economics (HEU)
- 64** Institute for Gender & Development Studies (IGDS)
- 70** Institute of International Relations (IIR)
- 75** Seismic Research Centre (SRC)
- 80** Sir Arthur Lewis Institute of Social & Economic Studies (SALISES)
- 82** Publications & Conferences (*Online only*)



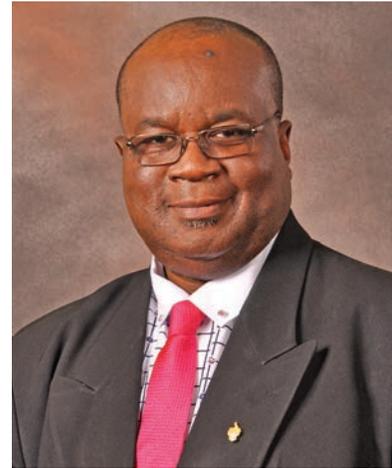
# Faculty of Engineering

## Dean's Summary

In the second semester, because of COVID-19, all courses and modules in the Faculty of Engineering were uploaded onto myLearning and taught remotely using the online platforms - Blackboard Collaborate (BBC)/ZOOM. Virtual labs, virtual field trips and virtual tours, remote access to data rooms, and software were provided to students to complete any outstanding labs, field trips, and project reports and ensure that all required learning outcomes were achieved.

The Faculty hosted the International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), which featured international participants and staff from all five departments of the Faculty. The Conference was conducted virtually using the Zoom platform over five days, from June 1 to 5, 2020. The IConETech-2020 Conference website was hosted on The UWI St. Augustine conference webpage: <http://conferences.sta.uwi.edu/iconetech2020/index.php>. A total of 150 papers were accepted and presented. The Conference was successfully completed and the proceedings published on the conference website. The Faculty extends thanks to Professor Boppana Chowdary and his team for their tremendous efforts in organising this conference.

Plans were advanced to transfer the Pre-Engineering Programme from the Open Campus to the Faculty of Engineering at St. Augustine. The programme's courses were revised and received approval from the Board of Undergraduate



**Professor Edwin Ekwue**  
Dean

**Faculty of Engineering had a total enrolment of 1,909 during the reporting period. This number included 1,118 undergraduate and 791 postgraduate students. At the end of the 2019/2020 academic year, 115 postgraduate and 269 undergraduate students graduated from the Faculty.**

Studies, Accreditation Council of Trinidad & Tobago, and GATE. The transfer aims at better promotion and monitoring of the programme.

Following an MoU signed between The UWI and National Energy of Guyana, the Department of Chemical Engineering conducted its self-financing MSc Petroleum Engineering programme at the University of Guyana for the first time. The Department acquired a sum of TT\$3 million for its world-class Rock Mechanics facilities for teaching, research, commercial services, and to become fully operational.

The Department of Civil & Environmental Engineering built on its initiatives, which resulted in the successful re-accreditation of its undergraduate and post-graduate programmes. The Department was successful in continuing to provide quality teaching and alternative assessments for students. A number of public statements, symposia, and outreach activities highlighted that The UWI is the repository of engineering knowledge and is relevant to the current needs of the society.

The Department of Electrical and Computer Engineering maintained collaborative arrangements with several regional and international institutions including the Caribbean Telecommunications Union, the International Telecommunications Union, the Latin American and Caribbean Collaborative Research Initiative, IBM, Nvidia Corporation, Huawei, T&TEC, the Institute of Electrical and Electronics Engineers, the University of Calgary (Canada), Trinity College Dublin (Ireland), and SUNY Oswego (US).

The Department of Geomatics Engineering and Land Management continued to distinguish itself locally, regionally, and in the wider international community, receiving honours and recognition from UWI and other tertiary academic institutions. Two staff members continued serving as Coordinating Lead Authors, expert reviewers, and review editors for Intergovernmental Panel on Climate Change (IPCC) publications.

The Department of Mechanical and Manufacturing Engineering coordinated a seminar on "3D Printing in the Caribbean Industry." The Industrial Engineering Team hosted the 12<sup>th</sup> public seminar on "Project Management Practices in the Caribbean."

## Enrolment & Graduation

Based on figures supplied by the Campus Office for Planning & Institutional Research (COPIR), the Faculty of Engineering had a total enrolment of 1,909 during the reporting period. This number included 1,118 undergraduate and 791 postgraduate students. At the end of the 2019/2020 academic year, 115 postgraduate and 269 undergraduate students graduated from the Faculty.

## Research

### *Department of Chemical Engineering*

Some major areas of focus within the Department were identified and researched.

### *Chemical Engineering Unit*

**Dr Sharad Maharaj's** area of focus included, but was not limited to, Mathematical modelling and optimisation of an ammonia synthesis

converter, and Performance evaluation of a purification system in a methanol plant, amongst other areas. **Dr David Janes'** research included Wastewater pH adjustment with carbon dioxide injection studies, and sustainable development of hydrocarbon processes. **Dr Jeffrey Smith** focused on PET recycling and Waste materials re-use; **Dr Dhurjati Chakrabarti** focused on areas such as, the Effect of solvent addition on bitumen-air bubble attachment and Regime indicator for multiphase reactor. **Dr Carmen Riverol** research focused on Desalination using liquid membrane, and Numerical simulation; while **Mrs Thérèse Lee Chan** focused on Process control and optimisation. **Dr Keenan Ward** research included Sargassum (seaweed) for the production of bioplastics and Environmental sustainability assessment with **Proman Limited** (Trinidad & Tobago).

### *Food Science and Technology Unit*

**Dr Saheeda Mujaffar's** research focus included, but was not limited to, Gelatin from alternate sources, and Drying studies involving cocoa, tomatoes, watermelon, avocado pulp, banana slices, saijan leaves and fruit carambola puree. **Professor Winston Mellows** focused on research involving Tamarind ice cream and Bread using okra seed flour.

### *Petroleum Studies Unit*

**Professor Raffie Hosein** focused on Heavy oil recovery and oil recovery from Trinidad Tar Sands by radio-frequency heating, and Carbon dioxide capture transmission for EOR and sequestration onshore and offshore Trinidad; **Dr Lorraine Sobers'** areas of research

# Faculty of Engineering

included Carbon dioxide enhances oil recovery, and Carbon dioxide emission reduction in Trinidad. Additional work within the Unit came from **Mr Hamid Hassanali** who researched the Determination of individual layer permeability and skin in multilayer reservoirs; **Professor of Practice, Mr Andrew Jupiter** focused on Gas hydrates; **Dr Ryan Ramsook** researched Field development of shallow reservoirs - (East Coast Trinidad). **Dr Oshaine Blake's** research focused on Thermal effects during CO<sub>2</sub> injection, and Elastic and seismic transport properties of shale from the Northern Basin of Trinidad. **Dr Anastasia Baboolal's** research included the areas of Mineralogy, and Organic Geochemistry and Petrology.

## *Department of Civil and Environmental Engineering*

The Department's areas of research included, **Dr Richard Clarke's** study on, Earthquake and Hurricane-Resistant High Energy Composite Housing System (Full-Scale Prototype); **Professor Indrajit Ray's** focus on Reducing Shrinkage Crack in Concrete Composites: An Experimental Investigation (Coinvestigator with Dr J. Smith); **Dr Trevor Townsend's** research on, A system of travel demand models that could analyse the impact of proposed changes or policy actions in the transportation system on the travel behaviour of Trinidadians, and **Dr Abraham Mwasha's** Manufacturing, Patenting and commercialisation of Multi-faced blocks RDI Fund Innovation Proof of Concept Grant - 5th. A number of staff also undertook commercial projects which included Danny's Enterprises Co. Ltd.: The University of

the West Indies, Highway Engineering Laboratory provides laboratory testing services to Danny's Enterprises Co. Ltd. The tests carried out are (a) Aggregate materials, (b) Asphalt Mix Design and, (c) Asphalt mix testing (**Dr Trevor Townsend and Dr Lee Leon**); Evaluation of the Cliff Failure at Bamboo Village, Cedros for the Coastal Protection Unit (CPU), Ministry of Works and Transport (**Dr Charmaine O'Brien-Delpesh and Dr K Park**); and Ministry of Energy and Energy Affairs, Trinidad & Tobago European Regional Development Fund- INTERREG Caraiibes, and the CARIB-COAST project – Caribbean network for coastal risks prevention related with climate change (**Dr Deborah Villarroel-Lamb**).

## *Department of Electrical and Computer Engineering*

During the 2019/2020 academic year, research was conducted in image processing, biomedical engineering applications, mobile applications for small scale fisheries, multi-processor systems, linear circuit applications, control systems, energy efficiency and renewable energy. Members of Academic Staff continued to publish in international refereed journals and present and publish in national, regional and international seminars, symposia and conferences. They also gave robust university, professional and public service in their respective areas of expertise.

## *Department of Geomatics Engineering and Land Management*

The Department's research areas included, Generating Lessons Learnt on Agriculture Land Banks in Grenada, Saint Lucia, and St. Vincent and the

Grenadines. Funded by Food and Agricultural Organisation (FAO) by **Dr Charise Griffith-Charles**; SUNRISE: Situated Understanding of Resilience in Island Societies and Environments by **Professor Michelle Mycoo**; Developing a Management Information System for the Environment Division, Ministry of Planning and Development, Government of Trinidad & Tobago, Funded by the Food and Agriculture Organisation, Trinidad & Tobago by **Dr Bheshem Ramlal**, and Autonomous Transmission Infrastructure Monitoring. The UWI-Trinidad & Tobago Research and Development Impact Fund. The potential impact of this project is the innovative monitoring and maintenance of transmission lines using drones that affects safety and continuity of power supplies by **Dr Michael Sutherland**.

## *Department of Mechanical and Manufacturing*

**Professor Boppa Chowdary's** research included, but was not limited to, Enhancement of Manufacturing Engineering Education in Trinidad & Tobago, and Application of PLA as an eco-friendly alternative to petroleum-based plastics in Trinidad & Tobago; **Professor Edwin Ekwue's** focus included Greenhouse technology and controlled environment agriculture, and the Effect of organic and other amendments on soil physical and engineering properties. **Professor Kit Fai Pun** focused on an "Investigating into Quality Management Practices of Industrial enterprises in Trinidad & Tobago," and expanding the online interface of *The West Indian Journal of Engineering* to foster engineering research and

publication in the Caribbean, while **Dr Jacqueline Bridge's** research included Mathematical modelling and analysis of wave energy conversion systems, and Shape Memory Alloys for vibration mitigation. Research also came from **Dr Chris Maharaj** who focused on Alternative use of waste materials (e.g. plastic and tyre waste), and Life assessment of components subjected to severe conditions. Other areas of research included, Biomass Gasification and PYROLYSIS using local biomass indigenous to produce SYNGAS/BIOGAS that can be used as a replacement for natural gas for downstream petrochemical industries (**Dr Anthony Adeyanju**); Flow induced vibration in Process Piping systems (CRP3.MAR17.3(2)) (**Dr Richard Bachoo**); Value stream mapping of indigenous industries (**Dr Cilla Pemberton**); and successfully completed the European Development Fund (EDF) funded project: Enhancing the Feasibility of the Local/Regional Chocolate Industry via the Development of Low-Cost Processing Equipment. Time period: 2016 - 2019. Project allocation: TT\$1.01 million. Other team members: Dr Cilla Pemberton and Dr Robert Birch. (**Dr Renique Murray**).

## Strategic Review

### Access

In seeking to provide a university for all, courses and modules in the Faculty of Engineering were uploaded on to myeLearning and taught remotely using the online platforms Blackboard Collaborate (BBC) and Zoom. Plans were advanced to transfer the existing Pre-engineering programme from the Open Campus; courses were revised and received approval from

the Board of Undergraduate Studies (BUS), the Accreditation Council of Trinidad & Tobago (ACTT) and the Government Assistance for Tertiary Expenses (GATE). A successful visibility campaign was completed by the Department of Geomatics Engineering and Land Management (DGELM) for four major programmes - BSc in Geomatics, BSc in Land Management, MSc in Geoinformatics, MSc in Urban and Regional Planning. The BSc Land Management and BSc Geomatics both received approval by BUS.

The Department of Chemical & Environmental Engineering (DCEE) organised short courses, software and technical training programmes and lab facilities, particularly the Rock Mechanics Facilities for providing a service to industry. This service gained \$10,000 income for the Department. Access was also provided to the public via a Department of Mechanical and Manufacturing Engineering (DMME) programme, *Performance-based Seismic Design* and a 5-day short course on Sustainable Integrated Solid Waste Management for the Caribbean by the Department of Civil and Environmental Engineering (DCEE).

The Food Science and Technology lab purchased a new Fourier Transform Infrared Spectroscopy (FTIR) and upgraded the Atomic Absorption (AA), GC-MS and High-Performance Liquid Chromatography (HPLC) in order to conduct teaching labs and analytical research.

With consideration of the limitations placed on students during the pandemic, the Faculty sought to

provide access to students via license codes to allow students to use applications (such as Matlab and ArcGIS) on their personal machines, as well as providing use of machines through the Deputy Principal's office. One hundred student licenses were provided by SolidWorks-used by the Department of Mechanical and Manufacturing Engineering.

The Faculty continued several innovative projects mainly through five of its staff who received grants approximating \$2.7 million from the Research, Development and Innovation (RDI) fund. Numerous major research projects were continued in the Faculty, especially in Chemical Engineering where the Research on Solvent Extraction, Heavy Oil Recovery by Radio Frequency Heating and Rock Mechanics continued. Funding for equipment was provided by the **Ministry of Energy and Energy Industries, bpTT** and the Faculty of Engineering.

### Alignment

The Department of Civil & Environmental Engineering (DCEE) organised a Symposium on the Role of The UWI in promoting Sustainable Integrated Solid Waste Management in the Caribbean, which was sponsored by the **United Nations Environment Programme** (UNEP) and local waste companies. The DCEE also delivered a presentation at ICE West Indies Local Association Event Report Flooding Symposium – A Panel Discussion on Flood Mitigation. The Department of Geomatics Engineering and Land Management (DGELM) initiated plans to engage Caribbean Island entities regarding geomatics training.

# Faculty of Engineering

Negotiations began with the **Surveying Department of the Government of Dominica** for GIS and GPS training. Some staff members were involved in high-level international research initiatives to change world behaviours, such as the Intergovernmental Panel on Climate Change Special Report on the Ocean and the Cryosphere.

The Department of Electrical & Computer Engineering (DECE), in collaboration with The UWI, **TSTT** and **Huawei** renovated and completed the refitting of the Block 11 to create the bMobile/UWI Innovation Laboratory powered by Huawei. The St. Augustine Campus e-Mobility hub continued to meet and plan its research agenda. The DECE continued its collaboration with the **International Telecommunications Union** (ITU) to develop regional-specific communication devices to assist local fisher folk. DECE researchers obtained RDI funding to develop a prototype device for a local electric utility.

The DCE increased and improved its academic/industry research partnerships including **National Gas Company, SHELL, Penn State University, University of Trinidad & Tobago, the Office of Disaster Preparedness & Management** (ODPM), the **University of Guadeloupe, Ministry of Energy and Energy Industries**, and **bpTT**. The primary research collaborative areas were corrosion, gas hydrates, carbon capture and storage, methanol production, waste minimisation, solvent extraction, membrane technology, heavy oil recovery and radio frequency heating and rock mechanics.

## Agility

In seeking to restore financial health to The UWI, the DCEE developed a number of short courses, software training programmes, lab and research facilities for use by its stakeholders. The DCEE initiated several projects with public and private sector clients to the tune of \$400,000.00 in areas focused on a new hurricane-resistant roof and three new types of earthquake and hurricane-resistant walls. The DCE received TT\$3 million from the **Ministry of Energy and Energy Industries** for the operations of the Petroleum Geoscience programme. It also obtained TT\$1 million from **bpTT** for the operations of the Petroleum Geoscience programme and the MSc Reservoir Engineering programme, including three scholarships for deserving students in the BSc Petroleum Geoscience Programme; US\$150,000.00 from **Methanol Holdings (Trinidad) Limited** (MHTL) to continue the Chair in Petroleum Engineering and TT\$0.9 million received from the **Ministry of Energy and Energy Industries** for 45 scholarships to students in the MSc Petroleum Studies Unit.

The DECE delivered its MSc Petroleum programme via a one-week face-to-face and twelve weeks online. There was blended learning for some Chemical and Process Engineering courses. The Department is fully capable of offering online courses and programmes, remote access to software training, virtual labs, and field trips.

## Distinguished Visitors

### Professor Chandra Bhat

Director  
US Centre on Data-Supported  
Transportation Operations and Planning  
University of Texas

### Ms Benita Bowen

Manager,  
CXC, Barbados

### Mrs Penelope Bradshaw-Niles

Permanent Secretary,  
Ministry of Energy and Energy Industries  
(MEEI), Trinidad & Tobago

### Ms Sandra Fraser

Deputy Permanent Secretary  
Ministry of Energy and Energy Industries  
(MEEI), Trinidad & Tobago

### Professor Aniruddha Mitra

Georgia Southern University

### Dr Dave Muir

Assistant Chief Examiner,  
CXC, Barbados

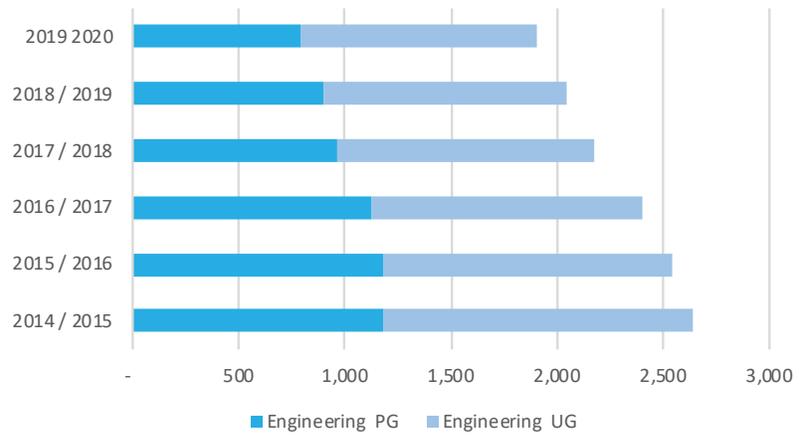
### Major General (Retired)

**Rodney Smart**  
Chief Executive Officer,  
Office of the Disaster Preparedness  
and Management

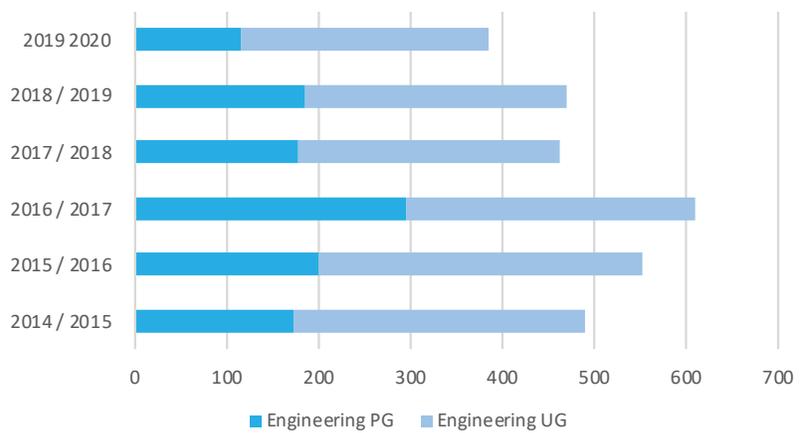
### Ms Rosemary Smith

Assistant Chief Examiner  
CXC, Barbados

## Enrolment Trends: Faculty of Engineering



## Graduation Trends: Faculty of Engineering



Source: Campus Office of Planning and Institutional Research (COPIR)

# Faculty of Food & Agriculture

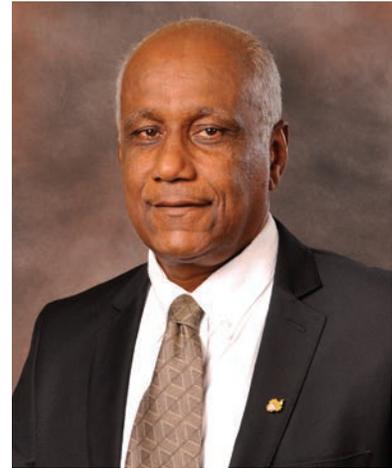
## Dean's Summary

In the thrust to facilitate greater access to UWI's programmes, the Faculty of Food and Agriculture (FFA) continued its outreach to schools across the country. One new MSc (Value Addition for Food and Nutrition Security) was rolled out.

Staff did very well in terms of research and publications. The report shows that 37 articles were published in respected peer-reviewed journals, 10 book chapters were published and a significant amount of abstracts for conferences. The FFA graduated four doctoral students in the period, which is good for a small faculty.

There were significant outreach efforts to promote the faculty's programmes. One particular activity, an Open Day for all secondary school students in south Trinidad, was held at the South Campus, Debe in February and over 200 students attended. As the COVID-19 pandemic unfolded, the FFA responded with international and regional webinars. Two very successful regional webinars were executed and drew attention to secure food and nutrition security in the Caribbean.

One professor was added to the faculty while three retired in the period. Staff successfully navigated all the challenges and responded positively to remote teaching and alternative assessments. The inability to fill vacant positions across departments negatively impacted programmes as Heads of departments had to hire lower level temporary/part-time staff to fill teaching voids.



**Professor Wayne Ganpat**  
Dean

**Faculty of Agriculture had a total enrolment of 853 during the reporting period. The figure was made up of 660 students pursuing undergraduate programmes and 193 postgraduate students. Two hundred and three students from the Faculty earned undergraduate degrees and certificates, while there were 39 postgraduate awards.**

For the first time, the 2020 Faculty awards ceremony was conducted virtually.

## Enrolment & Graduation

Based on figures supplied by the Campus Office for Planning & Institutional Research (COPIR), the Faculty of Agriculture had a total enrolment of 853 during the reporting period. The figure was made up of 660 students pursuing undergraduate programmes and 193 postgraduate students. Two hundred and three students from the Faculty earned undergraduate degrees and certificates, while there were 39 postgraduate awards.

## Outstanding Students

### *Department of Food Production*

The Department awarded several prizes to outstanding students during the 2019/2020 academic year. **Mr Grafton Dick** was awarded the Professor Richard A.I. Brathwaite Prize Awarded for the best performance in the BSc General Agriculture Year III and the Principal's Prize for the best performance in BSc Agriculture Special over Year I to III.

Several special prizes were also awarded. These included The Agricultural Development Bank (ADB) Prize (Awarded for the best Livestock Project), the Norman Girvan Award for Excellence: (Awarded to the academically excellent student with the best final year undergraduate project in the Department of Food Production), and the Professor Gary Wayne Garcia Livestock Prize (Awarded to the best graduating student in Livestock Science): to **Ms Elisha Leon**; the Norman Girvan Award for

Excellence and the Professor Lawrence Wilson Prize (Awarded for the best undergraduate final year project in Post Production Technology) to **Ms Sridevi Roopnarine**. The T.P. Lecky Award (CARDI Sponsored) Challenge Trophy Awarded for the best performance in all the degrees in School of Agriculture over Years I to III was awarded to **Mr Ajay Rameshwarsingh** and the Currie Memorial Prize (Awarded to the student who excelled in extracurricular activities, subject to satisfactory academic performance) to **Ms Rachael Bally**.

### *Postgraduate*

The Faculty awarded four PhDs - two in Livestock Science, one in Geography, and one in Human Ecology. Four MPhils were also awarded – two in Soil Science and two in Geography. There were 21 MSc degrees, including one in Tropical Crop Protection, eight in Agri-Food Safety and Quality Assurance, and three in Marketing and Agribusiness.

The MSc Degrees awarded in the area of Tropical Animal Science and Production went to **Ms Kavita Lall** (Distinction), **Ms Khyla Nunes** (Distinction), **Ms Shelly Ann Mohammed** (Distinction), **Mr Wendell Chad Rackal** (Distinction), **Ms Angelisah Khan**, **Mr Simelus Dieubon**, **Mr Janardhan Samsundar**, **Mr Dexter Bristol**, and **Mr Hamza Ali**.

The MSc in Tropical Crop Protection was awarded to **Ms Sherry Ann Brown** (Distinction), and the MSc Agri-Food Safety and Quality Assurance was awarded to **Ms Deneil Rivas** (Distinction), **Mr Dwayne Harris** (Distinction), **Mr Shane Sankar** (Distinction), **Mr Vishal Ganessingh** (Distinction), **Ms Natalie Baird-**

**Humphrey**, **Ms Kaavita Singh**, **Mr Chanderdatt Thakoordeen**, and **Mr Sunil Ramnarine**. The Postgraduate Diploma in Agri-Food Safety and Quality Assurance was awarded to **Ms Shelly-Ann Charles**, **Ms Veronica Maharaj**, and **Mr Jesse Nanan**. The MPhil Soil Science was awarded to **Mr De shorn Bramble** (High Commendation), and **Mr Micah Martin**. While the PhD in Livestock Science was awarded to **Dr Laura Tardieu**, and **Dr Melissa Williams**.

## Outstanding Students

### *Department of Food Production*

The Department awarded several prizes to outstanding students during the 2019/2020 academic year. The Ministry of Agriculture, Land and Fisheries Prize (Awarded for the best performing student in the mandatory research project of the MSc Agri-Food Safety and Quality Assurance) to **Mr Shane Sankar** and the Ministry of Agriculture, Land and Fisheries Prize (Awarded for the best performing student in the core courses of the Diploma/MSc Agri-Food Safety and Quality Assurance) to **Mr Vishal Ganessingh**. The Muriel Turnbull Prize (Awarded for the best oral presentation in the MSc Agri-Food Safety and Quality Assurance Research Project) to **Ms Deneil Rivas**.

### *Department of Agricultural Economics and Extension*

Several special prizes were awarded to outstanding students in the Department. The Head of Department Prize was awarded to **Samantha Daniel** (Best Performance in Agribusiness Management); **Reyanna Boodoo** (Best Performance in Human Ecology); **Alexia Lemo** (Best Performance in

# Faculty of Food & Agriculture

Human Nutrition and Dietetics); **Angel Harrypersad** (Best Performance in Agribusiness Management); **Adrianna Alexander** (Best Performance in Human Ecology); and **Kameela Hosein** (Best Performance in Human Nutrition and Dietetics).

Special prizes were also awarded to students during the period under review. These included the Dr Sunney D. Alexis & Collette Lewis-James Memorial Prize (Awarded for the Best Performance in Human Nutrition and Dietetics), and The Human Nutrition and Dietetics Prize (Awarded for the Best Final Year Project demonstrating excellence in Human Nutrition and Dietetics) to **Crussie Moise**; The Head of Department Prize (Evening University) (Awarded for the Best Performance in Human Nutrition and Dietetics) to **Luann Diaz**; The IICA Prize (Awarded for the Best Final Year Project demonstrating excellence in Agribusiness) to **Shaquana Osorio**; The Nutritional Sciences Prize (Awarded for Best Performance for the Major in Nutritional Sciences) to **Richard Ali**; The Entrepreneurship Prize (Awarded for Best Performance for the Major in Entrepreneurship over Years II and III) to **Camilla Edwards**; and The Alumni Association Prize (Awarded for the Best Performance in BSc Human Ecology) to **Rona-Mayer Deonanan**.

## Research

Several staff engaged in research during the 2019/2020 academic year. **Dr Wendy-Ann Isaac** designed several innovative non-traditional Grow-systems for household use as well as an indoor Plant Factory laboratory, both with the potential for scalability to

commercial production systems, and for pesticide-free vegetable production. Both systems can be useful for the promotion of hydroponics and other smart agricultural practices.

**Dr Ronald Roopnarine** and **Dr Gaius Eudoxie's** research both involved evaluating the risk of floods and the threat of landslides in the Dominican Republic. **Dr Oral Daley** completed the infrastructural renovation of the E.J. Duncan Tissue Culture Lab and is currently acquiring equipment, reagents, and staff to operationalise the facility, which will contribute to improving the quality of teaching in plant propagation and support outreach and research.

**Dr Anisa Bourne-Ramcharitar's** Take 10! Programme (a classroom-based physical activity programme developed by the ILSI Research Foundation to help reduce childhood obesity) has been implemented in schools around the world. This programme has the potential to increase physical activity and impact healthy dietary habits in children, while simultaneously advancing learning, creating knowledge, and fostering innovation for the positive transformation of the Caribbean and the wider world.

**Dr Isabella Granderson's** "Individual Food Consumption Survey and Analysis in St. Kitts & Nevis, and St. Vincent & the Grenadines" will support the implementation of individual 24-hour recalls in St Kitts & Nevis. This survey has the potential to impact the analysis of current food consumption patterns and would be useful in informing government policy to improve food and nutrition security.

**Dr Sharon Hutchinson's** support for the "Value Chain Analysis and Action Plan Development for the Seabob Industrial Fishery Value Chain in Guyana" has the potential impact of Identifying gaps and recommendations to strengthen and support growth in the Seabob Value Chain in Guyana.

## Strategic Review

### Access

#### *Business Development Unit*

The Business Development Unit (BDU) signed an MOU with the Open Campus to offer asynchronous delivery of the certificate programmes in Agriculture and Human Ecology. In addition, the BDU offered online professional development courses across the region and is finalising the extension of training, funded by the **World Bank**, for **Dominica**.

#### *University Field Station*

The Field Station partnered with the School of Clinical Surgical Sciences to provide bovine and porcine samples for surgical skills training. They also partnered with the School of Veterinary Medicine to provide reproductive samples for teaching and research. The Station increased access by facilitating eight weeks Farm Attachment and Large Animal Externship for School of Veterinary Medicine Students, as well as created a Quail Unit which primary focus is to educate student entrepreneurs and members of the public on the viability of quail meat and egg production as an alternative to poultry farming.

### Department of Geography

The Department created both a repository of all course outlines and a spreadsheet to record revisions and approvals made to courses. A repository was also built for final exam past papers to ensure that final questions are sufficiently modified every year.

Another initiative to improve the quality of teaching within the Department included collaboration with other departments to produce electives for students. This resulted in one course encompassing Earth Science and Oceanography and Hydrogeology, which will potentially be added to the course offerings for the academic year 2021-2022. A number of courses were revised and developed in the period under review. A Minor in Physical and Human Geography was developed and is currently awaiting approval. The ENRM programme was revised to more closely align with Geography and international environmental science courses. The Department continues to regularly publish peer reviewed articles and seek external and internal grant funding through UWI. Four peer reviewed publications were published, including two from undergraduate student projects.

### Department Food Production

During the 2019/2020 period, the Department made on-site visits to 20 Secondary Schools in Trinidad that culminated in a one-day boot camp at the Debe Campus in February 2020. During the reporting period, the E.J. Duncan Tissue Culture Lab was renovated. Currently equipment, reagents, and staff are being

acquired to bring the facility to full operationalisation. The Department also collaborated with **Caribbean WaterNet, CapNet** and the **UNDP** to deliver capacity building workshops on Disaster Risk Management to several Caribbean countries.

A number of grants were obtained; these include the CRP grant (TT\$68,416.03) for the project, *Genetic Diversity, Identification of Elite Germplasm, and Development of In-vitro Mass Propagation Systems for Root Crops in the Caribbean*; a CRP grant (TT\$45,000.00) to investigate *Spatial Variability and analysis of soil and crop yield to delineate management zones using drone technology*; an RDI grant (TT\$885,000.00) for the *development of biopesticides and innovative biomolecules for an environment friendly plant health management*; and an RDI grant (TT\$550,000.00) for research into *Circular Farming: Innovative and Resilient Food Production System for a Changing Climate*.

### Department of Agricultural Economics and Extension

The Department undertook curriculum review for a number of courses including the BSc Agribusiness Management and BSc Human Ecology. Regional accreditation standards were established for the BSc Human Nutrition and Dietetics programme and developed proposals for a PG Diploma in Agricultural Extension and Community Development for Climate Change and Certificate in Food service Supervisor Training.

### Alignment

#### Business Development Unit

During the 2019/2020 period the BDO contributed to a number of webinars which included two food security webinars in collaboration with the **Food & Agriculture Organisation** and **UNDP** for World Food Day. The Unit also finalised a Letter of Agreement with **WASA** for the evaluation of wastewater biosolids processing. An MOU with **IAMovement** was signed to facilitate evaluating the potential of Vetiver grass under different conditions.

#### University Field Station

The Field Station collaborated with several organisations during this period. They hosted the Eat Local Day 2019 with the **National 4-H Leaders Council**, in which more than 300 children and local entrepreneurs in agriculture participated. The Field Station hosted groups of regional and extra-regional students for **COSTAATT** in dairy operations as well as facilitated Public Health Inspectors' training in dairy and pasteurisation operations and slaughtering/meat processing. The Field Station also partnered with the **Artificial Breeding Center (ABC)** to facilitate exchange of breeding bulls between ABC and The UWI. Technical assistance was also provided to local charities for the development and expansion of their agriculture initiatives and acquired new livestock for expansion of livestock herds for teaching and research.

# Faculty of Food & Agriculture

## *Department of Geography*

A partnership with the department of Geography, the **Office of Disaster Preparedness and Management** (ODPM), the **Caribbean Disaster Emergency Management Agency** (CDEMA), and the **Open Street** map organisation led by **Dr Gabrielle Thongs** sought to map disaster related critical facilities in the Caribbean region. The Department Passport was revised in Semester II, 2020 to provide better guidelines for students which would encourage greater student volunteerism. However, with the COVID-19 pandemic, the revised passport programme was not distributed and cancelled for the 2020/2021 academic year due to the social distancing protocols. The Department collaborated with the Department of Geomatics Engineering and Land Management in the City Labs programme and received three computers as part of this EU funded programme, which aims to encourage problem-based learning.

## *Department Food Production*

The Department partnered with **National Flour Mills** to evaluate the nutritional impact of a yeast culture as a potential additive for ruminant feeds and hosted the Adopt a River Programme Conference: **Connecting the Dots, Mentoring towards Sustainability** in March 2020. The Department also hosted several different webinars during the period under review, including the 'Impact of COVID-19 on Food Availability' at the FFA webinar and a presentation on Alternatives to HHPs in Vegetable Disease Management' and the Integrated Crop Management and Pesticide Webinar.

## *Department of Agricultural Economics and Extension*

The Department was awarded an **FAO** funded project, **Individual Food Consumption Survey and Analysis in St Kitts & Nevis, and St Vincent & the Grenadines**, and took on two research projects, **Support for Value Chain Analysis and Action Plan Development for the Seabob Industrial Fishery Value Chain in Guyana**, and **The Farmer2Farmer** project.

## *Agility Business Development Unit*

The BDU initiated commercial testing services during the 2019/2020 period. They also initiated the 'Grow Your Garden' campaign to support internal stakeholders in the area of food and nutrition.

## *University Field Station*

The Field Station continued to provide technical support and breeding stock to students as well as organically grown meat and quail eggs to the public. Major upgrades were done to the UFS abattoir (in collaboration with the Veterinary Public Health Unit) and to the Goat unit in order to transform it into a dual-purpose unit geared towards meat and milk production. An RFID tagging system was implemented for maintaining livestock records.

## *Department of Geography*

The Department is in the process of converting all courses to a blended format, which will aid in the digital transformation of the campus. **Dr Thongs** completed the Professional Development course in Online Instruction and Technology Quest, designed to improve online teaching along with the development and delivery of online courses.

## *Department Food Production*

The Department distributed Survival Seed kits to more than 300 households, reviewed the operation of the Crops Greenhouse, and reduced the overtime work hours at the facility.

## *Department of Agricultural Economics and Extension*

The Department received stakeholder engagement towards productive and mutually beneficial research-oriented collaborations between disciplines within DAEE, students, external departments, and faculties of UWI and international research institutions.

## Distinguished Visitors

### Senator the Honourable

#### Clarence Rambharat

Minister of Agriculture, Land and Fisheries  
Trinidad & Tobago

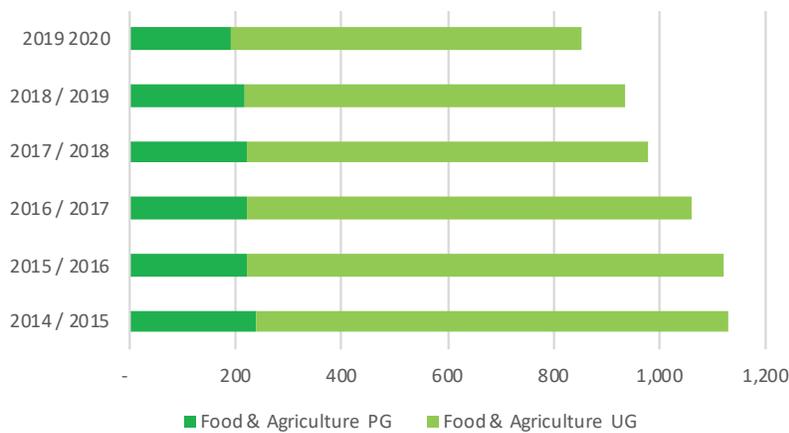
#### Mr Isaac Anthony,

CEO CCRIF, SPC  
(Represented by Mrs Gina Philips)

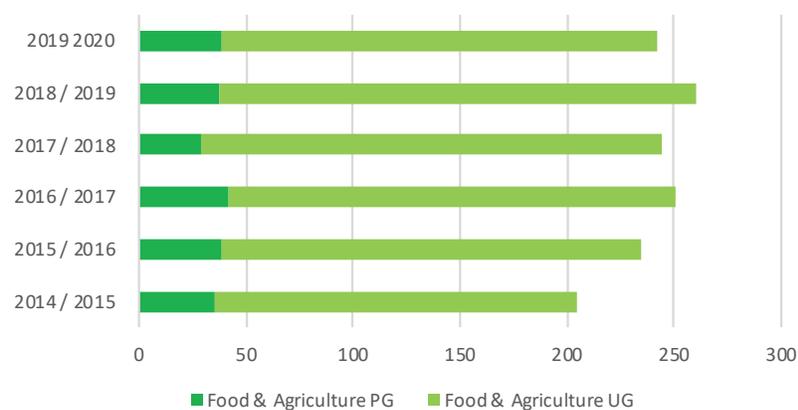
#### Dr Julia Kotzebue

Assistant Professor of Sustainable and  
Integrated Spatial Development Department  
of Economic and Social Geography  
University of Hamburg, Germany

### Enrolment Trends: Faculty of Food & Agriculture



### Graduation Trends: Faculty of Food & Agriculture



Source: Campus Office of Planning and Institutional Research (COPIR)

# Faculty of Humanities & Education

## Dean's Summary

**T**he academic year 2019/2020 was a watershed year which caused the Faculty to change the way in which most of its operations functioned. Despite the COVID-19 global pandemic, the Faculty had several significant accomplishments and put targeted strategic systems in place which resulted in more efficient processes. FHE was able to successfully conduct activities online. It moved swiftly to online modes of teaching with few challenges and restored most operations. The Faculty continued its focus on operationalising The UWI's Triple-A Strategic Plan and the strategic themes of Access, Alignment, and Agility.

At the start of the academic year, initial emphasis was placed on the identification of innovative and entrepreneurial projects while continuing the development of outreach activities directly aligned to the needs of the society. With the advent of the pandemic, focus turned mainly to areas with a demand from students and external stakeholders; areas which are connected to national economic, social, and development needs, and areas where FHE can facilitate social innovation.

We believe that we have a responsibility to lead social transformation in our society.



**Dr Heather Cateau**  
Dean

**2,119 students enrolled at the Faculty in 2019/2020 – 1,221 undergraduates and 898 postgraduates. The FHE was one of just two Faculties that saw its postgraduate enrolment increase over the period, by 16%. The Faculty awarded 74 higher degrees and diplomas at the end of the 2019/2020 academic year\* and 321 undergraduate degrees, diplomas and certificates.**

The demands of students and external stakeholders in the new normal directed the FHE to focus on programme and course accessibility. All courses were streamlined and offered virtually and alternative assessments were configured to 100% coursework where possible. FHE obtained approval for the Undergraduate Certificate in Humanities and commenced operationalising the programme. Workshops and seminars which targeted areas critical to our society's attempts to grapple with COVID-19 challenges were held.

In the area of Social, Economic and Developmental Needs, the FHE focused on the following initiatives:

- Workshops for Secondary School Teachers and Students (French and Spanish and History).
- Creation and offer of several Continuous Professional Education (CPE) courses/ workshops.
- CAPE and CSEC virtual Seminars.
- Serving English language teacher training and refugee learning needs through the PG Dip TESOL Practicum.
- Webinars focussing on the Education system, particularly those areas affected by the pandemic.

Further, the FHE:

- Continued the operations of the Psychoeducational Diagnostic and Intervention Clinic (PEDIC) and had another successful year despite tremendous set-backs due to the pandemic.
- Through the School of Education hosted webinars in response to the societal need in topics regarding school and COVID-19 virus.

## Enrolment & Graduation

According to official figures supplied by the Campus Office for Planning and Institutional Research, there were 2,119 students enrolled at the Faculty in 2019/2020 – 1,221 undergraduates and 898 postgraduates. The FHE was one of just two Faculties that saw its postgraduate enrolment increase over the period, by 16%. The Faculty awarded 74 higher degrees and diplomas at the end of the 2019/2020 academic year\* and 321 undergraduate degrees, diplomas and certificates.

*\*Note – the Faculty is reporting graduation achievements below, based on the ceremonies held in October 2019 which, while they fall in the reporting period, represent those students who would have completed their programmes at the end of the previous year.*

### Outstanding Students

The top Student in the FHE was **Samantha Joseph** who graduated with a Bachelor of Arts Degree, Special in Musical Arts. Ms Joseph obtained a Grade Point Average of 4.07.

### Postgraduate

The Faculty awarded 40 Master's degrees, of which 32 were MFA/MA/ MEd/MPhil degrees and 4 doctorates in 2019/2020. Thirty-two (32) postgraduate diplomas and certificates were also awarded, compared with 302 awarded in 2017/2018. The 4 doctoral degrees were as follows:

- **Enid Jones-Butcher** – Education
- **Shamella Latchmepersad** – Education
- **Sabrina Mc Millian-Soloman** – Education
- **Peter Smith** – Education

### Student Achievements

- **Christopher Lou-Hing's** short experimental video: Howler Monkey (2020) was selected for the Trinidad & Tobago Film Festival and was well received.
- **Antonio Wallace**, a recent graduate, was awarded a scholarship from the DOC NOMADS Erasmus Mundus Joint Master's degree (EMJMD) to further his studies in Documentary Filmmaking.
- **Shari Petti** (Alumna) most recent documentary JumpTT was selected for the 2020 TTFF. In 2020 she also received a Fulbright Scholarship to study a Master of Fine Arts in Film Production at Florida State University.
- **Anna-Lisa Wickham** (Alumna) was accepted into the California Institute of Arts (CalArts) to pursue a Master of Fine Arts in Acting on scholarship. She was set to begin her studies in September 2020. Unfortunately, Anna-Lisa passed away in August 2020.
- **Jian Hennings and Sophie Walcott** (Alumni). Their first feature film, Grace and Saleem, was selected to open the Caribbean Tales International Film Festival in Toronto. Grace and Saleem went on to win the Best Feature Film at CTFF.

# Faculty of Humanities & Education

- The painting “Euphoria” by final-year student **Saegel Bascombe** was selected for the cover of The UWI St. Augustine 2019 Presentation of Graduates booklet.
- To commemorate World Oceans Day 2020, the Visual Arts Unit collaborated with the Faculty of Life Sciences to produce an exhibition of artworks created by the students of the course: Fine Art Lab II. Given the global health challenge, this exhibition took a virtual format. The 13 students featured are: **Ariel Baptiste, Cori-Ann Chin, Delene Greaux-Granger, Roheim Leslie, Kajal Madho, Shireen Ragoobir, Faith Ramlal, Jonathan Raymond, Michaela Regis, Shonari Richardson, Reannah Seales, Shirvaughn Simmons** and **Andrea Wilson**. The artworks may be viewed here: [https://issuu.com/marshapearce/docs/woday\\_catalog](https://issuu.com/marshapearce/docs/woday_catalog)
- The painting “Green Turtle” by **Shonari Richardson** was selected for the cover of *UWI Today*, published Sunday, July 12, 2020.

## Research

### *Department of Creative and Festival Arts*

**Dr J. Remy** conducted research during Sabbatical Leave for a book on steel bands from South Trinidad. Research was conducted in Trinidad & Tobago, Canada and the USA.

### *Department of History*

**Dr L. Bonate** undertook a number of research projects. These included the book project, *Correspondence between Northern Mozambican Chiefs and the Portuguese Administration at the End of the Nineteenth Century: Islam, the Slave Trade and the Wars of the ‘Effective Occupation’*, under contract with The British Academy, *Fontes Historiae Africanae* series/ Oxford University Press. Other research covered the Cabo Delgado Insurgency: *Islam, Youth and the ‘Resource Curse’ in Northern Mozambique*; research on the Islamic Insurgency in Cabo Delgado, Mozambique; research on Islamic Law and Matriliney in Mozambique, and research on Muslim Women and Political Power in Pre-Colonial Mozambique.

**Dr D. Mc Collin’s** research focused on the history of Healthcare in Trinidad & Tobago 1938-1962, the History of the Child Welfare League of Trinidad & Tobago, the History of the Overseas Nursing Association and the West Indies, and the History of Tobago.

**Dr R. Noel** conducted a comparative study of Form Six students and their eligibility to obtain national scholarships in Trinidad & Tobago, and also focussed on other topics of interest. These were, *Venganza: The Origins of Resentment in the Conflict between the Republic of Haiti and the Dominican Republic*; *the Labours of the Black and White Odd Fellows Lodges in the United States and the Caribbean*, and *Industringism: The art and science of rejuvenating African culture and science for industrial applications*.

**Dr A. Ramsay** conducted research on *The History of Fraternal Organisations (Caribbean, Fiji)*; *Landships in Barbados*; *Museums (Caribbean, Pacific Islands)*, and *Caribbean Cultural Expressions, Heritage, Socio-Cultural Institutions*.

**Dr S.A. Singh’s** research focused on *The Indian Diaspora: Identities, Trajectories and Transnationalities*; *Formation of East Indian Communities in the Caribbean – The Cambridge History of the Caribbean*, and *the Diaspora in the Caribbean – Oxford Bibliographies in Hinduism*.

**Dr G. Matthews’ *Enslaved Businesspeople of the Caribbean*** is due to be published in 2020 in *Atlantic Studies*; *The Historical Mas Men of the Caribbean* is due to be published in 2020 University of the West Indies Press; and *The Monumental Rise of Toussaint Louverture at Home and Abroad* is due to be published in *Caribbean Quarterly* 2021.

**Dr J. Teelucksingh** conducted research on *Caribbean Masculinity*, and *Tourism in the Caribbean during the early 21<sup>st</sup> Century*.

**Dr M. Toussaint** focused on a number of topics during the 2019/2020 period. These included, but were not limited to, *the Legacy of Patrick Manning, Prime Minister of the Rep. of Trinidad & Tobago, 1990-1994 and 2002-2010*, *Africans in the Americas before Columbus*. *Status of the Debate; The Illegal (post 1805/6) Slave Trade between Trinidad and Venezuela in the Nineteenth Century*, and *Runaway Indentured East Indians on the Spanish*

Main. An exploration of (East) Indian and African West Indian Migration to Tucupita and El Callão respectively in Venezuela during the late nineteenth century.

#### *Department of Modern Languages and Linguistics*

**Dr O. Rodríguez** is conducting ongoing research on the literary corpus of the writer Alfons Cervera, and specifically on the topic of memory in his work, while **Dr S. Evans's** research focus was on Linguistic Advocacy in Legal Systems in the Creole-speaking Commonwealth Caribbean. **Dr P. Palma Rojas** is currently working on a project titled, Teaching and Learning Spanish in Trinidad & Tobago: A study of the Language Policy SAFFL.

During the period under review, **Dr J.A. Ferreira** focused on a number of different areas. These included a Digital Atlas of the Toponyms of Trinidad & Tobago (DATTT) <http://uwispace.sta.uwi.edu/dspace/handle/2139/46635>; a Handbook of Caribbean Languages and Linguistics (HCLL) with Dr Joseph T. Farquharson; and The Cultural Contribution of the Portuguese of the West Indies – Research on the cultural contribution of Luso-Trinidadians and the sociolinguistic and socio-economic integration of Madeirans into West Indian societies. Additional research covered a Comparative Study of French Creoles in the Southern Caribbean and Northern South America; and research on the French Creole varieties of Northern Brazil, Venezuela and Trinidad. Dr Ferreira is currently conducting a collaborative project with Phaedra Mohammed of the Faculty of Science and Technology, Ontological

Engineering of Winer's 2009 *Dictionary of the English/Creole of Trinidad & Tobago (DE/CTT)*.

**Dr B. Braithwaite's** research centred on the Falmouth Sign Language Documentation Project. A UNICEF-funded project documenting an Indigenous sign language in Guyana and producing teaching materials and curricula. However, Dr Braithwaite is currently involved in ongoing research on Documenting Language Across Modalities: Visual and Tactile Sign Language in the Bay Islands: an endangered languages documentation project documenting a sign language used in Roatan and Guanaja, Honduras; the creation of the Trinidad & Tobago Sign Language Dictionary, funded by the Ministry of Social Development and Family Services, GOTT, and from 2019–2020 was involved in the documentation of sign languages in St Vincent and the Grenadines.

**Dr N. Roberts** is involved in ongoing research from 2017-present, on Race and identity in the works of the Afro-Puerto Rican writer Mayra Santos Febres; and from 2019-present with Dr Diego Mideros and Dr Beverly-Anne Carter on Innovation in FL Teaching in the Caribbean.

#### *Department of Literary, Cultural and Communication Studies*

During the period under review, **Dr G. Steele** developed a Human Communication Studies Research Database and developed an IDRC Cross-Campus grant proposal on Artificial Intelligence and COVID-19 with a consortium of UWI colleagues, June-July 2020. **Dr D.W. Brunton**

interrogated the myriad ways in which the country's crime problem and the culture of fear around it is highlighted and reinforced – particularly through social media and the traditional media (specifically television and print). Dr Brunton also focused on a book-length project that constructs the creole as the primary technological product of the global political economy of the Age of Empire created by language, collective memory and place and offers it as a logic for understanding the personal and social constructions of identity afforded by the New World of online spaces.

#### *LCCS Collaborative Research with International Partners*

**Professor P. Morgan**, UWI Lead collaborated with **Dr Suzanne Burke**, **Dr Glenroy Taitt**, **Dr Keron Niles** for the Cultural Work Package of the European Union Latin American and the Caribbean Focus Project (EULAC). The project was completed August 2019. **Keron Niles** authored a refereed essay, in collaboration with **Suzanne Burke** and **Paula Morgan**, titled "The Possible Impact of Brexit on Caribbean European Cultural Relations" in The Challenges of Cultural Relations between the European Union and Latin America and the Caribbean, Eds. Lluís Bonet and Hector Schargorodsky. Quaderns Gescenic: Col·leccio Quaderns de Cultura. ISBN.4 163-184. ISBN: 978 -84-938519-4-1. (August 2019).

**British Academy Research Network** on Crime and its Representation in the Anglophone Caribbean, 1834-2018: This international research network funded by the British Academy (2016-2019) and led by principal investigator - **Dr Lucy**

# Faculty of Humanities & Education

**Evans**, School of English, University of Leicester, brought together participants from Jamaica, Trinidad, Guyana, Barbados and the UK. It addressed the acute and complex problem of crime in Anglophone Caribbean societies and aimed to develop our understanding of the historical, cultural, political and socioeconomic contexts of crime in the region by bringing social science researchers into dialogue with arts and humanities researchers. Research findings were published in *Caribbean Quarterly* Journal collection coedited by **Paula Morgan** and **Dylan Kerrigan** "Crime in Selected Caribbean Territories: Culture and Representation."

**Project Erasmus Staff and Student Exchanges** with the University of Salzburg Austria Liaison for Project Erasmus KA107 programme. Successful exchange arranged for UWI graduate student for semester at Salzburg U. Subsequent planned staff and student exchanges placed on hold due to COVID-19 travel restrictions.

## **Innovation and Entrepreneurship Projects** *Dean's Office*

The Faculty established a relationship with **OAMK Labs** of the Oulu University of Applied Sciences that facilitates the development of projects from design to start-ups in multi-disciplinary teams. An agreement was made to establish a Lab; a multidisciplinary incubator integrated as an option in our programmes. This would include some discipline specific courses, projects and internships. In 2019 a joint application for funding to set up the Lab at the St.

Augustine Campus was made. Dean Dr Heather Cateau and **Dr Freddy James** attended a meeting in Finland. 14-17 January 2020 FHE hosted a Lab-based Learning Workshop for Cross-Campus participation with Finnish team leading the sessions. At the end of the workshop, a multidisciplinary steering committee team was formed to establish a way to incorporate the learning from the workshop into a programme for the students. The team planned a pilot project for the students in August 2020; however, the COVID-19 Pandemic interrupted this plan. The project is therefore on hold.

## *School of Education*

In September 2019, the FHE officially launched its **Psychoeducational Diagnostic and Intervention Clinic (PEDIC)** at the SOE. After a pilot programme was in operation from September 2018, F&GPC approved funding in April 2019. The PEDIC was operationalised to test school students (and others) for learning disabilities and cognitive functioning. The PEDIC has the potential to generate additional revenue for the UWI as well as develop an area in the field of education which is very much needed in T&T. The PEDIC offers fixed cost services to the public and has serviced at least fifteen clients per month including individuals and institutional clients. It operates with four Clinical Psychologists (full and part-time), one Reading Specialist, one Clinic Manager, and two Administrative and Research Assistants. PEDIC's In-School Reading Assessment and Intervention Project was awarded the RDI grant in April 2019. COVID-19 caused a

closure of offices in March 2020. The Psychoeducational and reading assessments could not be conducted in person, however, confidential preliminary intakes and feedback sessions were done with clients via phone or Zoom.

## *Centre for Language Learning*

In 2019, the CLL was approached by **Caribbean Airlines Limited (CAL)** to assist with specialised foreign language training for their airline personnel. CAL became the CLL's first client for commercial language services to be offered. The CLL created a new course "*Spanish for Specific Purposes*" for CAL Trinidad & Tobago and provided Spanish language tuition for over 200 airline personnel during the period June 2019 – May 2020 (via blended delivery). The programme was suspended in March due to the COVID-19 pandemic. The CLL also continues to be a leading Foreign Language Testing Centre in the Caribbean and has seen increases in the following additional entrepreneurial activities/services:

- Testing capacity for the IELTS Test Centre - monthly IELTS (Test of English) and UK VI (UK Visa and Immigration) IELTS.
- Spanish Language testing and preparation courses (DELE). DELE test, November 22 & 23, 2019.
- English as a Second/Foreign Language (ESL) classes (strictly online). Offered four times per year.
- Japanese Language Proficiency Test (JLPT) candidates.
- Foreign Language on- and off-site teaching.

## Strategic Review

### Access

#### *Dean's Office*

All teaching moved to remote delivery in semester II and continued in summer 2019/2020. The Faculty Office developed a complete in-house virtual academic advising system for use at the start of the 2020/2021 academic year. The Faculty received approval of its UG Certificate in Humanities with specialisations in Liberal Arts and Caribbean Studies.

#### *Dean's Office (Film Unit)*

The Film Unit made an initial collaboration with the University of Guyana and Instituto Cubano del Arte e Industria Cinematograficos and Escuela Internacional de Cine y Television en Cuba as a means to expand access/ recruitment of regional/ international/ part-time students via engagement. The Unit continued working towards developing a *Caribbean Cinema Review Journal*.

#### *Centre for Language Learning*

During the 2019/2020 period under review the CLL trained two cohorts in Spanish for Airline Personnel—a blended Spanish for Specific Purposes programme (mounted in response to an RFP from Caribbean Airlines). CAL requested the suspension of the 3rd cohort because of the pandemic and the disruption to their core business. Remote delivery of the 40-hour short course, “English for Nurses in Critical Care,” to 11 Cuban nurses in response to a RFP from the Ministry of Health in May 2020 went on as scheduled, as well as remote delivery to 40 learners of Spanish for Specific Purposes course as part of PADF/UWI Open Hand Initiative.

There was an increase in candidate registrations in IELTS and UKVI testing (standardized test of English), and two sittings of DELE (standardized test of Spanish).

#### *Department of History*

The Department of History enhanced the mentorship programme to support students and to improve the numbers of graduating students during the 2019/2020 academic year. Mentors kept track of their assigned mentees' performances via regular face to face/ virtual meetings and emails, lecturers have access to personal information for students in their respective classes, and the Head of Department has access to ALL History students' information. Supervisors liaise with supervisees (both at undergraduate and postgraduate level). One on one feedback is provided for each given coursework assignment; both as written comments on the marked assignment and verbally if additional advice and feedback is requested by the student. Workshops to transition Face-to-face to blended learning were conducted for the students.

Caribbean Studies workshops along with workshops for graduate students focusing on writing, research and time management were conducted by staff members for students. Sustained and expanded initiatives with secondary schools (CSEC) and CAPE teachers and students occurred. This initiative allows the Department to assist teachers and students in those areas of the History CSEC and CAPE curriculums identified by the teachers as weak. The proposed programme comprised one CAPE and one CSEC workshop held in Semester

I of the academic year. The workshops were, once again, well attended and well received.

The Department has embarked on the process of developing a “Business Unit” that provides research services and skills to individuals and the business community. Services will include the research and writing of personal, community, and business histories/ biographies, conducting research on desired topics/areas, providing historical information and context in the forms of interviews, seminars, workshops etc., and the organisation of documents and material.

#### *Modern Languages & Linguistics*

Preliminary Curriculum renewal began in Semester II as a result of COVID-19. An assessment review of the 100% course work is ongoing, particularly as it relates to the impact the revised assessment mode has on students.

#### *Department of Creative & Festival Arts*

The DCFA initiated the process to bring the Festival Library online to connect to Campus Libraries Network. The existing cataloguing system has been updated and populated. The department is awaiting technical expertise from the Alma Jordan library to connect to Campus Libraries Network. The Department also launched the DCFA Creative Hour – a forum for the department's staff, graduate students and alumni to share work in progress or recently completed projects.

#### *Literary, Cultural & Communication Studies*

All teaching moved to remote delivery in semester II and continued in summer 2019/2020.

# Faculty of Humanities & Education

## *SCHOOL OF EDUCATION*

The School of Education, Continuing Professional Development and Outreach Unit hosted its Sign Language Holiday Camp (Introductory Level) for children between the ages of 10 to 16 years old. The camp took place at the School of Education from 15 – 26 July 2019. The School of Education officially launched the Psychoeducational and Diagnostic Intervention Clinic (PEDIC) on the 13 September 2019.

## **Alignment**

### *Dean's Office*

The Faculty implemented systems, adjusting several of its core business processes, which boosted productivity and saved cost. Some of these included the following major and routine meetings being done virtually: Faculty Board meetings, Assessment and Promotions meetings, general staff meetings, meetings with staff and students; Faculty Book meetings etc. The Faculty of Humanities and Education, in collaboration with **OAMK Labs**, Oulu, Finland, hosted the Iteration, Inspiration and Innovation Workshop at the School of Education from the 14 – 17 January 2020. The **CARICOM Reparations Commission**, in collaboration with The **UWI Centre for Reparation Research** and the Faculty of Humanities and Education at The UWI St. Augustine Campus hosted a two-day symposium to commemorate the 75th year of the publication of Eric Williams' *Capitalism and Slavery* on the 13 – 14 November 2019. The first day featured an academic symposium, while the second day focused on Sixth form History students from schools throughout Trinidad.

This was an excellent opportunity to introduce students to contemporary research and new perspectives from local and international scholars. We also connected the areas discussed to dimensions of the CAPE Syllabus.

### *Dean's Office (Film Unit)*

The UWI Film Programme presented the 2nd Edition of the World Festival of Emerging Cinema from 30 October to 2 November 2019. The festival comprised of movie screenings, workshops, and panels. The theme was 'Fire and Light' and 82 films were screened from twenty-eight countries covering an expansive range of topics which included, migration, poverty, and crime. Weekly screenings for the Secret Cinema were held and moderated by **Mr Andreas Antonopoulos** during the academic year. Faculty and students of the **Northern Film School at Leeds Beckett University** (UK) were invited to the screenings and the audience participated in online video discussions about each film. In October 2019, the Film Programme organised a series of panel discussions and interactive workshops with Caribbean filmmakers geared toward encouraging aspiring filmmakers and visual artists in Trinidad & Tobago. The learning outcome of the workshops and panels aimed to have persons learn how to function in various capacities in the organisation particularly in marketing, distributing, and exhibiting a wide variety of film products. The Programme continues its myriad partnerships with the Trinidad & Tobago Film Festival (TFFF), the Trinidad & Tobago Film Company Ltd. (TFFC), Africa Film TT (AFTT) and Africa World Documentary Film Festival. Mr Yao Ramesar represented

The UWI FHE Film Programme at the 38th Annual West Indian Literature Conference, "HINTERLANDS: Journeys of the Imagination" at the University of Guyana. This connection was vital as it initiated the collaboration to work on expanding access.

### *Centre for Language Learning*

The CLL held a number of events during the 2019/2020 academic year. These included the 2nd Annual Japanese Language Speech Competition in conjunction with the **Japanese Embassy in TT** in August 2019 and the Confucius Institute cultural outreach sessions from August 2019 to January 2020. **Ms Mathilde Dallier** was The UWI St. Augustine Representative at FORMEO (Student career fair), in Martinique in 5 - 7 February 2020. Fellowship to **Avian Daly** to participate in a seminar on Chinese Language and Culture for Education Officials from Latin American, Caribbean and South Pacific Countries. **Beijing International Chinese College**, Beijing, China from 24 October – 20 November 2019.

### *Department of History*

The Department held a contracted consultancy/writing of the History of the **National Gas Company of Trinidad & Tobago** (NGC): - Research, collating, writing, and editing of a publishable historical work on the NGC. The annual History Fest was held during the week of 9 – 13 March 2020 and this involved reaching out to and engaging various groups in society including various stakeholders such as teachers, students, the business community and other organisations and institutions. The week of activities included panel discussions, symposiums, screenings,

theme related exhibitions, schools' participation in competitions (essay writing, spoken word, art), and a cricket match between staff and students. The Department collaborated with **Sagicor Life Inc.** in the company's online observation of Divali, Emancipation and Eid-ul-Fitr. Interviews with members of staff on the historical dimension of each of these events formed part of the online forums commemorating each of these events.

#### *Modern Languages & Linguistics*

The Department of Modern Languages & Linguistics observed a Celebration of Black Consciousness Day in November 2019, as well as a celebration of International Creole Day on 31 October 2020. This included a panel on John Jacob-Thomas' 150-year-Old Creole Grammar, which featured Professors **Bridget Brereton, Lawrence Carrington, and Ian Robertson.** "Chipping Away at the Wall of Silence: A Workshop on Reparations in the Americas" was held on 21 November 2019. The MLL engaged the community by sending students of the Introduction to Audiology course visited DRETCHI to carry out hearing assessments for members of the community.

#### *Department of Creative & Festival Arts*

The DCFA had a marked increase in outreach and marketing of key departmental production during the 2019/2020 academic year. The Old Yard 2020 had an attendance of 1100 patrons. Arts-in-Action planned, developed, and implemented Teacher Training modules for BHP Safe Spaces Project in NE & SE Trinidad - Phase III (Sep Nov). Arts-in-Action entered into an Educative Theatre, youth

empowerment initiative with the TTPS Hearts and Minds which targeted police youth clubs and schools within the Port of Spain area. The Arts-in-Action also developed and implemented an Interactive Performance Workshop (IPW) called "The Blue Chair Series". This series focused on Gender Based Violence and Violence Against Women and Girls (Mar-July).

The painting "Euphoria" by final-year student Saegel Bascombe was selected for the cover of The UWI St. Augustine 2019 Presentation of Graduates booklet. The Visual Arts Unit collaborated with the Faculty of Life Sciences to commemorate World Oceans Day 2020 and produced an exhibition of artworks created by 13 students of the course: Fine Art Lab II. Given the global health challenge, this exhibition took a virtual format.

**Dr Marsha Pearce** conceptualised and led the project titled *Q&A Quarantine and Art* – a conversation series initiated in the context of the global COVID-19 lockdown. Weekly, published conversations offered insights from artists from the Caribbean and its Diaspora as they talk about their artworks, art-related issues and their personal responses to the pandemic. Over 20 interviews are available to the public. The DCFA also conceptualised and led the project *Art in the Time of Coronavirus* – conversations with senior, local (Trinidad & Tobago) artists, which are published as online PDFs. This project features artists **Donald 'Jackie' Hinkson and Wendy Nanan.**

#### *Literary, Cultural & Communication Studies*

In a swift response to the lockdown

required by the COVID-19 global pandemic, the 22nd Annual Campus Literature Week (March 23-27, 2020) shifted to a virtual platform and attracted a substantial virtual audience. The organisation was spearheaded by the MFA Creative Writing Programme and **Dr Muli Amaye**, ably assisted by **Roger Mc Farlane.** The week of lunchtime readings culminated in a gala reading by the Writer in Residence **Dr Vahni Capildeo.** The Literatures in English section hosted a successful online conference in collaboration with NALIS and Friends of Mr Biswas. The theme was "The literature of Trinidad & Tobago: 1980-2020; Books as Passports and Companions" (September 21 – 24, 2020). There was daily attendance of 80 – 200 persons and rich and vibrant cross disciplinary interchange. The conference was coordinated by **Dr Vijay Maharaj** supported by a team of graduate students. At the 2020 **OCM BOCAS Literary Festival,** writers from LCCS launched books, took part in public discussions, and offered training sessions. The OCM BOCUS Literary Festival paid tribute to UWI **Professor Emeritus Gordon Rohlehr** in recognition of his extensive contribution to regional scholarship. The event also saw the launch of Rohlehr's *Perfected Fables Now: A Bookman Signs off on Seven Decades* (Peepal Tree Press 2020).

Creative writing candidate **Alexandra Stewart** emerged as winner of the OCM BOCUS Winner of poetry grand slam for a second year in succession.

**Dr Muli Amaye** and **Emeritus Professors Dr Funso Aiyejina,** and **Dr Barbara Lalla** also contributed to

# Faculty of Humanities & Education

the Literary Festival. **Dr Suzanne Burke** chaired the CARIFESTA XIV Symposium, Journey Round Myself from August 19th – 22nd, 2019 in collaboration with the Department of Creative and Festival Arts and the Department of Literary, Cultural and Communication Studies, The UWI, St. Augustine. Given the role of the new communication and media technologies, climate change and the fragmentation of regional alliances on the Region's cultural and creative output, the symposium 'Journey Round Myself' positioned discussions on cultural policy as a significant vehicle in activating the arts and cultural industry sectors, and in promoting the sustainable development of the Small Island States (SIS) of the Caribbean. **Professor Paula Morgan** was Co-Coordinator for the Network and Outreach for Disability Education and Sensitisation (NODES) Conference. Theme: What now, where now? The National Policy on Disability & Launch of *Childhood Disability, Advocacy, and Inclusion in the Caribbean: A Trinidad & Tobago Case Study*, By Beth Harry, **Miami University**.

## School of Education

The School of Education held its *We are the World 3* children's concert on Saturday November 30 at The UWI, School of Education Auditorium. The concert was hosted by The UWI Early Childhood Caravan in celebration of Universal Children's Day. On Tuesday 26 May 2020, the School of Education hosted a public webinar entitled "Educating the Whole Child in Pandemic School Closure and Reopening". Presentations were made by our very own education professionals from the SOE, after which, a question and answer session was held.

## Agility

### Dean's Office

Staff received specialised training from Campus to handle some aspects of their duties with respect to the global pandemic. Special training sessions were held for HODs, Cleaning Staff and Office Assistants. Some long-standing projects were completed remotely (e.g., pre-requisite exercise) and the Faculty has initiated an exercise to put documents online to assist with easy retrieval moving forward.

### Centre for Language Learning

Staff participated in training offered by CETL, the Open Campus, the Association of University Language Communities (AULC) of the UK and the Association of Departments of Foreign Languages (ADFL) of the US, and Spanish Teachers Association of Trinidad & Tobago to support remote delivery. **Ms Mathilde Dallier** was an award recipient at the International Day of the French Teacher, French Embassy, POS, November 28, 2019.

### Department of History

Staff participated in cross campus seminars - three per semester. This series works to tighten the relationships among the campuses. Staff members continued to establish an international virtual presence through podcasts, symposiums, seminars, public lectures, and other forums. The Department has expanded its online presence by launching its website, Instagram page, Facebook presence, and YouTube channel. These online initiatives have greatly contributed to the ongoing digital transformation of the Department of History and, by extension, the St. Augustine Campus.

COVID-19 mandated a move to full online teaching and the Department of History managed this transition commendably - acquiring the necessary training, readily adjusting themselves and their modes of teaching to the new online forum, treating with hiccups and issues in a timely and informed manner, and assisting students to make this transition. A Quality Assurance Review process for the Department of History was initiated in November 2020 with a meeting between members of the Department and The UWI Quality Assurance team. An initial review of History's performance was done and guidelines for the year-long process given. The process will be completed in November 2021.

### Modern Languages & Linguistics

Three Language Assistants within the Spanish section were sent to Colombia as part of the **ICETEX** programme – to Bogota and Cali, and three French Assistants were sent to France. Two UWI students are now on Exchange Programme with **UPN (Universidad Pedagógica Nacional)** to Colombia.

Staff Members attended several online workshops to enhance teaching skills in the virtual mode. Some of these included: "Moving from Face-to-Face to Online Learning" – March 2020; "What Teaching Strategies Help Engage Learners Online;" "Developing your Teaching Portfolio" – All conducted by CETL.

A Risk Assessment Team was established in March 2020 to ensure that COVID-19 protocols were maintained throughout the DMLL.

## Distinguished Visitors

### *Office of the Dean*

#### **Dr Hilary Brown**

Programme Manager for Culture and Community Development  
*CARICOM Secretariat*

#### **Mrs Erica Williams–Connell**

Eric Williams Memorial Collection and Daughter of Former Prime Minister of the Republic of Trinidad & Tobago, Dr Eric Eustace Williams

#### **Dr Lovell Francis**

Minister in the Ministry of Education  
Trinidad & Tobago

#### **Mr Ferdie Ferreira**

Founding Member of the People's National Movement

#### **Janne Karjalainen**

Lecturer, LAB Master  
DevLAB/ OamkLABs  
Oulu University of Applied Sciences

#### **Mr Dorbrene O'Marde**

Chair Antigua Reparation Committee

#### **Dr Dexnell Peters**

Bennett Boskey Fellow in Atlantic History  
University of Oxford

#### **Ulla-Maija Seppänen**

Senior Lecturer, Head Coach  
DevLAB / OamkLABs  
Oulu University of Applied Sciences

#### **Professor Verene Shepherd**

Director UWI Centre of Reparation Research

#### **Ambassador June Soomer**

Secretary General  
Association of Caribbean States and  
Chair Open Campus Council

#### **Dr Sasha Tuner**

Associate Professor of History  
John Hopkins University

#### **Dr Nuala Zahedieh**

Professor of Economic and Social History  
University of Edinburgh

### *Centre for Language Learning*

#### **Ms Christel Outreman**

Cooperation and Culture Action Advisor  
Embassy of France

#### **Ms Kristen Lindahl**

English Language Specialist with Ms Afeisha Beckles, Education and Libraries Specialist  
Embassy of the United States,  
Trinidad & Tobago

### *Creative and Festival Arts*

#### **Mr Omari Ashby**

CEO Sagaboy Culture / Founder & Managing Director, Jaliman Entertainment

#### **Mr Kevin Babb**

International Dancer and Teacher  
(Jazz Tap Workshop at DCFA Dance Studios)

#### **Dr Marielle Barrow**

Author and Cultural Activist

#### **Ms Kimberli Boyd**

Fulbright Specialist, USA  
(Integrated Arts and Technology Workshop)

#### **Mr Etienne Charles**

Recording Artist/Composer/Arranger/  
Assistant Professor of Jazz Studies  
Michigan State University

#### **Ms Jillian Franklyn**

DCFA Alumni  
Workshops on Traditional Tobago Dances

#### **Mr Donald Jackie Hinkson**

Renowned Artist  
Trinidad & Tobago

#### **Ms Amanda T. McIntyre**

Writer, Cultural Activist & Co-Director,  
WOMANTRA  
Trinidad & Tobago

#### **Professor Kei Miller**

Keynote Speaker Carifesta XIV Symposia

#### **Ms Karen Theophilus**

Dignitariez Entertainment

#### **Mr Ngũgĩ wa Thiong'o**

Carifesta XIV Symposia

#### **Mr Arvinder Rampersad**

Local Artiste & CEO  
Winerboi Entertainment

#### **The Mayurbhanj Chhau Group**

Mahatma Gandhi Institute  
for Cultural Cooperation  
Ufs the High Commission of India  
(Indian Dance Workshop at  
DCFA Dance Studios)

### *Film Unit*

#### **Roger Alexis**

("I am Santana" series)

#### **Professor S. Torriano Berry**

Award winning Filmmaker

#### **Francesca Hawkins**

(News Anchor)

#### **Jian Hennings**

(Grace & Saleem)

#### **Cassandra Joseph,**

Filmmaker

#### **Shari Petti**

(Sorf Hair)

#### **Michael Roachford**

Filmmaker

#### **Ro'dey**

(YouTuber; Fleeky)

#### **Shivane Loach**

Filmmaker

#### **Vincent Lopez**

Filmmaker

#### **Tayo Ojoade**

Filmmaker

#### **Marlon Pinder**

Filmmaker

#### **Renee Pollonias**

Filmmaker

# Faculty of Humanities & Education

## *Literary, Cultural and Communication Studies*

### **Professor André Brock**

School of Literature,  
Media, and Communication  
Ivan Allen College of  
Liberal Arts, Georgia Tech

### **Dr Vahni S Capildeo**

Writers-in-Residence

### **Kevin Garbaran**

Writers-in-Residence

### **Mrs Wynell Gregorio**

Director of Marketing & Communications  
The UWI

### **Mr Peter Kalu**

Writers-in-Residence

### **Scott Ting-a-Kee**

Writers-in-Residence

### **Professor Teun A. van Dijk**

Pompeu Fabra University,  
Barcelona, Spain

## *Modern Languages and Linguistics*

### **Cristo Adonis,**

Pyai of the Santa Rosa First Peoples

### **Professor Emerita**

### **Bridget Brereton**

### **Professor Emeritus**

### **Lawrence D. Carrington**

### **Wendy Dyemma**

Director, Alliance Française  
of Trinidad & Tobago

### **Nnamdi Hodge**

Producer  
3 Trinidadian French Creole language films

### **Cassandra Joseph**

Director  
3 Trinidadian French Creole language films

### **Lennan O'Garro**

Dancer  
Department of Creative and Festival Arts  
(DCFA)

### **Professor Ian Robertson**

### **Madame Nicole Taylor**

### **Professor Teun Adrianus van Dijk**

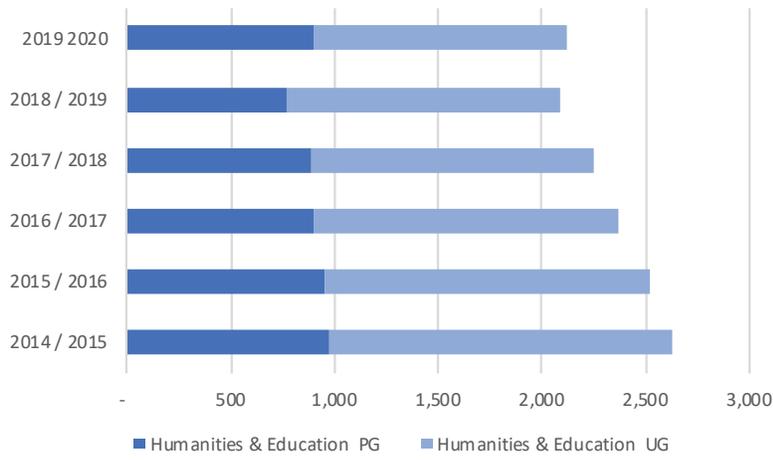
Universitat Pompeu Fabra  
Dept. de Traducció i Ciències  
del llenguatge Barcelona, Spain  
(<http://www.discourses.org/>)

### **Dr Travis Weekes**

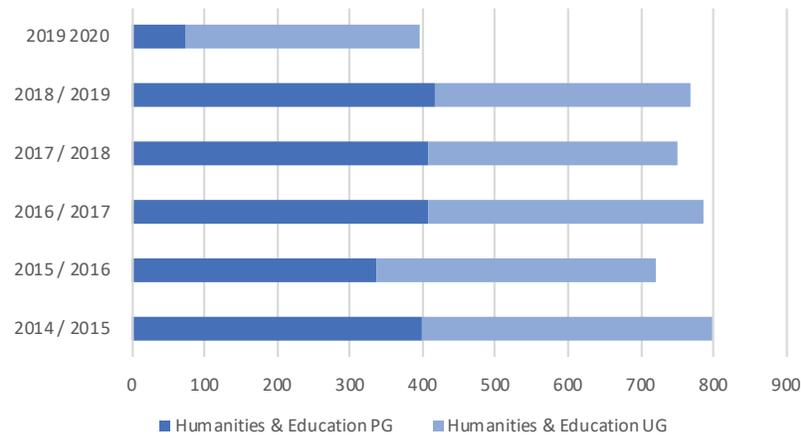
Lecturer, DCFA

### **Children and teachers of the Talparo RC School**

**Enrolment Trends: Faculty of Humanities & Education**



**Graduation Trends: Faculty of Humanities & Education**



Source: Campus Office of Planning and Institutional Research (COPIR)

## Dean's Summary

**T**he year under review reinforced the Faculty of Law's commitment to The UWI's Triple A strategy, *Access, Alignment and Agility*. Due to the economic concerns of the campus, the Faculty began the academic year revisiting financial obligations with the aim of ensuring that the work of the Faculty continued effectively and efficiently. This included revisiting undergraduate and postgraduate programmes to ensure that there were sufficient resources to meet the respective programme needs and expectations.

With the closure of The UWI on March 13, 2020 due to the COVID-19 pandemic, the Faculty was the first to resume teaching, losing only one day - despite a few initial hurdles. There was a very high level of coordination and support from the teaching staff as staff demonstrated their agility and moved forward to ensure that no student was disadvantaged by the transition to deliver classes online.

The Faculty continued to keep activism on its agenda, integrating it into the curriculum, research, and alignment strategies largely through successful, pioneering competitive bids for donor funded projects and their integration into the Faculty's International Human Rights Clinic (IHRC). Another historic win for the Faculty was the award of its 4th project, under the auspices of the European Union. The project highlighted Remand Justice with special emphasis on Female Remandees and Domestic Violence.



**Professor Rose-Marie Belle Antoine**  
Dean

**The Faculty observed increased applications from regional applicants, given the growing awareness of its existence and fast-developing reputation. The Faculty selects students on a competitive merit basis and maintains a cap on numbers.**

Access to the Faculty increased with new policies on disability and an activist scholarship, complementing earlier initiatives for law enforcement and a mentorship programme. Curriculum Assessments reform for all Faculty's courses was achieved, completing a 2-year cycle of work. Important courses were added to both the LLB and LLM curricula. The faculty's impressive outputs continue to outweigh its small size of 11 staff strong.

## Enrolment

The Faculty of Law continued to be a much sought-after faculty, attracting applicants with high quality academic qualifications, including first-degree holders and national scholarship winners, such as the Gold medallist for the CAPE, (top student) from Trinidad & Tobago. Total student enrolment for the Faculty in 2019/2020 was 487 students. The Faculty limits intake to 150 per year.

Additionally, the Faculty observed increased applications from regional applicants, given the growing awareness of its existence and fast-developing reputation. The Faculty selects students on a competitive merit basis and maintains a cap on numbers. It also continued its policy of a quota for applicants from law enforcement and for mature students who may not otherwise meet the selection criteria. A new policy providing special access to the Faculty of Law for students with disabilities was instituted and two such students were admitted.

## Graduation

The number of graduates in the Faculty's undergraduate and postgraduate programs endured despite the challenges faced in Semester II 2019/2020. In the undergraduate programme, the Faculty of Law had ten First Class Awardees.

**Mr Suraj Sakal**, was chosen to be the Faculty's Valedictorian at the Campus' Virtual Graduation Ceremony for 2019/2020.

### Outstanding Students

Students who performed exceptionally in the Faculty's academic programmes were as follows:

First Class Awardees (LLB)-  
Undergraduate

**Emalene Marcus-Burnett**  
**Hanna Niamath**  
**Chelsie Cox**  
**Aasha Ramlal**  
**Kurrisha Aberdeen**  
**Valini Marcial**  
**Suraj Sakal**  
**Sarah Julien**  
**Shalini Ali**  
**Keizel Hayling**

### Most Outstanding Students Level 3

**Kurrisha Aberdeen**  
**Suraj Sakal**

### Most Outstanding Direct Entry Student 2019/2020

**Emalene Marcus-Burnett**

### Postgraduate Programme 2019/2020

- **Shani Carrington** - Master of Laws (LLM) with Distinction (Corporate and Commercial)
- **Melissa Mano** - Master of Laws (LLM) with Distinction (Corporate and Commercial)
- **Shireen Khan-Hyder Ali** - Master of Laws (LLM) with Distinction (Legislative drafting)

### Student Representation Abroad 2019/2020

The Mooting team from the Faculty of Law, St. Augustine, was awarded the 2nd Best Memorial for the State in English in the Inter-American Mooting Competition, OAS, Washington. The team members were **Aasha Ramlal**, **Michael Jagnanan**, and **Errol Williams**. The team was ably assisted in their preparation for the competition by 2019 - 2020 Moot and Education Committee Chairperson **Wesley Ramnarine**, past mooter and current student **Shalini Ali**, and past students and mooters **Ajay Maraj** and **Jeron Paul**. The Faculty's newest and youngest member of staff, **Dr Emma Perot**, was the team leader and lecturer.

### National Youth parliament

Faculty LLB students participated in the 17th National Youth Parliament on Monday November 11, 2019 at the Trinidad & Tobago Parliament Chamber. Students debated on the topic, "*Should parents be held responsible for their children's social media activity?*" The UWI team won the best debate prize from the Parliament. (<https://www.youtube.com/watch?v=MrlInulRwpKY>)

# Faculty of Law

Special Scholarship for Law Students  
The Faculty's initiative to broaden and diversify access to legal education continues to offer the Makandal Daaga Scholarship in Law. This is an innovative scholarship, aimed at the underprivileged by allowing applicants to matriculate to The UWI based on outstanding social activism. This year the Faculty proudly presented the first Makandal Daaga Scholarship graduate **Mr Kareem Marcelle**.

## *Dean's Honour List (LLB)*

The Dean's Honour List which highlights students who have attained a GPA of 3.60 and above in Levels 1, 2, and 3 of each Semester of the academic year continued to be a popular incentive for student performance. Seventy-four students were on the Dean's List for the academic year 2019/2020.

Opportunities for Representation under the IHRC Course and LLB Curriculum  
The Faculty continues to identify creative programmatic opportunities for existing students and to incentivise potential students, focusing on public and community engagement and outreach. Under the aegis of UWI Faculty of Law's (FOL) project entitled '**Strengthening Trinidad & Tobago's Human Rights Capacity through Innovative Legal Education Delivery**', which is funded by the **European Development Fund** through the **Ministry of Education**, the FOL's International Human Rights Clinic (IHRC) once again consolidated its work and took to the global stage to raise awareness about human rights infringements in Trinidad & Tobago – this time focused on the remand system.

The IHRC LLB course continued, providing access to students to relevant, extraordinary learning through research and activism partnering with NGOS, lawyers, international agencies and the public sector. The course is designed to accompany the work of the IHRC and be co-funded by research projects. Students were assigned a topic (Refugees) to complement the work of the Clinic and the implementation of the EDF human rights project grant, working alongside NGOs and attorneys-at-law. The course was directed by an adjunct lecturer, a human rights attorney and activist. Students participated in a historic hearing before the Inter-American Commission on Human Rights, Washington on '**Access to Rights for Migrants**.' The course is in sync with the Faculty's vision to ensure full, equal participation in all scholarly and advocacy activities. IHRC students visited the prisons and built strategic relationships with prison authorities. With the COVID-19 pandemic affecting visits, the Faculty quickly transitioned to virtual meetings to ensure that the students received as much exposure as possible.

The LLB syllabus, in its attempt to meet its objectives and to be innovative and relevant, included presentations at international organisations such as hearings before the Inter-American Commission on Human Rights in Washington as part of the IHRC course; and at an international Moots in the US, as part of the Faculty's Moot course.

On September 23, 2019, a three-member team delivered a detailed,

well-substantiated presentation on the matter of 'Due Process and Remand Injustice in Trinidad & Tobago' before the Inter-American Commission on Human Rights (IACHR's) at the IACHR's 173rd Period of Sessions in Washington D.C.

Professor Rose-Marie Belle Antoine (Dean of The UWI Faculty of Law and former Commissioner and President of the IACHR), along with two students from the FOL's IHRC, **Ms Jenelle Corraspe** and **Ms Shyra Wattley**, spoke of issues related to the excessive and unjustifiable periods of incarceration on remand; the inadequate facilities and legal support for remand prisoners; the special considerations for female prisoners – especially those who are victims of domestic violence; and the need for bail and alternatives to remand. (<https://sta.uwi.edu/law/newsfeatures/HearingonDueProcess.php>)

## *Postgraduate Programmes*

The LLM, a successful self-financed postgraduate programme, increased its offerings to include Legislative Drafting, Banking Law and Intellectual Property.

## *Prize giving Ceremony*

Faculty of Law was among the first Faculties to host its Prize Award ceremony virtually. The Faculty's Prize Award ceremony was held on Thursday 3 December 2020. Senior Council **Sophia Chote** was the distinguished Featured Speaker and her presentation provided a rich tapestry of learning, motivation and inspiration for the graduating class. <https://www.youtube.com/watch?v=jGP8g04g-Mo&t=100s>

### *Faculty Adjustments in light of COVID-19*

Following the closure of the campus on March 13 because of COVID-19, teaching staff held an emergency meeting on Sunday March 15 via ZOOM with all staff including tutors and adjuncts to prepare for delivery and continuation of teaching. Faculty agreed that teaching could continue using the available technology including ZOOM, Mylearning and Blackboard Collaborate (BBC). Online delivery began almost immediately with staff participating in BBC training delivered by CETL. There was a very high level of coordination and support from the teaching and administrative staff as staff moved forward to ensure that no student was disadvantaged by the transition to deliver classes online. The Faculty resumed teaching on Tuesday March 17, despite a few clashes, classes continued without further delay.

- Saturday 4 April, Faculty hosted a Town Hall meeting with all students, providing information relating to Faculty's response to the COVID-19 pandemic, its effect on examinations, students' concerns regarding access to computers, internet, and other resources.
- After receiving a policy paper from UWI Management regarding proposals for alternative assessments in light of the COVID-19 pandemic and the nation's 'stay at home' directive, Faculty held an emergency Faculty Board meeting on March 26 to discuss delivery of assessments

online. Also in attendance were two student representatives (both outgoing Law Society President and the incoming Law Society President). All staff were informed on May 5 that the adjusted examination assessments would be asynchronous and that the examination period was finalised as May 25 – June 19, 2020.

### *Faculty of Law Open Day*

Faculty hosted its Virtual Open Day on July 07, 2020. (<https://www.youtube.com/watch?v=CVsSKw0jzlw>)

## **Research**

### *International Human Rights Clinic (IHRC)*

The Faculty's IHRC continues to be an innovative legal education and staff development concept aligning the Faculty's curriculum, academic staff, and students with NGOs, attorneys, the state and international organisations. Students and staff engage in human rights activism and research with Clinic partners. The research outputs are integrated into ongoing faculty donor project activities including international presentations and litigation and aim toward law reform and social change. The Clinic and donor-funded research projects have proven to be powerful mechanisms to foster meaningful academic and industry partnerships with significant potential for research and litigation. The Clinic concept meets all three Triple A strategic goals. It is aligned with strategic partners: NGOs, state, law practitioners and international organisations within the LLB course framework. It was also the basis for yet another successful bid for EU project funding.

Faculty of Law/University of the West Indies Rights Advocacy Project (U-RAP) U-RAP is an outreach project of the Faculty of Law, established prior to the creation of faculties on three campuses. It includes the participation of six lecturers on the Mona, Cave Hill and St. Augustine Campuses and is coordinated by **Arif Bulkan** and **Tracy Robinson** who are also co-founders of U-RAP with **Douglas Mendes SC**. STA law faculty member **Jewel Amoah** is also a member of U-RAP. U-RAP's mission is to promote human rights and social justice in the Caribbean by undertaking and participating in strategic litigation, socio-legal research and legal education in collaboration with Caribbean lawyers, scholars and civil society organisations and by working with students of the Faculties of Law. Through these activities the project aims to generate greater respect for and understanding of human rights in the Caribbean.

In 2010, under U-RAP's leadership, a constitutional challenge was filed against s 53 of the Belize Criminal Code, which section made it an offence to engage in 'carnal intercourse against the order of nature'. The primary litigant was **Caleb Orozco**, with lead counsel being Trinidadian Senior Counsel Christopher Hamel-Smith along with U-RAP member and Cave Hill faculty member **Westmin James**. In 2016, the High Court of Belize invalidated s 53 to the extent that it criminalised consensual sex between adults, see: **Orozco v AG of Belize** (2016) 90 WIR 161. A limited appeal filed by the State was dismissed by the Court of Appeal of Belize on December 30, 2019, the court holding unanimously that s 53 violates

# Faculty of Law

the rights to dignity, privacy, freedom of expression and equality before the law, and cannot be justified, see: **AG v Orozco** [2020] 2 LRC 501. This landmark case is the first of its kind in the Commonwealth Caribbean to invalidate one of the region's enduring unnatural crimes laws.

The **Orozco** case, which was conceptualised and led by U-RAP, has received significant attention from human rights organisations, lawyers, and regional and international media. See, for example:

- Crosspost: UNIBAM Press Release On The Belize Court of Appeal Decision About The Caleb Orozco Case | OutRight Action International (outrightinternational.org)
- Belize Court of Appeal upholds ruling against gay sex ban | Lead Stories | Jamaica Gleaner (jamaicagleaner.com)
- Victory for Orozco & LGBTI persons in the Caribbean: A Decade in the Making - Stabroek News
- Belize Court of Appeal upholds ruling that struck down sodomy law (washingtonblade.com)

## **Grant won by U-RAP**

U-RAP received a grant of US\$150,000.00 from the **Open Society Foundation** for a two-year period, from February 2018 - February 2020, to undertake strategic litigation, conduct sociolegal research and public legal education. The grant period was extended by two years, to end in February 2022, and under it **U-RAP** is collaborating with **Red Thread**, an NGO in **Guyana**, to launch strategic litigation in the area of intimate partner violence.

## **Donor Funded Research Projects**

The Office of the Dean won its 4th project, an EU competitive bid, this time to the amount of 175,000 Euros, for a project on Remand Injustice, with Special Emphasis on Female Remandees and Domestic Violence. The Faculty will continue to bid for and implement competitive Research/Advocacy funding grant projects envisaged as academic and developmental tools for staff, students and the Faculty at large.

## **EDF Human Rights Project**

Work continued on the donor project '**Strengthening Trinidad & Tobago's Human Rights Capacity through Innovative Legal Education**', funded by the **European Development Fund** (EDF project) for the amount of TT\$1.5 million administered by the **Ministry of Planning**. The project manager is **Keisha Garcia** and the Project Leader is **Professor Rose-Marie Antoine**. This 2-year project involves an innovative legal education concept integrating the Faculty's new International Human Rights Clinic and corresponding LLB course with NGOs, the state, faculty staff, students and practising attorneys within a dynamic programme of research, advocacy, activism, litigation and outreach. All 3 UWI strategic goals are highlighted.

## **New EU Project**

The Faculty was successful with its bid for the EU Project, worth TT\$1.6 million on **Remand Injustice with Special Emphasis on Domestic Violence in Murder Cases**.

## **Continuing Research and Legal Education Through Other Conferences and Workshops**

The Faculty ambitious and versatile programme of continuing legal education was again realised through conferences and workshops, highlighting subjects of interest in its research and innovation agenda. It served key constituents, hosting successful workshops and public lectures, partnering with key stakeholders and attracting over \$600,000 in funding. The offerings for the year included a visit of the Co-Chairs of the Glasgow/UWI Reparations Initiative.

## **Strategic Review**

### **Access**

During the 2019/2020 period the Faculty engaged in curriculum renewal initiatives, including receiving approval of revised LLB course outlines for implementation in the 2020/2021 academic year. Collaboration improved between course directors and tutors which led to a higher quality experience for students. The Faculty was awarded the 2nd Best Memorial for the State in English in the Inter-American Mooting Competition, OAS, Washington 2019/2020 period. Communication commenced between the Faculty and University Global Online Director Pauline Coble to pursue its plan to put in place at least two courses online.

### **Alignment**

During the period under review, the Faculty of Law created the International Human Rights Clinic via course LAW 3892. This course saw groups in academia and NGOs coming together.

Despite the COVID-19 challenges, the Faculty hosted a series of workshops and seminars and was awarded a European Union Grant contract titled, *'Addressing Human Rights Abuses of Remand Prisoners with Special Emphasis on Domestic Violence Murder Cases'* for 30 months.

**Agility**

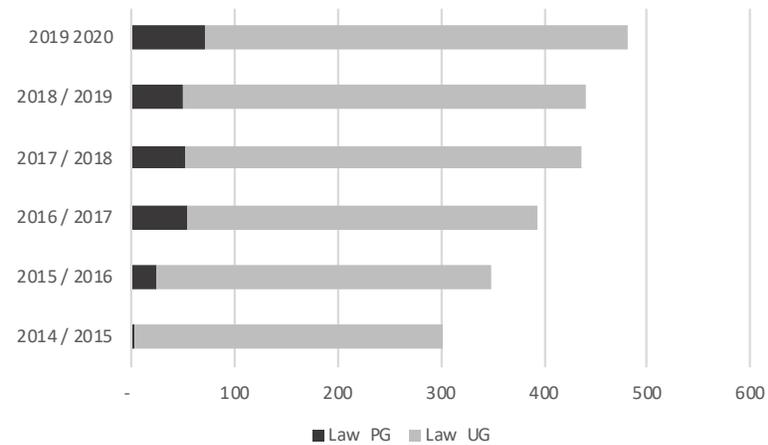
The Faculty was awarded a donor funded research grant and recruited one Senior lecturer and one Academic lecturer. The Faculty also engaged in extensive training to ensure an efficient transition to online teaching due to the COVID-19 challenges.

**Distinguished Visitors**

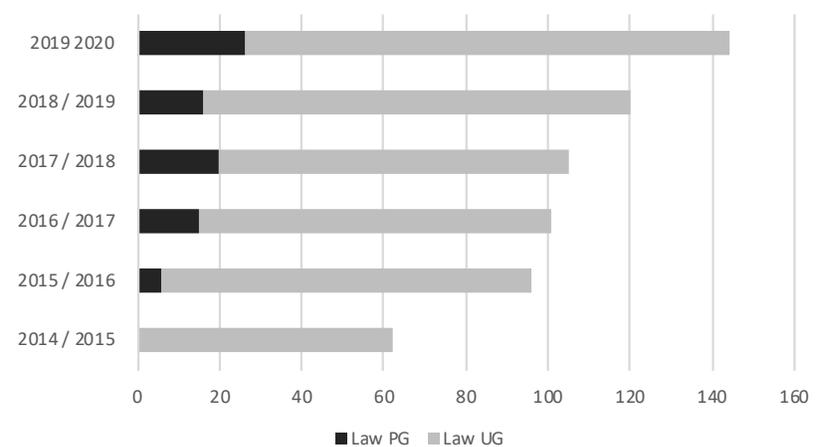
**Justice Donna Prowell**

President of the Equal Opportunity Tribunal

**Enrolment Trends: Faculty of Law**



**Graduation Trends: Faculty of Law**



Source: Campus Office of Planning and Institutional Research (COPIR)

# Faculty of Medical Sciences

## Dean's Summary

**T**he Faculty of Medical Sciences (FMS) at UWI St. Augustine has five schools:

- School of Dentistry (SoD)
- School of Medicine
- School of Pharmacy (SoP)
- The UWI School of Nursing (UWISoN)
- School of Veterinary Medicine (SVM)

One programme, Optometry, is offered under the School of Medicine. The Faculty offers some 40 postgraduate programmes and six undergraduate programmes, and 560 academic, administrative, technical staff and service staff including 17 professors, 115 lecturers. The Faculty delivers teaching to roughly 3,000 students, about half of whom are in the School of Medicine. All of the programmes offer compulsory face-to-face teaching of clinical skills in small groups in the final two to three years of undergraduate training. The downturn in Trinidad & Tobago's economy has led to a deficit in income for the Faculty over the past two years and the Faculty has had to resort to deficit spending. Nevertheless, staff have responded admirably to this challenge and there has been widespread 'belt tightening'. Over the past year the Faculty has published 248 papers and despite the COVID-19 pandemic has produced 345 graduates among the Class of 2020.

As the pandemic spread to and through the Caribbean, prompting the closure of national borders, the Faculty has relied upon online delivery of courses wherever possible in order to comply with the country's strict COVID-19 public



**Professor Terence Seemungal**  
Dean

**Postgraduate enrolment stood at 475, while undergraduate enrolment was 2,305. Thirty-one students graduated with higher degrees and Diplomas at the end of the academic year while 345 had earned undergraduate degrees.**

health regulations. Among the impacts was a one month delay in the issuing of the final graduation list for the MBBS degree (July instead of June 2020), and in December 2020 the Faculty held the first online DM examinations for 115 students. Although it is out of the reporting period, it should be noted that Clinical students were allowed back onto the wards in November 2020 and in January 2021, the last group (year 4) began their face-to-face ward-based training in nursing and medicine. The School of Dentistry was hardest hit by the pandemic as most related procedures are generate aerosols. However, following guidelines issued by the Dental Council of Trinidad & Tobago, these students have also been gradually resuming curriculum delivery consistent with the Trinidad & Tobago Public Health Regulations.

To diminish any potential alienation of staff and students, the Faculty had a weekly COVID-19 committee meeting comprising the Faculty Executive Committee, together with Administrative, Technical & Service (ATS) Staff and student representatives where problems were resolved collectively. This continued until curriculum delivery resumed in June 2020. In March 2020, teaching in some departments was extended to the **Scarborough General Hospital in Tobago**. Although the pace of this expansion was slowed due to the pandemic, we expect that it will continue in the following academic year.

As part of the national effort to combat the spread of COVID-19, one SVM Laboratory, a lecture theatre and a

teaching laboratory were handed over to the **Ministry of Health** to conduct COVID-19 PCR testing. **Dr Roxanne Charles, Dr Candice Sant, Mr Lemar Blake, Dr Sannandan Samlal, and Professor Chris Oura** were involved from the inception of the COVID-19 Pandemic in the initial setting up and validation of the PCR lab for testing samples, and training of **Trinidad & Tobago Public Health Laboratory (TTPHL)** technicians. At the end of the 2019/20 academic year the Faculty provided 50 students to assist the Ministry with data collection and monitoring of the COVID-19 protocols.

The UWI School of Nursing hosted a Fulbright Scholar, who supported the MScN (Advanced Practice Nursing) programme. The curriculum for a new BSc in Midwifery was sent for University approvals and approvals for the MScN curriculum are also being sought. The SVM secured two **Food and Agricultural Organisation (FAO)** grants and lead investigator status on a project funded by the **Pan-American Health Organisation (PAHO)** and the **European Union (EU)**.

The Faculty, in conjunction with the **Caribbean Centre for Health Systems Research and Development (CCHSRD)**, hosted three symposia on COVID-19. A Memorandum of Understanding (MOU) has been negotiated with the **Trinidad & Tobago Medical Association (TTMA)** to allow for continuing professional development for our graduates. The SoP conducted a webinar on Complementary and Alternative Medicines on 29 July 2020 with

**Delhi Pharmaceutical Sciences and Research University**, New Delhi, India.

The SVM continues to be at the forefront of national issues addressing human and animal health and welfare. One student, **Ms Monique Kellman**, SVM Class of 2022 was appointed in October 2019 to a Cabinet Committee to develop Animal Welfare Standards.

The Faculty of Medical Sciences continues to support the Government and people of Trinidad & Tobago through the development and delivery of courses at the forefront of knowledge and to assist the Government in meeting the challenge of the COVID-19 pandemic.

## Enrolment & Graduation

Total enrolment in the Faculty of Medical Sciences in the 2019/2020 academic year was 2,780 according to official figures from the Campus Office for Planning & Institutional Research (COPIR). Postgraduate enrolment stood at 475, while undergraduate enrolment was 2,305. Thirty-one students graduated with higher degrees and Diplomas at the end of the academic year while 345 had earned undergraduate degrees.

## Research

Following are examples of the latest research undertaken at the Faculty of Medical Sciences.

### SCHOOL OF MEDICINE

Department of Clinical Surgical Sciences

**Dr Satyendra Persaud** applied for and received a research grant for ongoing research, (CRP.3.NOV19.26) *The Economic Impact of Urinary Tract Stones at a Tertiary Referral Centre in South Trinidad.*

# Faculty of Medical Sciences

## Department of Clinical Medical Sciences

**Monplaisir T, Teelucksingh S, Ali R, Nayak S** *Evaluation of clinical and biochemical profiles of patients undergoing coronary angiography at a selected hospital in Trinidad.* Heart failure Interventions in Black and Indian South Caribbean people - Utilisation Study - The HIBISCUS Project Group – a cross campus collaboration between St. Augustine and Cave Hill Campuses of The UWI. Global Hearts Initiative – a hypertension control project being implemented across the Caribbean.

**Ali R, Baboolal N, Teelucksingh S, Sakhamuei S et al.** *DiSCoVID Cohort Study Trinidad & Tobago. Study on Disease Severity, Complications, and Outcomes in COVID-19 patients in Trinidad & Tobago.* The severe acute respiratory syndrome coronavirus-2 (SARS CoV-2) infection is responsible for the current coronavirus disease 2019 (COVID-19) pandemic affecting nearly six million people worldwide to date. Infection with this virus is causing a broad clinical spectrum and varying outcomes. The study seeks to establish a database of all COVID-19 patients in Trinidad & Tobago, including their sociodemographic, clinical, biochemical, radiological characteristics, and disease severity, complications, and outcomes. Researchers proposed an observational cohort study of patients managed in Trinidad & Tobago Health facilities for a SARS-CoV-2 infection. It should be noted that at the time of the proposal, locally there were 117 cases of COVID-19 with 8 deaths and 108 recovered cases.

A number of other staff members undertook COVID-19 research. These included **Khan K, Baboolal N, Reid S, Hutchinson G, Hypolite I, Ivey M, Malcolm T.** *Psychological and Mental Health Impact of COVID-19 Pandemic (PSYMIC) in Trinidad & Tobago;* **Rampersad F, Maharaj P.** *Review of radiological findings of COVID-19 patients;* and **Baboolal N,** *COVID-19 Psychiatric Morbidity.*

Other research topics within the department were: **Hutchinson G.** *Intrepid, Epidemiology of Psychosis in 3 Countries.* (Award of grant by Wellcome Trust); **Seecheran N, Jagdeo C, Seecheran R, Seecheran V, Persad S, Peram L, Evans M, Edwards J, Thackoorcharan S, Davis B, Davis S, Dawkins B, Dayaram A, De Freitas M, Deonarinesingh T, Dhanai J, Didier C, Motilal S and Baboolal N.** *Screening for depressive symptoms in cardiovascular patients at a tertiary centre in Trinidad & Tobago: investigation of correlates in the SAD CAT study;* and **La Foucade A, Davis G, Baboolal N, et al.,** *The socio-economic determinants of multi-morbidity among the elderly population in Trinidad & Tobago.*

**Dr Curt Bodkyn** took on the role of Co-Caribbean Physician Lead / Country Lead on **The SickKids International Caribbean initiative (SCI).** *The Sick Kids – Caribbean Collaboration in Cancer and Blood Disorders* focuses on the development of research, education and training in Paediatric Oncology and blood disorders in the Caribbean. The main objective is to build capacity

for the delivery of care for children with cancer and blood disorders in the Caribbean region. This is a TT\$40 million (CA\$8 million) philanthropic fund across six islands: **Jamaica, Saint Lucia, St Vincent and the Grenadines, Bahamas, Barbados and Trinidad & Tobago.** Funds are administrated by The UWI.

*Exposures in Childhood and Cancer Risk in the Caribbean.* This community-engaged academic partnership proposes to start a new cohort consisting of children and their parents (N total=6000; 2000 children) residing at two study sites in the Caribbean: **Suriname and Trinidad & Tobago.** Environmental exposures during childhood and adolescence affect risk of cancer. This US-relevant cohort will examine environmental exposures in racially and ethnically diverse health disparate, understudied children and the associated cancer risks, in particular risk of cancer in adolescents and young adults (AYA). Collaboration with **University of Pittsburgh Graduate School of Public Health (lead), University of Pittsburgh Hillman Cancer Center, Tulane University School of Public Health and Tropical Medicine University of the West Indies – St. Augustine, Foundation for Scientific Research Center Suriname (SWOS), Foundation for Perinatal Interventions and Research in Suriname (Perisur), University of Alabama at Birmingham, Consortium of Universities for Global Health (CUGH), Anton de Kom University of Suriname.**

**Dr Stanley Giddings** embarked on a study of *Predictors of positive CSF cultures in patients with suspected meningitis at Port-of-Spain General Hospital and San Fernando General Hospital from 2010 to 2015* (Campus Research and Publication Fund Committee grant – CRP.3.MAR16.37-\$20,000.00).

### Grants

**Dr Curt Bodkyn** is lead investigator for the Trinidad study site of the **American Society of Hematology (ASH), Children's International Consortium on Acute Leukemia (C-ICAL)**. The study aims to develop a treatment protocol for children in the Caribbean suffering from Acute Lymphocytic Leukemia (ALL), a type of cancer of the blood and bone marrow. Researchers hope to improve survival and reduce early tumour-related deaths. Funding was received in 2019 for data management to the tune of US\$24,000.00 over three years upon patient enrolment.

**B.S. Nayak, P.K. Sahu, K. Ramsaroop, S.Mahara, W.Mootoo, S. Khan, R.M. Extravour** *Prevalence and factors associated with depression, anxiety and stress among healthcare workers of Trinidad & Tobago during COVID-19 pandemic: A cross-sectional study*. This study conducted in Trinidad & Tobago, and the wider Caribbean region describes the prevalence of depression, anxiety and stress among healthcare workers during this COVID-19 pandemic. The findings showed the need for continued assessment of the psychological impact of the COVID-19 pandemic on frontline healthcare workers in Trinidad & Tobago, who

are vital for the proper functioning of health institutions. The conclusions will serve as supportive evidence for the timely implementation of further planning of preventative mental health services by the **Ministry of Health** for frontline workers within the public and private health sectors.

The study may be reproduced fairly easily, therefore it can be used in different regions of the world as a means of identifying the psychological wellbeing and the impact of the unprecedented pandemic on its healthcare workers.

**B.S. Nayak, S. Jaggernauth, A. Jaggernauth, P. Jadoo, N. Jagmohansingh, V. Jaggernauth, R.Hosein, B.Issarie, J. Jaikaran** An Assessment of the Risk Factors and Concerns of Postpartum Depression amongst Mothers Seeking Healthcare in North Central Trinidad. This study comprised 360 postnatal women among whom 4.7% were diagnosed with postpartum depression, while 40% scored  $\geq 10$  in the Edinburgh Postnatal Depression Scale (EPDS) which indicated a risk for postpartum depression. This research revealed seven significant predictors of PPD: family history of mental illness, baby blues, mood swings during period, use of oral contraceptives, emotional support, life stress and being diagnosed with depression ( $p < 0.05$ ). Other characteristics like socio-demographics were not remarkably correlated but marginally indicative of depressive signs. The study shows that many risk factors for PPD exist, and screening and treatment should be used to avoid its consequences.

**B. S. Nayak, J. Thom, S. St. John, S. Swann, S.Trotman, B. Thomas, D. Townsend, N. Ojar, L. Thomas** *Significance of Serum Protein Electrophoresis in the Detection of Multiple Myeloma: A Diagnostic Interpretation of Patients with Varied Immunoglobulins*. Multiple myeloma is a cancer that forms in plasma cells, a type of white blood cell. The median age of Multiple Myeloma (MM) patients in Trinidad & Tobago is 69 years. The ratio of male and female patients with the MM is 50:50. Out of 131 patients, 24 (18.32%) had M bands present, 60 (45.80%) had an increase in gamma globulin, and 16 (12.21%) had a decrease in albumin. In cases of M band presence and raised gamma, there was noticeable increase in IgG concentration and a slight increase in IgM concentration. There was also an increase in IgA concentration in patients with the M-band but a decrease in concentration in those with raised gamma. Patients with an elevated gamma had a significant increase in IgG diameter and IgG concentration. There was not satisfactory data to determine a correlation between SPE and serum immunoglobulin profiles in patients with MM, but the study provides sufficient data to indicate the possibility of linkages in greater sample sizes. Additionally, SPE and serum immunoglobulin profiles can be effective tools in the screening process and early detection of MM but further testing is necessary before the final diagnosis.

**B. S. Nayak and P. K. Sahu** *Stress among Health Professions Students*. Depression, anxiety and stress are the most prevalent mental health problems

# Faculty of Medical Sciences

among students pursuing health professions. The objective of the study was to explore the socio-demographic and educational factors associated with depression, anxiety and stress among health professions' students. Using non-random purposeful sampling, 366 health professions' students were studied in 2018/19. Selected students were surveyed via a self-reported questionnaire that included Depression, Anxiety and Stress Scale (DASS-21) and questions on sociodemographic and educational characteristics. Data were analysed using chi-square and binary logistic regression in Statistical Software for the Social Sciences. The majority of respondents were from the School of Medicine (59.8%), with 116 males and 250 females which reflect the gender distribution of the student population.

Sleep duration, communication problems with teaching staff, feelings of inferiority to friends and family problems were determined to be independent predictors of depression in the current study. Communication problems with teaching staff, feelings of inferiority to friends and family problems were important predictors of anxiety. Further, we found that feelings of inferiority to friends and family problems were found to be important risk factors for stress. Results suggest that the overall prevalence of depression, anxiety and stress among health professions' students was considerably high. This study also identified social and educational factors associated with mental health problems. All students having a severe negative emotional status consistent with depression, anxiety and stress should be supported by the student

counselling centre and expert clinicians in order to confirm the diagnosis and implement subsequent treatment strategies.

**A. Ramjag, G. Simmons, C. V. F. Carrington** *Characterisation of emerging viruses and protective immune responses against them in humans.* Emerging viruses are becoming increasingly common. Recent examples include Dengue viruses, human immunodeficiency viruses, SARS coronavirus, H1N1 influenza, Chikungunya virus, Ebola virus, Zika virus and the novel coronavirus from Wuhan, China. This trend is expected to continue but it is difficult to predict when and where each emergence will occur, and previously unknown viruses of animals that adapt to and emerge into human populations (e.g. HIV) are impossible to predict.

With each newly arrived virus there is a need to rapidly characterise the virus and develop specific tests, vaccines or therapeutics. In particular sensitive and specific diagnostics tests are required since most viral infections initially present as acute undifferentiated fevers that are clinically indistinguishable, and a significant proportion may be asymptomatic. This requires knowledge of the viruses' genetic structure and an understanding of the human immune response to the virus.

The aim of this study is to detect and characterise emerging viruses associated with acute undifferentiated fevers and to characterise immune responses against them with a view to developing novel diagnostic tests, therapeutics and vaccines.

G. Simmons, **A. Ramjag, C. V. F. Carrington** *Protective B-cell responses in Chikungunya virus (CHIKV) infection.* CHIKV has created a major public health impact in the Americas. CHIKV causes extensive human and economic damage, primarily due to acute fever and arthralgia and post-viral chronic joint pain/arthritis. Currently no licensed therapeutic treatments or vaccines exist for CHIKV. We will address the important public health threat posed by CHIKV by identifying lead candidate monoclonal antibodies for development into treatments capable of being used both prophylactically and therapeutically.

**K. Badal, R. Haracksingh, J. E. Foster.** *An investigation of epidemiological, pathological and genetic predictors of breast cancer onset and outcomes in Trinidad.* There is a paucity of information describing the genetic and other epidemiological factors driving the breast cancer (BC) burden in T&T. Though studies have shown that geography and ethnicity are associated with higher incidence and mortality rates across Trinidad & Tobago, and the presence of three BC susceptibility genes – BRCA 1, BRCA 2 and PLAB2 – among women with breast cancer in Trinidad (10% penetrance), none have looked at the influence of these factors on BC survival. Prognostic tools are a part of BC patient management in more developed countries, aiding in the determination of more tailored treatment regimens for individual patients. Such tests have limited applicability in Trinidad & Tobago due to the unique and diverse multi-ethnic population. For this reason, there is

need to investigate our population-specific predictors of disease outcome.

This study aims to determine predictors of breast cancer outcomes on a Trinidad breast cancer cohort, by comparing somatic and germline mutations, along with the prevalence of known susceptibility genes in order to fill the aforementioned knowledge gap on genetic, epidemiological and pathological factors affecting BC prognosis. A manuscript describing an epidemiological review of factors associated with outcomes for women with breast cancer receiving treatment at the hospital study site is in preparation.

H. Singh, **J. E. Foster**, D. Ramdath, K. E. Nelson *Dietary modulation of gut microbiome and host gene expression across human evolution and the emergence of modern human disease.*

This study aims to investigate the interaction of dietary changes, gut microbiome and disease phenotypes in an Afro-Trinidadian cohort. We will characterise the gut microbiome and metabolome of an industrialised human cohort historically susceptible to metabolic syndrome and chronic inflammation (i.e. Trinidad), which will be compared to other human populations representing diverse subsistence patterns, including hunter-gatherers and traditional agriculturalists from Central Africa, and an industrialised western human population. This project is in collaboration with the principal investigators at the **J. Craig Venter Institute (USA)** and has been granted **US National Institutes of Health (NIH)** funding.

**B. S. Nayak, V. Rodrigues A.V.C Rao.** *Evaluation of hypoglycemic and hepatoprotective activity of Moringa oelifera and Morinda citrifolia leaf extracts in diabetic rats: A comparative study.* Diabetic experimental animals treated with *M. oleifera*, showed a significant decrease in fasting glucose from 236 mg/dl (day 1) to 171mg/dl (day 14), and this represented a decrease of 26 %. The animals treated with *M. citrifolia* showed a decrease in fasting blood glucose from 257 (day 1) to 169 (day 14) (34 %). The diabetic standard group showed the reduction in fasting blood sugar from 251mg/dl to 134 mg/dl (47%). Histology results showed no adverse effects of leaf extracts on liver. The date of this study showed that *M. citrifolia* has higher hypoglycemic activity than *M. oleifera*. However, our study recommends the use of both either individually or in the ratio of 1:1.

#### Department of Pre-Clinical Sciences Grants

**Farid Youssef** - Principal Investigator: *An investigation of prebiotic therapy on brain function in an obese rodent model.* Campus Research & Publications Fund (2019) TT\$20,000.00

**Farid Youssef** - Co-investigator: *Exploring the virtual empathy on social networking sites versus real life empathy among the undergraduate university students across five faculties.* Campus Research & Publications Fund (2019) TT\$40,000.00

Department of Para-Clinical Sciences  
**R. J. Edwards - Johns Hopkins Center for AIDS Research:** PI - Damani Piggott 05/01/17 – 04/31/20. *Comparative*

#### *Assessment of Aging Phenotypes between the Trinidad & Tobago and Baltimore HIV-infected Populations.*

This study compared the age-specific burden and determinants of frailty and multi-morbidity between the Trinidad & Tobago and Baltimore HIV-infected populations.

**Medical Research Foundation of Trinidad & Tobago:** PI- Jeffrey Edwards January-December 2019. *Syphilis among men who have sex with men (MSM) attending a large HIV Clinic in Trinidad.* A chart review study was conducted to determine the prevalence of syphilis and explore the associated risk factors among 218 MSM who attended a large HIV Clinic in Trinidad.

**S. Umakanthan** - Campus Fund Research Grant CRP.3. MAR14.10: Principal Investigator in Campus Research Project: *Role of Immunohistochemistry and Histochemical Studies in Neoplastic Lung Lesions.*

#### SCHOOL OF PHARMACY Patent filed

A US Patent for the novel treatment of Prostate Cancer using extracts prepared from a Caribbean plant has been filed with **Dr Diane Ignacio**, Lecturer of Pharmacy Practice as Co-inventor (2019/20).

#### Grants

**Dr Diane Ignacio** was awarded a Campus Publication and Research Grant (CPR) of TT\$75,000.00 for project titled *Isolating and Characterising the Active Anti-Prostate Cancer Constituents of Muscadine Grape Skin Extract.* (July 2020).

# Faculty of Medical Sciences

**Dr Madan Mohan Gupta** was awarded a Campus Publication and Research Grant (CRP) of TT\$29,500.00 for a project titled *In-Vitro Quality Control Testing of Different Brands of Antihypertensive Tablets Available in Trinidad & Tobago*. (2019).

## COVID-19 Research Challenges

The COVID-19 pandemic presented formidable challenges to the School of Pharmacy, mainly the inability to conduct face-to-face sessions with students in classrooms, laboratories and in clinical rotations, and the need to replot a course for the continuance of the University's business. The School conducted surveys to ascertain the ability of students to access and use virtual platforms. Lectures, Problem Based Learning, Continuous Assessments and Final Examinations were conducted virtually. Where required, staff were trained by the Centre for Excellence in Teaching and Learning to use myElearning and BlackBoard Collaborate, while administrative meetings and discussions took place on Zoom and Cisco WebEx videoconferencing software. Clinical rotations and clerkships were deferred until the University obtained permission from the Ministry of Health to allow face-to-face contact in a clinical setting. These sessions are being conducted with strict measures to mitigate the spread of COVID-19.

## SCHOOL OF NURSING

### Project Funding

The UWISoN was awarded a second tranche of US\$100,000.00 for the second phase of the *Disaster-Related Psychological Trauma and Mental Health Training for Nurses in the Caribbean*.

## SCHOOL OF VETERINARY MEDICINE

**A C Phillips - Enhancing National Health Standards in Aquaculture Systems (ENHSAS): Increasing Aquaculture Productivity, Improving Industry Sustainability and Reducing Deleterious Aquatic Habitat Impacts.** UNDP GEF-SGP Funded (US\$49,994.63). August 2017 - 2019

## CARIBBEAN CENTRE FOR HEALTH SYSTEMS RESEARCH

A paper from The UWI St. Augustine Caribbean Centre for Health Systems Research entitled *Health Systems' Resilience: COVID-19 Response in Trinidad & Tobago* was published in the *American Journal of Tropical Medicine and Hygiene* describing Trinidad & Tobago's successful response to the first wave of the COVID-19 pandemic. It identified the strengths and weaknesses of the national health system response and identified lessons for future waves of infection and for other countries.

## Research Funding

The **International Development Research Centre** provided CDN\$145,600.00 for the conduct of activities in support of evidence-informed policy-making towards Caribbean countries' achievement of the Sustainable Development Goals (SDGs) as well as their responses to the COVID-19 pandemic. The project "Rapid & Responsive Evidence Partnership" began in May 2020 and is expected to extend to December 2021 and will require direct engagement with Caribbean countries at the national and regional levels, and with stakeholders and citizens.

## COVID-19 Research Challenges

The pandemic resulted in a number of challenges, which included the postponement of the Inaugural National Health Research Conference, which had to be delivered virtually. The policy dialogue to address the topic "Strengthening Human Resources for Health in Trinidad & Tobago, to Achieve Universal Health Coverage, with Emphasis on the Primary Healthcare Workforce" was postponed from June 2020 to the first quarter of 2021.

Data collection on the studies, "Assessing Readiness for Change among mental health personnel for the Implementation of Community Based Mental Health Service in Trinidad & Tobago, and Health Systems Utilisation and Satisfaction by Older Adults in Trinidad & Tobago," was paused due to COVID-19.

## Research Opportunities Resulting from COVID-19

The CCHSRD established the FMS COVID-19 Research Group. The Group is multi-disciplinary and comprises researchers from all FMS Schools, as well as colleagues from the Sir Arthur Lewis Institute for Social and Economic Studies, Faculty of Social Sciences (Department of Economics) and Faculty of Engineering (Department of Geomatics).

The Group successfully coordinated COVID-19-related studies to ensure prioritisation and efficient utilisation of research resources thereby preventing duplication and promoting synergies. Over 30 projects have been developed by the Group that resulted in the

dissemination of timely research evidence to the **Ministry of Health** and the general population, as well as publications in international peer-reviewed journals and presentations at conferences. The CCHSRD led the conduct of two COVID-19 health policy and systems research (HPSR) studies: "An assessment of the preparedness of primary health care facilities in Trinidad & Tobago for COVID-19, and An assessment of the health system's response to the COVID-19 pandemic, Trinidad & Tobago."

## Strategic Review

### Access

#### SCHOOL OF MEDICINE

##### Department of Clinical Surgical Sciences

Part of the Department's COVID-19 response was to harness technology for teaching to allow the continuity in learning. The Zoom platform was used for both teaching and Objective Structured Clinical Examinations (OSCE) of undergraduate students, as well as blackboard collaborate for lecturers. The myElearning platform was used to share materials for rotations and for evaluation.

##### Department of Clinical Medical Sciences

The Department had to undergo a rapid shift to the online platform both for PG/UG and ensured that all academic staff were competent with the online learning platforms BBC, Zoom, and Cisco WebEx. The DM Paediatrics programme benefited from a cross-campus collaboration where lecturers in Haematology, Oncology and Rheumatology delivered a virtual lecture series in partnership with **SickKids Hospital, Toronto**.

Despite a delay caused by the pandemic, the Department introduced undergraduate and postgraduate teaching at the Scarborough General Hospital in Internal Medicine, Psychiatry and Paediatrics for 4th year Medical Students doing the MBBS programme. Postgraduate students enrolled in the DM Psychiatry can now also do part of their training at the **Scarborough General Hospital**, and in the future postgraduate students enrolled in the DM Paediatrics and Internal Medicine will be able to do part of their training there.

#### SCHOOL OF DENTISTRY

The new DDS Curriculum was introduced in September 2020 and all coursework, teaching, assessments, and examinations were conducted online.

#### SCHOOL OF PHARMACY

During the period under review, the School of Pharmacy developed a PharmD Programme (submitted to the Campus Principal for budgetary review) and a Self-Assessment Quality Report was developed as per the suggestions from the Quality Review Team.

#### UWI SCHOOL OF NURSING (UWISON)

UWISO collaborated with **Columbia University**, to host an international webinar under the theme '*Innovations in Online Clinical Nursing Education – in the context of COVID-19*' on 31 July 2020; and collaborated with **PAHO/WHO** to develop and introduce a Critical Care Nursing course. The Diploma in Health Visiting programme officially commenced 13 January 2020 and the BSc Midwifery curriculum was developed and approved by

CETL. Further approvals would be required from the Faculty Board and the Committee for Graduate Studies and Research.

#### SCHOOL OF VETERINARY MEDICINE

The **American Association of Veterinary Medical Colleges** granted collaborative membership to The UWI-SVM. This has improved the School's digital footprint internationally and given it access to cutting edge resources in the area of veterinary education. The School is now listed on this digital map <https://www.aavmc.org/about-aavmc/our-members/>.

### Alignment

#### SCHOOL OF MEDICINE

##### Department of Clinical Surgical Sciences

**Dr Desirée Murray** collaborated with the Faculty of Engineering and the **Trinidad & Tobago Manufacturers Association** to produce protective hygienic shields. Several dozens of these were donated to the **Ophthalmological Society of Trinidad & Tobago** for the eye units in public hospitals. She is currently on the Council of the **Trinidad & Tobago Blind Welfare Association** (nominated October 2020) and Chief Medical Officer on the **Workers' Compensation Board** as a Medical Referee, as specified in the Workmen's Compensation Act.

Dr Murray was also a panellist for the **National Medical Association** (USA) glaucoma and was interviewed by Trinidad & Tobago Television in observance of World Glaucoma Week (8 -14 March 2020) and International Women's Day (8 March 2020) - *Celebrating Women/Women in Medicine*.

# Faculty of Medical Sciences

## Professor Michael James Ramdass

fostered relationships with private sector companies, **A.A. Laquis** and **Bryden Pi** who sponsored consumables and Laparoscopic Kits for his surgical skills workshops.

## Department of Clinical Medical Sciences

The pandemic saw all UWI clinical staff provide support to the national Health Service to ensure that services kept running smoothly. The Department has membership on the Faculty of Medical Sciences COVID-19 research team. Efforts to enhance access to funding continue with Academic staff applying for funding for projects, including applications to the Campus Research and Publication Fund, the RDI Fund and international funding agencies.

## SCHOOL OF DENTISTRY

Outreach continues to be an important part of the School's mandate. The **Dental Students Association** conducted a virtual outreach to their selected charity, the **Mother's Union Children's Home** in December 2020. In recognition of World Cancer Day, the School of Dentistry participated in a health education outreach event together with the School of Pharmacy. This department outreach activity was organised through the Oral Diseases Unit by **Dr Candy Naraynsingh** (Unit Coordinator and Lecturer in Oral and Maxillofacial Surgery) and **Dr Kevin Henry** (Lecturer in Oral Surgery). These academic staff members coordinated a team of dental interns who provided a health education presentation on oral cancer, for members of the public attending the **St. Helena Health Centre**.

## SCHOOL OF PHARMACY

During the 2019/2020 period, the School visited Regional Health Authorities, TV/ Radio Stations, and hosted a number of webinars. An MOU with the **University of Bradford** is to be drafted. The School also embarked upon the process of filing a US patent and on the development of the PharmD Programme in alignment with the Mona Campus.

## UWI SCHOOL OF NURSING (UWISON)

The School hosted their annual Christmas hamper distribution and children's treat for members of the **Grande Rivière** community in December 2019. In January 2020 the UWISON was recognised as a **PAHO/WHO Collaborating Centre for Nursing and Midwifery** with an emphasis on policy and leadership. and the School hosted a Fulbright Scholar for five months from 12 January 2020 to 12 May 2020 (period was shortened to March 2020 due to COVID-19). Work continued to finalise Memoranda of Understanding between UWISON and **Columbia University, Duke University** and **Birmingham City University**.

## SCHOOL OF VETERINARY MEDICINE

The School received a number of grants for research during the period under review. These included:

- **The Promotion of Food Safety and Meat Hygiene in the Poultry Cottage Industry in T&T** (Food and Agriculture Organisation of the United Nations-US\$45,360.00)
- **Developing practical guidance on food safety in the management of aquaponics systems and in the sea moss value chain** (Food and Agriculture Organisation of the United Nations US\$29,450.30)

- **RA Training: Informant Interviews in One Health; Identify best practices, attributes or competencies for leadership in complex intersectoral problems** (University of Saskatchewan- \$10,000 CD)
- **Strengthening Climate Resilience Health Systems** – (PAHO/EU US\$100,000)

The School engaged with the **Caribbean Veterinary Network, Carib Vet** and the **United States Department of Agriculture** on **Heartwater Disease: Potential Worldwide Threats for Livestock**.

## Agility

### SCHOOL OF MEDICINE

#### Department of Clinical Surgical Sciences

The Department hosted courses in Antiphospholipid syndrome (APLS), Basic Surgical Intercollegiate Skills, How to Write a Surgical Paper, and Student Surgical Skills that generated over TT\$100,000.00 in profit.

#### Department of Clinical Medical Sciences

The department has engaged in cost cutting exercises including freezing posts for academic staff. There has been no travel for examinations, resulting in a significant decrease in expenditure for travel, hotel reservations and other related travel expenses. This is largely a result of travel restrictions due to the COVID-19 pandemic. Expenditure on purchases were reduced since the COVID-19 pandemic with fewer face-to-face meetings, fewer staff and students in building, and virtual meetings with peers across the region and internationally. Staff and Associate Clinical Instructors attended training courses run by CETL to transition teaching from face-to-

face to online using various platforms and to administer online assessments.

Academic staff members have been involved in several projects to foster international partnerships.

**Department of Pre-Clinical Sciences**

The Department created research collaborations with a number of other departments such as the Department of Maths and Statistics, Faculty of Science and Technology; the Department of Chemical Engineering, Faculty of Engineering; and the Department of Life Sciences, Faculty of Science and Technology. Cross departmental (Intra Faculty) research collaborations were created with peers across the Faculty of Medical Sciences. Staff participated in a range of CETL workshop on Online teaching and learning, and the use of Blackboard Collaborate.

**SCHOOL OF DENTISTRY**

A business plan was developed by the School of Dentistry and accepted at the Campus and University Finance and General-Purpose Committees. It is currently awaiting formation of the implementation committee.

**SCHOOL OF PHARMACY**

The BSc Mixed Mode Programme generated income for the School and provided continuing Pharmacy development training in Aseptic Preparation of Hazardous Drugs for Oncology. The School initiated the process of filing a US patent, and engaged in research partnerships with other international universities. Regular meetings were conducted to foster a CAMP Team.

**UWI SCHOOL OF NURSING (UWISON)**

UWISO received \$2,500,000.00 in scholarship funds for 50 nurses to pursue the Diploma in Health Visiting and another \$450,000.00 for 9 fee paying students.

**Distinguished Visitors**

**SCHOOL OF MEDICINE**

*Department of Clinical Surgical Sciences*

**Professor Desmond Nunez**  
University of British Columbia,  
External examiner for DM Exams December 2019.

**Ralph George**

University of Toronto  
External Examiner for General Surgery Dec 2019

*Department of Para-Clinical Sciences*

**Professor Henna Budhwani**  
Professor of Public Health Scholar  
University of Alabama at Birmingham (UAB)

**SCHOOL OF NURSING**

**Professor Barbara Pieper**  
Fulbright Scholar - Wound Care Specialist  
Wayne State University, Michigan.

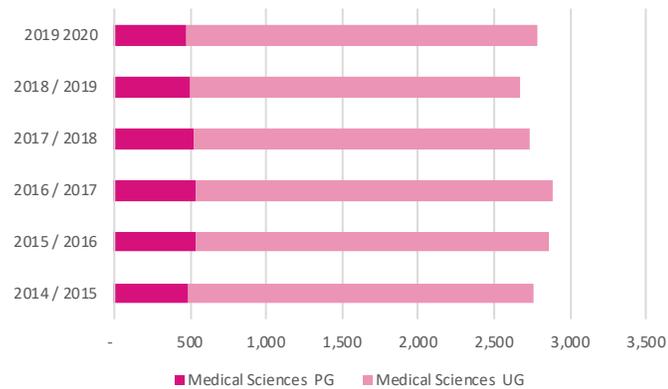
**SCHOOL OF VETERINARY MEDICINE**

**Dr Olatunji Nasir**  
President of the Commonwealth Veterinary Association  
Truthmiles Animal Hospital, Nigeria

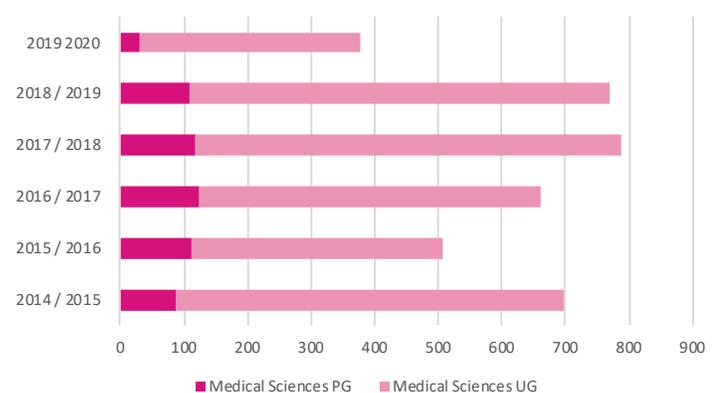
**Dr Satesh Bidaisee**  
Professor Public Health and Preventative Medicine  
St George's University, Grenada

**Professor Neil Olson**  
Dean School of Veterinary Medicine  
St. Georges University, Grenada

**Enrolment Trends: Faculty of Medical Sciences**



**Graduation Trends: Faculty of Medical Sciences**



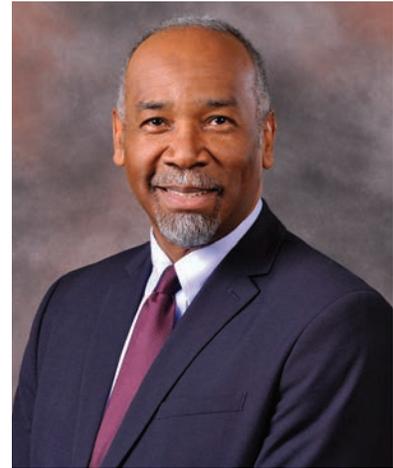
Source: Campus Office of Planning and Institutional Research (COPIR)

# Faculty of Science & Technology

## Dean's Summary

**L**ike many institutions, The UWI and, by extension, the Faculty of Science and Technology grappled with the financial effects of the COVID-19 pandemic as well as its impact on teaching and learning, during the second semester of the 2019/2020 academic year with respect to teaching and learning. The Faculty made a number of adjustments in order to keep courses accessible. These adjustments included moving some courses to 100% coursework and holding lectures and tutorials virtually via Black Board Collaborate (BBC). Case studies/virtual field trips were also utilised in place of in-person activities. Lectures and tutorials were recorded, and the recordings subsequently made available to assist students who may have had accessibility issues.

Practical lab sessions, traditionally designed for students to get hands on experience with conducting experiments, had to be quickly redesigned for online or virtual mode delivery via myeLearning and BBC. Experiments were delivered using a combination of free Web based resources as well as experimental data provided by the Department on myeLearning. In some instances, videos of the scientific procedures were made by demonstrators and provided to students. Assessments were administered as asynchronous take home assignments comprising open ended questions. Oral presentations by students were completed using BBC. The only aspect of the lab courses that could not be completed was the lab skills assessment that involved



**Dr Brian N. Cockburn**  
Dean

**Enrolment at the Faculty of Science and Technology was 2,807 in the 2019/2020 academic year. Of these, 2,305 were registered for undergraduate programmes and 502 at the postgraduate level. The Faculty remains the second largest on the Campus. Just under 500 students earned undergraduate degrees and 53 were awarded higher degrees and diplomas.**

the evaluation of students' skills in the manipulation of apparatus and instruments as well as the planning, designing, testing and execution of experiments. As students' lab skills evaluation is carried out in-person. To date, no virtual equivalent assessment to replace students' lab skills evaluation has been possible.

Only one Department (the Department of Computing & IT) was able to facilitate student internships. Consequently, students were not afforded the hands-on experience in the workplace that the Faculty would have wanted them to receive as part of their training.

For the Department of Chemistry, all internships had to be conducted in-house through special permission granted for them to enter the campus during lockdown. Six of these students were in line to graduate. Demonstrators were a key component to the successful delivery of the online or virtual lab courses.

Fiscal concerns, exacerbated by the pandemic, prompted sharper focus on the efficient conduct of all aspects of faculty functions. The Faculty ensured that departments maintained efficient teaching loads; expanded access by broadening outreach activities to include identifying new internship partners and activation of industry liaison committees; upgraded teaching and learning facilities; and improved internal processes.

The COVID-19 pandemic delayed the CAPE results which had a direct impact on The UWI student enrolment of Level 1 undergraduate students in Semester I. In an effort to facilitate student

registration, the commencement of semester I classes was delayed by one week and the course registration deadline was extended. This measure contributed somewhat to a smoother registration experience; it was felt that the quality of course delivery was negatively impacted in several ways. Lecturers felt challenged in coping with the issues of novel remote teaching and the shortened semester simultaneously and the extended registration deadline caused significant delays in both the delivery of course content, and the administration of assignments and other coursework assessments.

COVID-19 has certainly taught us that agility is important in successfully navigating the pandemic, as the situation is constantly changing. We have worked to address the challenges and shall offer improvements in Semester I as we engage in the online/remote mode of learning. The health, safety and well-being of our students and staff was, and continues to be, our highest priority in line with our mandate as major stakeholders in higher education.

## Enrolment & Graduation

Figures supplied by the Campus Office for Planning and Institutional Research show that enrolment at the Faculty of Science and Technology was 2,807 in the 2019/2020 academic year. Of these, 2,305 were registered for undergraduate programmes and 502 at the postgraduate level. The Faculty remains the second largest on the Campus. Just under 500 students earned undergraduate degrees and 53 were awarded higher degrees and diplomas.

## Student Achievements

### Undergraduate

#### Department of Chemistry

- **Ms Kiara Garcia** was the most outstanding undergraduate students in Chemistry for 2019/2020. She was awarded the Southern Systems Limited Prize for the best graduating student in Chemistry for 2019/2020. Ms Garcia also won the Massy Gas Products Trinidad Ltd. Prize for the best Year III performance in Chemistry.

#### Department of Life Sciences

- **Reyad Mohammed** - The Massy Group Prize for Best Level III Performance in Biology and The Professor Dave Chadee Prize for Best Performance in the Ecology & Environmental Biology Specialisation & The Institute of Marine Affairs Prize for Best Performance in the Marine Biology Specialisation.
- **Navin Ramdass** - The St. Augustine Medical Laboratory Prize for Best Performance in the Biotechnology Specialisation & The St. Augustine Medical Laboratory Prize for Best Performance in the Microbiology Specialisation.

#### Department of Mathematics & Statistics

- **Karishma Harrykissoo** - Head of Department Prizes Awarded for: Best Year III Performance in Actuarial Science
- **Renisha Ramkissoo** - TATIL Group Prize: Awarded for the best Year III performance in Mathematics

# Faculty of Science & Technology

## Postgraduate

Two PhD students graduated in 2019/2020, **Shanna-Kay Ming** (nee Spencer) and **Shobha Dhanpat**. Two MPhil students, **Veronica John-Luke** and **Nathan Maharaj** also graduated. Only two students were able to graduate from the MSc Occupational and Environmental Safety and Health programme in 2019/2020. Students of this programme were severely impacted by the COVID-19 Pandemic as they were unable to conduct their research in a timely manner. Many had to have their deadline for submission of their thesis extended.

## Postgraduate Prizes - DCIT

**Jason Mungal** - Teleios Systems Ltd. Prize – Awarded for the Best MSc Research Project in Computer Science, 2019/2020

## Postgraduate Student Supervision

### P. Mohammed

- **David Charles** – MSc Computer Science and Technology, Cloud Specialisation. *An Approach for Categorising Online News Articles in Trinidad & Tobago Based on The Group By Class Classification Algorithm*. Winner of Best MSc Research Project, 2019.
- **Jason Mungal** – MSc Computer Science and Technology, Cloud Specialisation. *Classifying Images of Scorpion Peppers with CNNs and Comparing Learned Features to Morphological Features*. Graduated with Distinction.
- **Rabindra Ramjattan** - PhD Plant Science. *A Study of Yield, Its Components and Their Genetics in Hot Pepper (Capsicum Chinense Jacq.)*

- **Lauren Ali** - MPhil Zoology. *A Biological and Social Examination of Commonly Exploited Shark Species in Trinidad & Tobago*
- **Madhavi Dookie** - MSc Biotechnology. *A Study of Flowering Gene Regulation in Tomato Plants Treated With Seaweed Extract*

## Department of Mathematics & Statistics

**Hassan Shah** - The Rose Marie Bissessarsingh-Mohais MS in Mathematics Prize

## Research

### Department of Chemistry

**Dr Nigel Kevin Jalsa**: One of his publications has been featured on all of Elsevier's Chemistry social media platforms. In this article the researchers demonstrated the utility of the green solvent, dimethyl ether, in being able to efficiently extract seed oil in yields superior to that of commercial processes (Subratti, A.; **Lalgee, J. L.; Jalsa, N. K.** Liquefied dimethyl ether (DME): A green solvent for the extraction of hemp (*Cannabis sativa* L.) seed oil. *Sustainable Chemistry and Pharmacy*. 2019, 12, Article 100144). The researchers also demonstrated that using waste electronic parts or recycled computer parts, they can build effective laboratory equipment for a fraction of the cost, but the same utility, as commercially available items. This is of benefit to not only high school and tertiary science students in Trinidad & Tobago, but worldwide as well. (Subratti, A.; **Lalgee, J. L.; Jalsa, N. K.** Robust, Efficient, and Economical Magnetic Stirrer: A Device Based on Pulsed Width Modulation, Built Using Mainly Recycled Parts. *Journal of Chemical Education*. 2020, 97, 305-307)

## Department of Computing & Information Technology

A number of staff members were awarded grants for their research during the 2019/2020 academic year.

**Drs M. Hosein** and **W. Goodridge** received a RDI Grant for the project, *A Resilient System for Communication under Disaster Conditions in the Caribbean*, on 29 July 2020. **Professor Patrick Hosein**, Shiva Ramoudith, and Inzamam Rahaman were awarded a CIBC Research Grant for *Data Mining, Optimisation, and Machine Learning for the Finance Sector* in June 2020.

The Project and Internship courses developed an app to aid in students' recruitment for the Marketing & Communication Office (M&C). The M&C will soon launch this app as the 'BeUWI Recruitment App'. The DCIT's Computing Connections Unit will take over the maintenance of the project for an annual fee. In Semesters II and III, Academic Year 2019/2020 the Project and Internship courses respectively developed an app that allowed students to make appointments with the Health Services Unit. This proposal is pending the Campus Principal's signature. The DCIT's Computing Connections Unit will take over the maintenance of the project for an annual fee.

## Department of Life Sciences

The Department has a few research projects that are currently in progress: **Professor J. Jayaram** and **Dr A. Ramsubhag**: Identification and characterisation of elicitor molecules from local seaweeds for plant protection. Currently under testing phase. (June 2019-July 2021)

**Dr Luke Rostant**, Professor John Agard, and Mrs Lee Ann Beddoe in conjunction with the **Environmental Management Authority**: continued work on *Public Sector Investment Programme (PSIP)- to develop a Management plan for the Ocelot (Leopardus pardalis)* and work on the National Restoration, Carbon Sequestration, Wildlife, and Livelihoods project. (June 2019 - ongoing)

**Dr Sephra Rampersad**: *Epidemiological profiling and genotype-chemotype relationships of major fungal phytopathogens* (2016 – ongoing) and *Novel microorganisms for bioremediation and industrial purposes*. (2018 to present)

**Dr Ayub Khan**: Continued joint projects with the Department of Chemistry for identification, isolation and testing of natural products with pest management potential. (2018 to 2021)

#### Challenges faced due to the COVID-19

As far as research is concerned, bench work was severely hampered - especially during the first three months of campus closure from mid-March 2020. The sudden closure of campus did not give postgraduate (PG) students an opportunity to properly secure ongoing experiments and retrieve data and information on campus in preparation for the prolonged loss of access to research labs. The break has caused some students to lose momentum on their research and has set them back a few months. Some experiments would have to be restarted. The overall effect of the pandemic on PG students' research would be a delay in the completion

of their degree programmes. Since PG students could only do limited work at the bench, students were advised to focus on other aspects of their degree programmes during the closure of campus: Literature review, completion of compulsory courses for the degree, writing aspects of their theses for work already completed. Once the COVID-19 protocols were in place - handwashing stations, limited lab occupancy, and mask wearing - PG students were able to return to their regular activities.

### Strategic Review

#### Access

##### Department of Chemistry

During the period under review, the Department has had to make a number of changes. Enrolment to the BSc Chemistry Option was suspended due to undersubscription and a draft proposal for rationalisation of program offerings to limit the number of undersubscribed courses, majors and minors was created. The Department also expanded the modes of blended/ mixed methods of course delivery and increased the number of guest lectures by expert practitioners in specialised subject areas, with emphasis on entrepreneurship and industry.

The Department was also able to diversify services offered through the Research Outreach Consulting and Analytical Services (ROCAS) to include product development guidance, particularly to small entrepreneurs, and outfit the Department Reading Room as an additional venue for e-engagement in small/advanced classes.

Other improvements included repair to the Department Computer Laboratory

for undergraduate research, improved **Chemistry Help Desk** Services through increased availability of full-time academic staff, greater participation of teaching assistants, and dedicated venues, and completion of design specifications for the rehabilitation of the main teaching laboratories located in the C1 Chemistry Building to modern safety and instructional-standard codes, in collaboration with the Campus Projects Office and its team of consultants. Testing and Certification of industrial-grade equipment in the C1 Chemistry Building and the Teaching and Learning Centre occurred, including compressors and fume cupboard extraction systems. The C3 Research Laboratory 4 received upgrades to air extraction, lighting and flooring to materials handling and safety specifications, and the C3 Research Laboratory 5 was outfitted for dedicated asphalt product research and development. An audit of high-frequency (HF) analytical instrumentation in the C4 Building and the development and implementation of an appropriate electrical grounding scheme for their protection and increased reliability also occurred during the period under review.

Continued support was given to the operations of the **Chemists in Action (CHEMIA)** student group to stimulate enthusiasm and interest in Chemistry through the provision of office space, administrative support and promotion of planned student activities, as well as financial support for student participation and poster presentation at the 2019 Materials Research Society Fall Meeting (Dec 1-6 2019). Increased collaboration with Latin American

# Faculty of Science & Technology

Centres of excellence in research and innovation occurred through two staff visits and conference participation at the **University of Havana**, Cuba.

## *Department of Computing & Information Technology*

On 29 June, 2020, the DCIT in collaboration with industry stakeholders - Diagon Consulting, First Citizens, Health Services Unit (UWI), Maritime Services, MSD, RAMPS, Republic Bank, The Alma Jordan Library (UWI) and Virtana - offered its internship course to 30 Levels II and III students. The Virtana Code Jam was held on 13<sup>th</sup> February, 2020. This Trinidad & Tobago based Coding Competition comprises 3 rounds which focus on: algorithmic reasoning, programming and mathematical analysis. The students of the DCIT and ECNG who participated worked as a team while solving challenging algorithmic puzzles.

On 10 October 2019, the DCIT commemorated International Internet Day with these activities: Cyber Security ISACA booth, Social Media and Privacy, Internet Safety Snakes and Ladders, UWICS Cyber Safe Treasure Hunt, ISOC booth, Fake News, Fake or Real information literacy. These drew great enthusiasm and engagement to the students from different disciplines and faculties.

On 7 and 9 October, 2019 the department participated in the Spark Education Career Fairs in NAPA, San Fernando and National Racquet Centre, Tacarigua, respectively. The Fairs are specialised exhibitions aimed to expose secondary school students to national and international tertiary level

educational institutions, industry and toward career development.

In December 2019, **Huawei Training Services** provided the DCIT and Department of Electrical & Computer Engineering with training catalogs in the areas of Huawei LTE, 5G, IT and IP training courses. Huawei provided access to their Massive Open Online Courses (MOOCs) for staff in both departments. This initiative allowed access to Huawei's state of the art resources for students to use their technologies. It is especially important during the COVID-19 pandemic to allow the virtualisation of computer resources for student access.

In March 2020, the **Oracle Academy** partnered with the DCIT to offer access to its technological resources. Oracle is well known globally for providing computing education to educational institutions and educators to enhance innovation, develop skills and promote knowledge in technology fields. Ultimately, the students benefit from the DCIT and Oracle's combined curriculum. This initiative is particularly essential during the COVID-19 pandemic to allow the virtualisation of computer resources for student access.

## *Department of Life Sciences*

The Department did a review of the DLS programmes, BSc in Biology, BSc Biology with specialisation, and BSc Environmental Science and Sustainable Technology. A Teaching Gap Analysis was also performed. The Head of Department (HOD), engaged academic staff to identify their expertise/teaching. As a result, this allowed for the identification of teaching gaps,

key to the improvement of the pool of expertise required to advance the DLS' curricula.

## *Department of Mathematics & Statistics*

The department began curriculum review of Level I courses to ensure that courses/programmes meet regional/national needs and adhered to quality assurance guidelines. Several short courses were developed that were relevant to UWI undergraduates and postgraduate students, UWI and non-UWI researchers, professionals and industry.

The UWI Math Fair was hosted in November 2019 with the objectives of sparking enthusiasm for the various applications of Mathematics in real life and allowing students to view Mathematics in an exciting way, using various puzzles and logic games to increase interest in the field, while highlighting the various programmes and research opportunities available at the Faculty of Science and Technology (FST).

Lecturers continued to make themselves available to students during office hours. In the absence of face-to-face meetings and consultations due to COVID-19 restrictions, lecturers utilised video conferencing to continue discussions with students about their projects, namely MSc and PhD projects. During the period, six MSc students and one PhD student have completed their respective programmes and successfully graduated in July 2020.

The Department used the students' feedback to ensure optimal service is provided by the Math Help Centre

(MHC) in an effort to attract more students in 2020/2021. The Department, in conjunction with the Dean, Faculty of Science and Technology, continued to operate the Mathematics Help Centre during the academic year 2019/2020. The Centre specifically addressed the learning needs of the UWI students in the areas of Mathematics and Statistics.

The Department offered three new actuarial science elective courses in the academic year 2019/2020, all in an effort for the Society of Actuaries to deem UWI's programmes as a Centre for Actuarial Excellence. The courses were offered in the first semester but subsequently cancelled due to low registration. In the second semester, five students were registered for Asset & Liability Management II (ACTS 3014). This low number was largely due to a lack of awareness and publicity of the available courses. Also, because the potential students were not given significantly advanced notice, they were already burdened by their heavy workload and could not accommodate an additional elective.

The Department hosted several to encourage staff and graduate students to publish their research work in peer refereed journals. The academic staff have been publishing consistently and have attended, as well as presented, at several conferences face-to-face and/or virtually via video conferencing. The department encouraged staff and students to work on their projects with a focus on applications to industry.

#### *Department of Physics*

From November 2019 to March 2020, the department engaged in an internal

Curriculum Review Exercise for all of its offerings. Various stakeholders were involved in this exercise. We amended prerequisites for PHYS 2402, Electronics Matriculation and many environmental minor courses further to this exercise. Based on recommendations which emanated from our curriculum review exercise a proposal for a new course entitled "Fundamentals of Atomic & Nuclear Physics" was prepared and discussed at the department level. Approval was obtained from both the FST Curriculum Review Committee and Faculty Board. Additionally, a new programme on MPhil/PhD in Renewable Energy Technology was proposed and currently being processed for offering in Jan 2021.

The Department was able to double the intake of PG students in both MScs using targeted marketing and obtained necessary part time staff for teaching to support the BSc in Biomedical Technology (BMET) and Physics related courses of BSc in ESST.

The Department of Physics was the first to successfully implement the process of online teaching at the FST as new equipment for level II Labs were purchased with the closure of the University on March 16, 2020. To cater to the requirements of Electronics and Computer based (simulation) experiments/projects of UG, as well as PG courses and seminar facilities, a proposal for a new Computer / Electronics Lab/Seminar room was discussed at the department and necessary approval process was initiated.

**Dr Nikolay Zyuzikov** was successful in receiving research funding grant of €32,000 for the period of 4 years and signed the Contract No. 23750/R0 with IAEA (International Atomic Energy Agency) for research project "Evaluating IMRT and VMAT Dose Accuracy for Clinical Implementation of Cases for Carcinoma of the Left Breast and Prostate: Error Sensitivity of Various IMRT; QA Equipment and Protocols and the Impact of Induced Errors on OAR Tolerances and PTV Coverages" as a part of Coordinated Research Project (CRP): Doctoral CRP on Advances in Radiotherapy Techniques (E24022).

**Dr Shirin Haque** became Programme Director for the NINE hub programme in Radio Astronomy for the Caribbean through for the National Science foundation (NSF) and National Radio Astronomy Observatory (NRAO) leading to an MOU between NRAO and the UWI. She was also appointed National Outreach Coordinator from the Office of Astronomy Outreach (OAO) through the International Astronomical Union (IAU) – Chair of national committee for naming of ExoWorlds HD 96063 and HD 96063B (Dingolay and Ramajay) and leading the nation to name an Exoworld.

#### **Alignment**

##### *Department of Chemistry*

The Department completed experimental work for the development of new rapid testing method for pesticide levels in green leafy vegetables with local small farmer participation and held round two examinations with 300 secondary school participants for the **International Chemistry Olympiad**

# Faculty of Science & Technology

and made 40 selections for the third and final round. A new research project for landfill (Guanapo) runoff water purification by bioremediation method commenced, as well as engagement with local honey producers for research and quality assurance projects toward export market goals.

Workshops, training and technology transfer sessions were conducted with representatives of **Trinidad Lake Asphalt** for the commercialisation of UWI-licensed products, including detailed engineering advice for scaled production process. A needs survey of existing ROCAS clients on certified testing requirements was completed and basic instrumentation and a secure facility for quality system management was assembled and procurement of new GCMS at advanced stage in the CPO. There was a 30% increase in ROCAS support services to UWI research at St. Augustine, largely from the Faculty of Medical Sciences.

Increased engagement with government and industry stakeholders in development of short courses, diploma and certificate offerings in Occupational Health and Safety (OHS), now pending University approvals. An application for international certification of the MSc OESH programme is under consideration by the Institution of Occupational Safety and Health (IOSH) and new instances of collaboration and provision of analytical services with the Ministry of Health (Port-of-Spain General Hospital) and the Ministry of Agriculture Land and Fisheries occurred.

## *Department of Computing & Information Technology*

Among those staff members receiving grants for their research projects were: **Drs Michael Hosein** and **Wayne Goodridge** for their project, "A Resilient System for Communication under Disaster Conditions in the Caribbean" (RDI Grant project-July 29th, 2020); and **Professor Patrick Hosein, Shiva Ramoudith, and Inzamam Rahaman** for their project on *Data Mining, Optimisation, and Machine Learning for the finance sector* (CIBC Research grant- June 2020).

## *Department of Life Sciences*

The Department formed a committee responsible for generating the DLS newsletter to highlight the accomplishments of both Academic and Administrative staff. The DLS has also begun to actively seek out funding for critical research equipment- an HPLC.

## *Department of Mathematics & Statistics*

The Department hosted The UWI MATH Fair in collaboration with the Dean, FST in November 2019. It was well attended by about 1,318 students along with 111 teachers from 43 secondary schools. This was a significant increase over the previous year. The venue for this venture was financed by the Dean's Office, FST. Other sponsors included **Trinidad & Tobago Unit Trust Corporation, V.H. Marketing Limited and Guardian Life of The Caribbean Limited**. Several short courses were developed that were relevant to persons conducting research,

especially those in the medical field as well as working professionals in fields such as actuarial science and industry such as banking and finance.

Terms of Reference were established for the Faculty Industry Liaison Committee to facilitate collaboration between FST and industry by ensuring that the Faculty is addressing the needs of Industry by offering relevant programmes; facilitating relevant research projects for our research students and academic staff; assisting departments in identifying internships opportunities for students, and connecting departments with potential sources of funding for research and development. The UWI MATH Fair was promoted on social media via the FST website and FST Facebook page as well as through a specially created website **www.uwimathfair.com**, guided by The UWI Marketing & Communications Department to ensure compliance with University branding.

## *Department of Physics*

The Department arranged internships for all BMET students for the academic year 2019/2020 with two new companies added to the list of host institutions - **Biomedical Technologies Limited** and **Biomedical Enterprises of Trinidad & Tobago Limited**. In an arrangement with the **Technical Services Partnership** (a WHO Collaborating Centre), **University of Vermont**, two of the top graduating students (for the 2018/2019 Academic Year) of the Biomedical Technology programme were afforded paid internships from January to May 2020.

The pandemic curtailed plans for a Guest Lecture series (an ILC Initiative) in Semester II of the 2019/2020 Academic Year. However, the Department was able to purchase new equipment and components for the Electronics workshop which contributes to the department's income generation efforts. Most notably, the ILC (Industry Liaison Committee) is in charge of this and other units at the department.

**Dr Shirin Haque** conducted a number of outreach activities, most particularly a 13-part television series for IETV, "Exploring our place in the Universe with Dr Shirin Haque" – (2019); 16 part television series for IETV, "Full STEAM Ahead" – (2020); YouTube channel – With science features on "Two minutes of wonder" and children's series "Enchanted Forest" (2020). Other notable outreach programmes were, "Science Talks, Science Rocks" 21st October 2020 to Corpus Christie College; "Women and Girls in Science" celebration 2020 – **Saraswati School**, Chaguanas (21 Feb 2020); "STREAM – the future of learning – sparking curiosity" – (Feb, March, April 2020), and "Space – the final frontier" STEM Booth BPTT 20 (September 2019).

### Agility

#### *Department of Chemistry*

The Department continued international research collaboration projects in Catalysis, at the University of Cardiff; Materials Chemistry, at the **Brookhaven National Laboratory**, and in Surface and Elemental characterisation, at **Universite D'Antilles**, Guadeloupe. Engagements with Dr Ale Palermo

and Dr Sarah Thomas of the **Royal Society of Chemistry Commonwealth Chemistry** Initiative toward the first International Congress to be hosted by the St. Augustine Campus.

Hand-sanitizer product development and testing was supported by technical staff and the ROCAS unit advanced operationalisation of a spin-out company, UWI-Seal-It, including projections of demand, corresponding manufacturing capacity and staffing needs.

Discussions with UWI-Ventures were initiated on commercialising technical knowledge and research programme outputs. The OESH programme offerings were expanded to attract more fee-paying adult learners and experienced workers in industry and the liquid nitrogen facility was serviced and upgraded. An audit of research and analytical equipment for prioritisation of service and replacement was also completed by technical staff. The Department saw a 55% reduction of expenses for paper during the period under review as a digital file system for the exchange of information was promoted. Training of academic staff in digital and virtual delivery modes was offered through the Centre for Excellence in Teaching and Learning

#### *Department of Computing & Information Technology*

On 9 October 2019, the DCIT commenced its weekly Seminar Series Workshops 'Do or Die' to assist staff transition to online instruction. The presentations were done by Senior and Junior academic staff. Those

presentations aimed to bridge the gap between the traditional approaches to programming vs. the machine learning approach. Topics included Introduction to Machine Learning; k-NN Machine Learning Technique; Unsupervised Learning with k-means Algorithms; k-means; Diabetes Data Set, Visualisation and Linear Regression; Regression (Best Fit and Goodness of Fit Approaches); Logistic Regression; Naive Bayes for Machine Learning; Introduction to Neural Networks; Implementation of Neural Networks in Pytorch; Convolutional Neural Networks – Concepts and Implementation.

The Project and Internship courses developed an app, on behalf of the Marketing & Communication Office (M&C), to aid in student recruitment. M&C will soon launch this app as the 'BeUWI Recruitment App'. The DCIT's Computing Connections Unit will take over the maintenance of the project for an annual fee. In Semesters II and III, Academic Year 2019/2020 the Project and Internship courses respectively developed an app that allowed students to make appointments with the Health Services Unit. This proposal is pending the Campus Principal's signature. The DCIT's Computing Connections Unit will take over the maintenance of the project for an annual fee.

#### *Department of Life Sciences*

During the period under review, the Department conducted a teaching gap analysis and reviewed the DLS cost allocation to ensure expenditure is correctly accounted for under the self-financing MSc programmes. The

# Faculty of Science & Technology

DLS continues to attempt to seek funding and submitted a proposal to the 2020 U.S. Ambassadors Fund for Cultural Preservation (AFCP) Small Grants Competition Funding under the project title: Preservation and conservation of Trinidad & Tobago's natural history - our national collections.

## *Department of Mathematics & Statistics*

Several courses were offered in the FST Summer School. However, due to the COVID-19 situation, low registration caused seven courses to be cancelled. One Actuarial Science course (Loss Models II - ACTS 3013) was offered in summer for the first time. The Department ran four short courses during the period 5 – 30 August 2019. These courses generated a total of TT\$97,000.00. Savings of more than TT\$500,000.00 were generated due to part-time positions in the Department being supplemented by six Associate Professionals and one On The Job Trainee (OJT) provided by the Ministry of Education (MOE), whereby the MOE paid the salaries of these APs and OJTs.

The Department was able to acquire the much-needed AXIS software free of charge for its student computer labs. Normally, the Department would pay an annual subscription fee to access this software. Several short courses were developed that were relevant to researchers, professionals and industry. These short courses attracted the interest of persons from within, as well as outside, of Trinidad as the courses were advertised via local media and on the internet to facilitate regional and international access to these courses.

The Department established an email address, **MATHStudent.Support@sta.uwi.edu** in order to remotely facilitate students' concerns via electronic media with respect to teaching and examination related matters. During the closure of campus to students, lecturers communicated with students via their respective UWI staff emails and engaged in virtual office sessions using video conferencing (Zoom and Blackboard Collaborate). Further, lecturers recorded and uploaded their project and research presentations to YouTube in order to share resources and information on a global scale. Video conferencing has also been used to discuss students' MSc and PhD projects.

During Semester II of the 2019/2020 academic year, the Math Help Centre (MHC) transitioned its service from face-to-face to online via MyeLearning and Blackboard Collaborate to compensate for the closure of campus to students. Students were given the option of posting to a forum and having their questions answered by tutors. This allowed MHC to operate in both the synchronous and asynchronous modes for the first time.

## *Department of Physics*

**Professor Aleksandr Myllari of St. George's University, Grenada** visited the department from 1 - 4 Nov 2019 to discuss collaborative work with Dr Shirin Haque and also presented a seminar on "Numerical Symbolic Dynamics in the Three-body Problem" on 4 November 2019. The Department plans to continue such opportunities.

The Department purchased new equipment and components for the

Electronics workshop which contribute to the department's income generation efforts. Most notably, is that the ILC (Industry Liaison Committee) is in charge of this and other units at the department.

The Electronics Workshop (EW), Electron Microscopy Unit (EMU) and X-ray Diffraction Unit (XDU), have been advertising their services to the entire campus community via the Marketing and Communication (M&C) Unit and so have become more visible and positioned to improve their rate of income generation. Due to target marketing and dedicated teamwork, the Department was able to double the enrolment numbers in both MScs.

## **Projected Activities 2020/2021**

### *Department of Physics*

The Department, noting that it needs financial support to purchase new equipment, components and maintenance of existing facility, plans to continue to advertise the services it offers through the Marketing & Communications Office. The Scanning Electron Microscope has been repaired and now can be used to earn income and the Electronics workshop is currently designing sanitising UV Robots which will be commercialised if succeeded. The Department is currently finalising the financials concerning the renewal of maintenance contract and subscription of software for the XRD Machine which will propel the progress of this resource. To further increase the number of students in both MSc programmes and to generate more revenue, the Department will offer stand-alone and bundled courses using existing resources.

## Distinguished Visitors

### Department of Chemistry

#### Dr Peter Kenny

Visiting Scientist  
University of Sao Paulo  
Brazil

#### Professor Francesca Kerton

Professor of Chemistry  
Department of Chemistry  
Memorial University of Newfoundland,  
Newfoundland and Labrador, Canada

#### Professor Christopher Kozak

Professor of Chemistry  
Department of Chemistry  
Memorial University of Newfoundland,  
Newfoundland and Labrador, Canada

#### Professor Dirk Van de Meent

Professor  
University of Nijmegen  
The Netherlands

#### Dr Ale Palermo

PhD/FRSC  
Senior Manager, External Relations  
Royal Society of Chemistry, UK

#### Dr Sarah Thomas

PhD/FRSC  
Senior Programme Manager –  
International Engagement  
Royal Society of Chemistry, UK

#### Dr Dick de Zwart

PhD/Private Consultant  
Ddz Ecotox  
Odijk  
The Netherlands

### Department of Computing & Information Technology

#### Dr Nauman Aslam

Associate Professor  
Department of Computer and Information  
Science, Northumbria University, UK.

### Department of Mathematics & Statistics

#### Professor Emeritus Winston A. Richards

Associate Professor Emeritus  
of Mathematical Sciences, Science,  
Engineering and Technology  
The Pennsylvania State University  
Harrisburg, Pennsylvania, U.S.A

### Department of Physics

#### Professor Dirk Schulze-Makuch

Professor at Technical University Berlin,  
Germany and Adjunct Professor at Arizona  
State University and Washington State  
University. (Astrobiology project)  
October 10-18, 2019

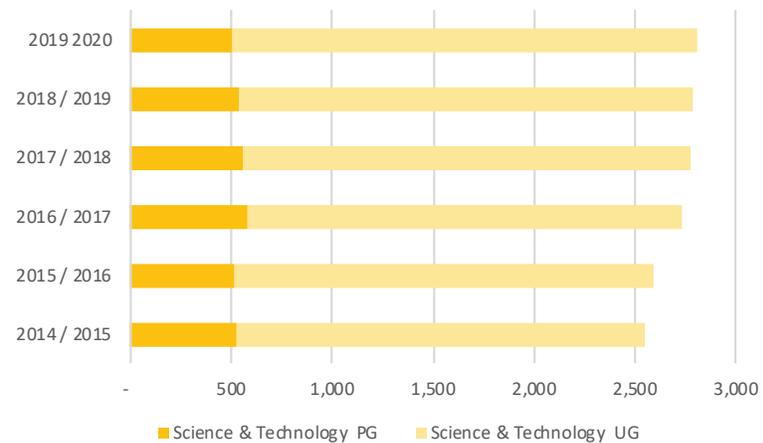
#### Professor Aleksandr Myllari

St. George's University, Grenada  
1-4 November 2019

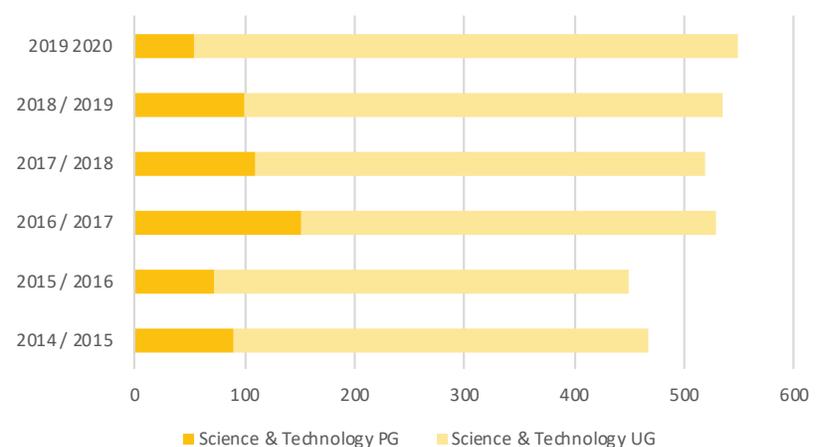
#### Professor Mauri Valtonen

Univ. of Turku, Finland  
22 Oct - 6 November, 2019

### Enrolment Trends: Faculty of Science & Technology



### Graduation Trends: Faculty of Science & Technology



Source: Campus Office of Planning and Institutional Research (COPIR)

# Faculty of Social Sciences

## Dean's Summary

**D**uring the reporting period, the Faculty of Social Sciences continued to make further progress in operationalising The UWI's Triple A Strategic Plan, 2017-2022, under the themes of Alignment, Access and Agility.

In October 2019, a new 'Structure and Operations' was introduced with a revised Mission and Vision of the Faculty, five areas of focus, a new Faculty Structure and a Faculty Advisory Board. The revised Vision, "*To be Socially Engaged and Solutions Oriented*", was developed in the context of digital, economical, ethical and social challenges. The areas of focus included Customer Service, Academic Advising, Teaching and Learning, Marketing and Outreach, and Digitalisation. The Faculty Structure comprised a Faculty Management Team supported administratively by the five Units within the Office of the Dean, academically by the Standing Committees of Faculty Board, and strategically by the Faculty Advisory Board. The Advisory Board comprised members of the business community and relevant professional bodies.

The Faculty of Social Sciences conducted a successful online Summer School session thereby generating additional revenue to supplement the budget. Self-financing programmes and training workshops also contributed in generating much needed revenue. During the reporting period, a new course entitled "Practice and Treatment of Forensic Populations" was introduced as part of a summer 2019 pilot workshop which included participants from specific



**Dr Acolla Lewis-Cameron**  
Dean

**Going forward into the 2020/2021 academic year, the focus will be on digitisation and innovation. The Faculty plans to engage in several initiatives including the development of an overall Strategic Plan for the Faculty**

ministries and agencies involved in service work. The course will be offered to registered students in the 2020/2021 academic year. The MSc and Postgraduate Diploma in Public Sector Management, and the MSc Strategic Leadership and Management programmes were revised, and a re-designed MSc Financial Economics programme was implemented in 2019/2020. The Quality Assurance reviews of the Sociology and Psychology disciplines were completed during the academic year.

During the 2019/2020 academic year, the Faculty engaged in several outreach activities. The Department of Economics hosted its annual regional Conference on the Economy (COTE) on October 9 and 10, 2019 under the theme "*Re-evaluating Strategies for Sustainable Economies*". **Professor Avinash Persaud**, Chairman of the CARICOM Commission on the Economy, was the feature speaker. The conference served as an avenue to highlight the economic research and thought of the Caribbean as it navigates issues surrounding sustainable economic practices. The Department again hosted the pre-conference events, "*COTE Youth Day*" on 26 September 2019 at the Teaching and Learning Complex, St. Augustine Campus. The activities included an Armchair Discussion, Digital Poster Competition, a Make-a-Thon Competition and a Debate Competition. Over 250 persons from The UWI campuses, secondary schools and the general public attended or participated in the various activities.

On November 7, 2019, the Department of Economics hosted the 2nd Youth Economic Forum in collaboration with the Centre for Health Economics and the Economics Society of The UWI at the St. Augustine campus. The focus was on sustainable development, good health and well-being, quality education and climate action to create a platform for dialogue among young Caribbean scholars on regional economic issues.

In March 2020, the Department of Behavioural Sciences established a Developmental Psychology Lab within the Psychological Research Centre

aimed at deepening collaboration between staff and students and to provide an opportunity for mentorship within the Unit as well as to stimulate the generation of a greater volume of psychological research and publications.

Three representatives from the Faculty of Social Sciences participated in the Capsim Global Challenge in April 2020. Participants had the opportunity to test their business acumen against competitors from around the world. In the final round, the Faculty representative placed second overall. The Faculty hosted its first Professional Development Workshop for all administrative staff on November 8, 2019. The workshop focused on "*Fundamentals of Customer Service – The FSS Way*". The training gave participants valuable insights and skills for interaction with each other, students, and key internal and external stakeholders.

Going forward into the 2020/2021 academic year, the focus will be on digitisation and innovation. The Faculty plans to engage in several initiatives including the development of an overall Strategic Plan for the Faculty, a review of all programme offerings, the introduction of online academic advising to replace face-to-face advising, the introduction of an E-customer service (Live Chat) initially in the Office of the Dean, the introduction of a pilot programme to reduce the use of the current Oxford tutorial model by 40% of the total number of courses taught, a Faculty Retreat and a Professional Development Day.

## STRATEGIC REVIEW

### Access

#### *Department of Behavioural Sciences*

During the period under review, the Department introduced a new course, SOWK 2013-Treatment and Practice of Forensic Populations, which extends the curriculum for the social work students. This course was part of a summer 2019 pilot workshop, which invited participants from specific ministries and agencies involved in service work. The course will be offered to registered students and again in the summer to a wider clientele, to sustain external interest.

The Department successfully completed three quality assurance reviews for sociology, psychology, social work, and mediation. The review of the Criminology and Criminal Justice Programmes remains to be completed. The Mediation room was launched as a central location through which The UWI can offer mediation training and public engagements, which advance the conflict management and resolution programmes. The **ANSA MCAL** centre facilitated the SAS Statistics Workshop, which benefitted staff and students doing quantitative research and data analysis.

A Developmental Psychology Lab was established within the Psychology Research Centre to deepen collaboration between staff and students and to stimulate greater research and publications. Criminology & Criminal Justice staff began drafting three new undergraduate courses that have since been reviewed at the Departmental level and await amendments before submission to the FSS Curriculum Review and Faculty Board.

During the 2019/2020 period, there was a sustained high number of publications:

# Faculty of Social Sciences

these included 3 papers in national journals, 20 published in international journal, and 34 papers submitted in both national and international symposia, seminars, conferences.

## *Department of Economics*

The redesigned MSc Financial Economics programme was implemented during the period under review. All MSc courses, which are core to part-time offerings, were scheduled at days and times that allow greater effective access by candidates who are employed. There was a marked improvement in Academic Advising processes via the academic advising committee. During the second semester there was a quality assurance review of the Department. Graduate Research Seminars were aimed at giving guidance to graduate students who are registered in the MPhil or PhD programme. The Department worked with the **CAF Development Bank** to develop an internship which would give practical experience to undergraduate/post graduate students in Economics.

## *Department of Management Studies*

The celebration of World Tourism Day 2019 was held by the Tourism, Hospitality and Sport Unit of the Department of Management Studies on 26 September 2019, with 20 tourism stakeholder organisations receiving awards. The 'Cash is King' Entrepreneurship 101 Series Workshop by the Entrepreneurship Unit on 7 November 2019 was attended by 38 participants. The Department also hosted the UWI/FIFA/CIES Open Public Lecture Series as well as the Faculty development 'brown-bag' meetings to discuss teaching and learning improvement opportunities. Coordination of the Internship Programme will be continued with **ANSA MCAL's** internship opportunity in the area

of Strategic Planning, Mergers & Acquisitions, Analytics, and Financial Modelling for recent graduates of the BSc in Banking and Finance or BSc in Management Studies with Finance minor programmes.

## *Department of Political Science*

The Department revised the curriculum for the MSc Public Sector Management graduate Diploma in Public Sector management, as well as the MSc PSM and PG Diploma in PSM.

## **Alignment**

### *Department of Behavioural Sciences*

During the 2019/2020 period, **Dr Andrea Silva Tapia** and **Mr Sebastian Garbe** sociologists attached to the Institute for Sociology at **Justus Liebig University** in Germany visited. This visit allowed for engagement of graduate students on their research agendas and in the one-day conference on Creative Enterprises and Post-Colonial Identities in Trinidad & Tobago. The latter event included the contribution of staff and students and provided an important opportunity for academic exchange and partnership across institutions. Many students benefited from engagement of key stakeholders, specifically, as guest lecturers or as part of a panel discussion. This led to institutional visits by; the Deputy Director of the **Police Complaints Authority**, the Manager of the Victim and Witness Support Unit in the **Trinidad & Tobago Police Service**, the Advisor to the **United Nations Trinidad & Tobago**, the CEO Mediation Division within the **Ministry of Community Development**, and the **UN Consultant on International Rights**. Many of our staff members also

served as panellists on various webinars and panels organised by both public and private entities.

The UWI Farm Work Project continued with an emphasis on providing psychosocial support to needy families. This offers a modelling of an integrated community engagement project with the Farm Road, St. Joseph Community. A critical aspect of this project involves the engagement of students in both the assessment of needs for selected families, as well as in the design and implementations of key interventions that can potentially address the challenges faced in the community. This is an ongoing project. Staff within the social work programme also engaged students involved in the Heights of Aripo community project. This is part of a collaboration with social work professionals at the University of Pennsylvania and The University of the West Indies. UWI St. Augustine Social Work students provided support to members of the community as part of their practicum.

## *Department of Economics*

The Department continued various outreach activities including Secondary School Outreach Lectures and Workshops; the Conference on the Economy (COTE); the Demas-Rampersad Seminar Series; the Post Budget Forum; the Youth Economic Forum, and Youth Day and Youth Engagement for Secondary Schools (under COTE). Work was initiated with the CAF (Corporacion Andina de Fomento) Development Bank to develop an internship which would give practical experience to undergraduate and post graduate students in Economics.

**Department of Political Science**

The Department drafted one proposal to develop short courses to satisfy the needs of ministries and governmental departments, and another for an induction training programme for Local Government Councillors with the Ministry of Local Government. The Department collaborated with the Governance Unit on a forum to discuss “Community Governance and Citizen Participation: The Way Forward” and helped to promote greater activism and public advocacy by hosting various youth fora on such topics as Police Trust, Constitutional Reform, Education and Climate Change.

**AGILITY**

**Department of Behavioural Sciences**

The Department trained court officers and service professionals within the OECS on mediation and conflict resolution. This was a paid five-day service offered through our mediation programme and presented an opportunity to generate revenues for the Department. While this is a pilot programme, we are hoping that such an initiative can be extended to internally manage conflicts that unfold at a student and staff levels. This work is ongoing.

Training of staff in Blended Learning took place on 23 and 30 January 2020. These CETL training sessions were conducted at a departmental level and included both part time and fulltime staff. Members of staff within the social work programme piloted eLearning portfolios for professional development of BSc Social Work practicum students. While this is a work in process, it provided an effective alternative for the engagement of students on practicum. It also created an opportunity for the creative presentation of these portfolios.

**Department of Economics**

During the 2019/2020 period the Department of Economics was able to harness the skills of its staff to provide technical assistance to national and regional agencies. It also continued working with the Division of Facilities Management and Faculty staff on plans to refurbish administrative offices to make them OSHA compliant.

**Department of Management Studies**

The ‘Unleashing your Competitive Competencies with Data Analytics’ seminar was held on 13 and 14 March 2020, with 11 participants from the manufacturing, financial services and construction sectors.

**Distinguished Visitors**

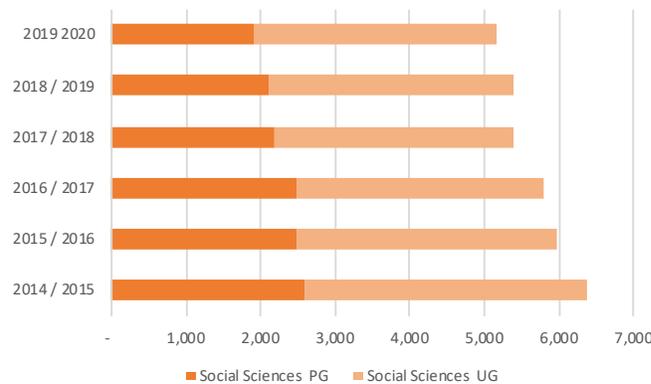
**Mr Sebastian Garbe**

Institute for Sociology  
Justus Liebig University  
Germany

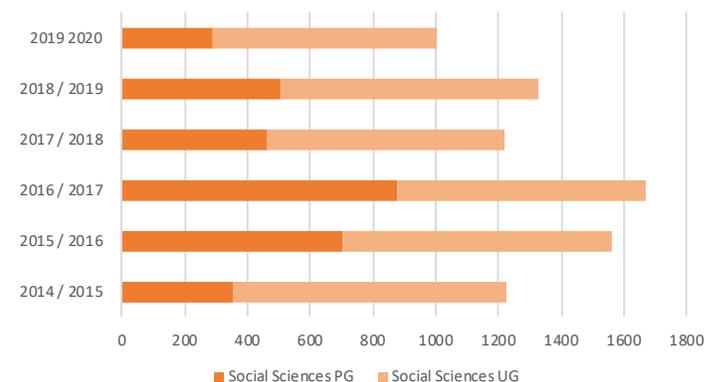
**Dr Andrea Silva-Tapia**

Institute for Sociology  
Justus Liebig University  
Germany

**Enrolment Trends: Faculty of Social Sciences**



**Graduation Trends: Faculty of Social Sciences**



Source: Campus Office of Planning and Institutional Research (COPIR)

# Faculty of Sport

**T**he Faculty of Sport at the St. Augustine Campus consists of the St. Augustine Academy of Sport which administers the three academic programmes offered, and the Sport and Physical Education Centre (SPEC) which manages the sporting facilities on the campus. Although the COVID-19 pandemic severely curtailed the hosting of sporting events such as the 2020 UWI-SPEC International Half Marathon, there were some significant achievements.

## *Programmes*

In keeping with the Access pillar of the University's strategic plan, the Faculty of Sport welcomed its first cohort of students, numbering 22 in all. The BSc Sport Kinetics and BSc Sport Coaching programmes came on stream for the first time with teaching conducted via a cross-campus collaboration between the Mona and St. Augustine Campuses.

## *National & Community Engagement*

The engagement and outreach activities of the Faculty contributed to the Alignment of the Campus and University.

During the review period The UWI SPEC hosted several sports events such as the **National Hockey Tournament**. A total of 15 teams participated and the tournament recorded the highest spectator turnout since its inception. **UWI-UNICOM T20 Tournament** was also hosted successfully from 9 – 19 January 2020 with **Powergen** emerging the eventual winners.



**Dr Akshai Mansingh**  
Dean



**Professor Emeritus Funso Aiyejina**  
Head, St. Augustine Academy of Sport

**Although the COVID-19 pandemic severely curtailed the hosting of sporting events such as the 2020 UWI-SPEC International Half Marathon, there were some significant achievements.**

The Campus co-hosted the **Ramps Logistics Super Series Invitational T20 Cricket Tournament** which aimed to cultivate a family-friendly platform, where professionals could network and engage in result-driven projects to positively develop and impact society using cricket, while providing the opportunity for academic research for The UWI.

The Academy of Sport hosted four matches in the preliminary round of the 3rd edition of the **Courts T20 Grand Slam Tournament** at the Sir Frank Worrell Cricket Ground. This tournament is the only kind in the region, which seeks to develop women's cricket and create the opportunity for cricketers to excel in the international arena.

In July 2020, the Academy secured the privilege of providing the bio-secure training 'bubble' for the participating teams of the **Hero Caribbean Premier (CPL) T20 League**, having received the approval from the Government of Trinidad & Tobago.

The UWI Women's Cricket Club was promoted from the Championship Division to the Premiership Division, after it was restructured to include regional athletes and non-UWI students. The reclassification will increase interest and boost future student recruitment, as there should now be more opportunities for players to be seen by national selectors.

The Academy conducted fundraising ventures to support The UWI Hockey and Track & Field teams' participation in a tournament at UWI Cave Hill and the Penn Relays (USA) respectively.

#### *Student Achievements*

In November 2019, Engineering student **Mr Khesan Yannick Ottley** was appointed vice-captain of the Trinidad & Tobago Red Force for the West Indies Regional Super50 one-day cricket tournament. In February 2020, in the fourth round of the 2019–2020 West Indies Championship, he scored his maiden century in first-class cricket.

UWI Law student **Mr Shemar Britton**, was a finalist in Guyana's National Table Tennis championship held in February 2020. By virtue of being a finalist, Britton qualified to participate in the Olympic trials which were scheduled to be held in Mexico later that year.

#### *Staff Activities & Achievements*

The activities and achievements of staff during the period related to staff engagement and the improvement of administrative processes which are related to the Alignment goals of The University.

**Mr Ramnath Persad** (Contract Officer and UWI Grounds Curator) hosted two Electronic Scoreboard Training workshops for students, inclusive of on-site training.

The Wellness Programme conducted by **Ms Candice Joseph** (Ag. Gym Supervisor) provided fitness sessions which included aerobics and spin classes for staff and students as a pre-carnival workout. This initiative was geared towards creating comradery, wellness and engagement of staff members across the Campus.

Staff and coaches participated in an Online Development Coping Course for Sports Support Staff hosted by **Dr Olivia Rose Esperance**, Sports Psychologist at the Mona Academy of Sport, UWI, Jamaica

#### *Sporting Facilities*

Innovation and income generation related to improving the Agility of the Campus, were the aims of the following activities undertaken during the review period.

Regarding the upkeep of facilities, light fixtures were upgraded at the SPEC Outdoor Court, Cricket and Football Fields for greater use by students and stakeholders. Low-budget sight screens were constructed at the Sir Frank Worrell Cricket Ground using old bleachers.

Before the pandemic the rental of facilities for a variety of events was possible, including external graduations and sporting tournaments. A review of rental fees was undertaken to make them competitive and a rental contract was devised with guidance from the Campus Legal Office.

# Centres & Institutes

## ANSA McAl Psychological Research Centre

### DIRECTOR'S SUMMARY

In the academic year 2019/2020, the ANSA McAL Psychological Research Centre (AMPRC) engaged in a number of activities geared toward the progress of The University of the West Indies' Triple A Strategy. The COVID-19 pandemic inhibited full engagement of many of these activities but has not prevented the continued pursuit. The Centre continued its work on Bridging the C.R.I.M.E. (Community, Research, Innovation, Monitoring, Empowerment) Divide and had prepared for the move to the field stage in mid-2020 but this was postponed. The Centre continued its international collaboration with a joint book publication with Professor Aleksandra Kostic titled *Positive Psychology* with a release date set for 2021. The Psi Chi UWI St. Augustine Chapter, facilitated by the Centre, was supported through this period as well as a number of graduate students. The Centre is optimistic that its goals will be further realised in the academic year 2020/2021.

### RESEARCH PROJECTS

#### *Caribbean Young Adults Study: Risk and Protective Factors as Determinants of Health Behaviors of Caribbean Youth: Identifying Points of Intervention*

This study is being conducted by Dr Lutchnie Narine, Ambika Krishnakumar and Jaipaul Roopnarine at **Syracuse University** in collaboration with the ANSA McAL Psychological Research Centre which is collecting data in Trinidad & Tobago. This study uses both quantitative and qualitative approaches to understand the association between risk and protective factors associated with health outcomes of young adults in Trinidad and Tobago. Comparative data is being collected in **Guyana**, and **Suriname**. The participants are university students (18-25 years) enrolled at the University of the West Indies, St. Augustine Campus, Trinidad and Tobago, **University of Guyana**, Turkeyen Campus, Guyana, and **Anton de Kom University of Suriname**, Suriname. Project Investigators include Lutchnie Narine, Ambika Krishnakumar, and Jaipaul Roopnarine (Syracuse University). Collaborators include **Dereck Chadee** (ANSA McAL Psychological Research Centre, The University of the West Indies), Michelle Semple-McBean (University of Guyana Turkeyen Campus), and Tobi L.G. Graafsma (Anton de Kom University of Suriname).

### *BRIDGING THE C.R.I.M.E. DIVIDE (Ongoing)*

Crime has been shown to have a significant, adverse impact on this society, from decreases in human welfare to perceptual and emotional changes to social fragmentation to economic decline. These effects have necessitated action from various stakeholders in society, from the individual to state level, but the crime problem remains unresolved.

The Bridging the C.R.I.M.E. Divide is an ongoing project that aims to do this through social innovation, by partnering with stakeholders to investigate how various divides within society affect crime perceptions, victimisation, and responses to victimisation and to cultivate strategies for addressing these divides.

During the review period several stakeholder meetings were conducted towards the preparation of the measuring instrument. A social survey of approximately 2,500 to 3,000 respondents was planned for implementation in May 2020 but was postponed to the following year because of the pandemic.

### INTERNATIONAL COLLABORATION

Dr Kiaras Gharabaghi, Director, School of Child & Youth Care, Associate Professor, Immigration & Settlement Studies Graduate Program and The ANSA McAL Psychological Research Centre recruited eight students from both **Ryerson University** and the St. Augustine Campus to participate in a project revolving around working on a social issue common to both Trinidad and Toronto, even if manifested differently. The project explores issues of youth engagement, youth crime and youth violence, and aims to create an interdisciplinary group of students at Ryerson and at UWI to explore the issues surrounding these themes in both Canada and Trinidad & Tobago. The Ryerson group are to explore these issues as they pertain to Trinidad, and the UWI students will do the same for Toronto.

The book *Positive Psychology* by Aleksandra Kostic and **Derek Chadee** is forthcoming in 2021 from Wiley-Blackwell. The book is the scientific study of the strengths - positive attributes that allow individuals and communities to thrive, rather than the weaknesses, in human thoughts, feelings, and behaviors. *Positive Psychology* is a collection of essays

that includes both theoretical applied contributions focusing on a range of areas including altruism, positive creativity, science of well-being, forgiveness, coaching for leadership, cyberpsychology, intelligence, responding to catastrophes like COVID-19, time perspective, physiological and epigenetic, youth civic engagement, ups and downs of love, flow and good life, global perspectives on positive psychology, self and collective efficacy, positive psychology interventions and positive orientation.

## STUDENT ENGAGEMENT

### *Psychology Research Labs*

The ANSA McAL Psychological Research Centre further enhances the research experience of students. In an effort to facilitate the academic and research development of students, in 2020 a Research Lab was established on Media Effect and Copycat Behaviour. Other Research Labs to be established are decision making and risk; copycat behaviour; and COVID-19.

### *Research Writing Workshops*

Two Research Writing Workshops for students were facilitated by PhD Psychology candidates – Ms Mala Ramesar and Ms Delia Brito. The primary intention was to build a link among students engaging with research. These sessions were held in November 2019. The agenda included coaching sessions on how to:

- Conduct a literature search.
- Write a literature review.
- Plan a methodology.
- Analyse data using SPSS.
- Format according to APA standards.

### *PSI CHI: International Honor Society in Psychology*

Since its introduction at the Campus, the Psi Chi UWI St. Augustine chapter has received support from the Centre. The following are some of the activities undertaken by the group during the 2019/2020 academic year:

- i. Virtual Guild Fest's Sip and Chat Event: Inviting potential members by divulging our goals, history, past activities, and future activities.
- ii. World Mental Health Day – A video was created outlining PTSD criteria, signs and symptoms, causes and treatment. This was circulated via Instagram and YouTube platforms.
- iii. Health Habit Thursdays – Tips on coping with Zoom fatigue, academic stressors, delivered via Instagram.

- iv. NAC Talk "D" Things Episode 2 – The Mind You campaign – Debunking myths on mental health delivered via Facebook live video
- v. Virtual Scribbles Stories – Stories were shared by persons about their struggles in life as well as their coping mechanisms. The aim of this exercise was to inspire and motivate persons who would be experiencing the same challenges
- vi. Resume writing workshop – Resume writing guidelines facilitated by a PSYD Clinical Psychology Student
- vii. The Psychology of Domestic Violence – a discussion of domestic violence and trauma from different viewpoints. Facilitated by Neola Zama, and collaboration with SPA, PCA and NCA.
- viii. PCA's Health Series which presents coping mechanisms for mental health.

## GRADUATE STUDENTS

The provision of support for graduate research remains a priority of the AMPRC. Summaries of research undertaken by students affiliated with the Centre are provided below.

### **Dionne Brewster-Phillip**

*Adolescent risky decision making: Examining the influence of parental and peer attachment, emotion regulation and sensation seeking.*

This thesis consists of two studies. The objective of Study 1 was to explore the influence of parent and peer attachment, emotion regulation and sensation seeking on risky decision making among adolescent males. The findings of Study 1 influenced the objectives of Study 2 which explored the impact of peer influence and community risk and protective factors on risky decision making among adolescent males.

Adolescence is a significant stage of development in which the individual undergoes physical, emotional, cognitive, psychological and developmental changes that facilitate the transition to adulthood. Studies have consistently shown that adolescence is a developmental stage that is most associated with reckless and risk behaviours. Unfortunately, these behaviours can jeopardise the healthy transition through the psychosocial phases of development; such as the successful transition into adulthood, performing expected social roles and the acquisition of life skills.

# Centres & Institutes

The Study 1 sample consisted of 296 adolescent males attending secondary school high and low crime density areas in Trinidad and Tobago. The data was extensively explored showing that a secure parental attachment protects adolescence from risky behaviour through early to mid-adolescence. The Study 2 sample consisted of 204 adolescent males attending secondary schools in Trinidad and is currently being analysed.

## **Diana Williams**

*Comparison, the Thief of Motivation? Examining the Effects of Social Comparison on Adolescents' Academic Possible Selves and Motivated Behaviours.*

Adolescence is a critical window of opportunity for investing in individuals' potential. Of particular relevance in this regard is the domain of education. Fundamental to adolescents' performance in this domain are adolescents' academic possible selves, the academic behaviours they motivate, and the social comparative processes which play an integral role in shaping the aforementioned. Yet, despite the existence of research on the influence of the latter on the former constructs, there is a paucity of research on this in the context of Trinidad, wherein there is strong relevance.

The present study sought to expand the knowledge base on the effects of social comparison on adolescents' academic possible selves and motivated behaviours by examining these in the stated national context. In 2019, data were collected from 153 adolescents attending an all-female secondary school in Northern Trinidad. Data are currently being analysed to examine the aforementioned effects; primarily via analysis of variance (ANOVA), mediational analyses, and a quantitative content analysis.

## **Aaron George**

*Victimisation, Community Connectedness and Minority Stress: Precursors of Perceived Risk and Fear of Crime Among the LGBTQ Community in Trinidad.*

In recent times, crime and its associated fear have been receiving much attention from researchers in various fields. Though the body of knowledge related to this topic is growing following extensive research efforts, a gap in the data still exists as it relates to obtaining systematic data for understanding fear of crime among sexual minority groups.

A review of the literature suggests that several factors may contribute to an LGBTQ person's fear of crime. The model for this story proposes that previous victimisation experiences, community connectedness, minority stress and perceived risk of victimisation are precursors to LGBTQ person's fear of crime. Each variable has been individually explored by researchers in relation to fear of crime, however, no study has captured all the variables in one model to explain the social phenomenon.

Utilising non-probability sampling techniques, participants will contribute to the growing body of knowledge that serves the LGBTQ community. Anticipated are recommendations on new policies and laws specific to crime victimisation that can directly benefit minority group members by reducing the fear of crime and improving their overall wellbeing.

## **Cory Ammon**

*Substance Use Disorder Remission: a COM-B model examination of self-efficacy, time perspective and social support.*

Substance use disorder is an issue that affects individuals, families, and the community at large, with numerous associated costs. Successful remission from substance use disorder is estimated at 35% to 50%. This research seeks to examine remission from substance use disorder within the health model of COM-B, which explains health behaviour in terms of capacity, motivation and opportunity. Under the framework of this model, the study considers self-efficacy as the capacity component, time perspective as motivation, and social support as opportunity. The study which is cross-sectional in design, examines the relationship among and between the variables in participant groups with varying levels of remission; early remission, remission and sustained remission. The objective of the study in explaining the difference between the remission groups is to be able to make recommendations for improved remission success rates for substance use disorder.

**Lauren Ramlal*****The Influence of Social Media Images Risky Behaviours Depictions (i.e. Substance Use/Risky Sexual Behaviours/Promiscuity) and Mental Construal on Externalising Behaviours of Young Adults:***

The purpose of the proposed study is to explore the relationship between exposure to social media images depicting risky behaviours (namely substance use, risky sexual behaviours and promiscuity) on similar externalizing behaviours in the offline environment among Trinidadian young adults, aged 18 to 25. The relationship between mental construal of these images and subsequent externalising manifestations is also under examination. Self-esteem and gender are being considered as moderators. It intends to explore these variables via self-report measures.

**STRATEGY APPRAISAL**

The ANSA McAL Psychological Research Centre has consistently sought to streamline its operations to be consistent with the goals of The UWI. In this regard, the following new initiatives were undertaken by the Centre in the 2019/2020 academic year:

**Access**

The Centre sought to improve the quality, quantity and impact of research, innovation and publication, in support of the Access pillar of the Strategic Plan. The social innovation approach was used to develop the methodology of Bridging the C.R.I.M.E. Divide. This is anticipated to encourage the use of similar approaches by students and staff at The UWI. The Centre is currently conducting research into several areas of concern which arose out of the global pandemic.

**Alignment**

In support of Alignment, and the promotion of greater activism and public advocacy, the Centre introduced practical psychology sessions to promote proper mental health management during the pandemic. Through PSICHI, several virtual initiatives were launched to assist students with stress management and maintaining general mental health. Some of these activities were conducted on a weekly basis and included Health Habit Thursdays, and the PCA's Health Series.

**Agility**

The Agility of the Campus and University through the establishment of "a physical presence of The UWI on all continents" was facilitated as the Centre continued to foster relationships with researchers across the globe. The review period saw the start of a student driven collaboration with **Ryerson University** to develop solutions for juvenile crime in both Canada and Trinidad & Tobago. This project, still in its early stages, was halted temporarily due to the pandemic.

**Centre for Health Economics (HEU)**

For the academic year 2019/2020, the Centre for Health Economics (HEU) continued its mandate to be a resource for national and regional agencies through the execution of its research agenda. The Centre continued its research thrust in the broad areas of Health Sector Programmes and Financing, Health Systems Analysis, Health Impact Assessments and Health and Economic Policy Analysis. The research projects undertaken by the Centre and the technical support provided over the course of the academic year also aligned with the University's strategic goals.

**Highlights**

The major highlights for the 2019/2020 academic year included:

- Designation as a WHO Collaborating Centre for Health Economics and Financing
- Development of the HEU Health Costs Estimation Tool
- Completion of the Comprehensive Costing of Public Sector Health Services in Barbados
- Provision of Services for the Design and Development of a National Health Insurance System for Antigua and Barbuda
- Co-hosting of the Youth Economic Forum with the Department of Economics
- Production and dissemination of a Special Edition of **IMPACT: HEU Bi-Annual Bulletin**
- Hosting of the 13th Caribbean Conference on National Health Financing Initiatives

# Centres & Institutes

## RESEARCH

During the academic year 2019/2020, the Centre furthered its own research agenda and also conducted research on behalf of regional Governments. The Centre also worked in partnership with regional and international agencies and formalised significant relationships with relationships key agencies, based on the quality of its wide scope of research. A selection of these undertakings is summarised below.

### *WHO Collaborating Centre (WHOCC) for Health Economics and Financing*

The HEU, Centre for Health Economics was designated as a World Health Organisation Collaborating Centre (WHOCC) for Health Economics and Financing with effect from June 4th, 2020. This formal designation by the Director-General of the WHO serves as a formal mechanism to carry out activities that support the WHO's programmes, goals and priorities. WHOCCs are key institutions with relevant expertise distributed throughout the world that have a long-standing history of collaboration with the WHO. Of the 834 highly regarded academic and scientific institutions designated as WHOCCs globally, 191 are in the Region of the Americas. The HEU, Centre for Health Economics is one of the four WHOCCs in the English-speaking Caribbean. The HEU, Centre for Health Economics, WHOCC for Health Economics and Financing, has the distinction of being the only institution with such a designation in the world. The only other WHOCCs with similar designations are the Seoul National University, Republic of Korea, WHO Collaborating Centre for Health System and Financing and the Chulalongkorn University, Thailand, WHO Collaborating Centre for Health Economics.

### *HEU Health Costs Estimation Tool*

A preliminary HEU Health Costs Estimation Tool was developed and piloted as part of the Centre's response to COVID-19. The Excel-based tool with built-in formulas provide health cost estimates for COVID-19 and various disease conditions. The Tool was first used in April 2020 to estimate the COVID-19 health care costs for 26 Caribbean countries for prevention, testing, treatment, and infrastructural upgrades.

### *Major Research Projects Completed*

*Comprehensive Costing of Public Sector Health Services in Barbados.* Commissioned by the **Ministry of Health and Wellness**, under the **Government of Barbados**. Principal Investigators: Althea La Foucade, Karl Theodore and Christine Laptiste. Co-Investigators: Vyjanti Beharry; Patricia Edwards-Wescott, Kimberly-Ann Gittens-Baynes, Charmaine Metivier.

*COVID-19 and the Economic Shock: Impact and Policy Options. Country Case Diagnostics – Trinidad & Tobago.* 2020. Principal Investigator: Althea La Foucade. Co-Investigators: Karl Theodore, Ewan Scott, Christine Laptiste, Vyjanti Beharry, Samuel Gabriel, Haleema Ali-Sisbane, Don Bethelmie, Leon Henry, Ricardo Laloo, Gemma Baliram. Submitted to the **United Nations Development Programme, Trinidad & Tobago Office.**

*The Economic Impact of COVID-19 on The Economy of Trinidad & Tobago.* Principal Investigator: Karl Theodore. Co-Investigators: Althea La Foucade, Ewan Scott, Christine Laptiste, Vyjanti Beharry, Samuel Gabriel, Haleema Ali-Sisbane, Don Bethelmie, Earl Boodoo. Submitted to the **Government of Trinidad & Tobago.**

### *Major Research Projects Nearing Completion*

*Improving Household Nutrition Security and Public Health in the CARICOM.* UWI Mona, UWI Cavehill and the **International Development Research Centre (IDRC)**. Althea La Foucade, Karl Theodore, Vyjanti Beharry; Charmaine Metivier; Samuel Gabriel; Christine Laptiste.

Provision of Services for *Advancing Action on the Design and Specification of a National Health Insurance System in Antigua and Barbuda.* **Government of Antigua and Barbuda.** Principal Investigators: Karl Theodore and Althea La Foucade. Co-Investigators: Charmaine Metivier; Stanley Lalta; Christine Laptiste; Roger Mc Lean; Patricia Edwards-Wescott, Kimoy Worrell; Anton Cumberbatch.

Empowering Healthcare Decision Makers to Achieve Regional Needs in Sugar-Sweetened Beverage [SSB] Policies in Latin America and the Caribbean: Building a Framework to Evaluate the Disease Burden and the Cost-Effectiveness of available Interventions; and Estimating the Disease Burden in Four Countries. The **International Development Research Centre** (IDRC), in collaboration with the **Institute for Clinical Effectiveness and Health Policy** (IECS) (Buenos Aires), The UWI, UWI-HEU, **ACT Health Promotion** (Brazil) and the **Ministry of Health** (El Salvador). Principal Investigators: Karl Theodore and Althea La Foucade. Co-Investigators: Vyjanti Beharry; Kimberly-Ann Gittens-Baynes, Samuel Gabriel, Christine Laptiste, Charmaine Metivier.

*Health Sector: COVID-19 Economic Impact Assessment. PAHO, Trinidad & Tobago Office.* Principal Investigators: Althea La Foucade. Co-Investigators: Karl Theodore, Vyjanti Beharry; Don Bethelmie, Samuel Gabriel, Christine Laptiste, Haleema Ali-Sisbane.

## OUTREACH

The Centre continued to form strategic alliances with Governments in the Caribbean, as well as several national, regional and international stakeholders/partners, including the **Ministry of Health, Trinidad & Tobago, regional Ministries of Health and Finance, UNECLAC and PAHO/WHO**. Such partnerships/collaborations have facilitated, in many ways (financial, technical, etc.), the coordination, promotion and integration of interventions that advance our developing Caribbean countries.

### *Conferences, Seminars & Workshops Hosted*

#### *Youth Economic Forum*

The Youth Economic Forum (YEF) began in 2019 and is a collaborative initiative of the Department of Economics, the HEU, the Centre for Health Economics and the Economics Society of The UWI, St. Augustine. Its primary aim is to create a platform for dialogue among young Caribbean economists on regional issues and progress towards the 17 Sustainable Development Goals (SDGs) of the United Nations (UN). It is hoped that this dialogue would strengthen youth involvement in policymaking and bridge the gap between current thinking and perspectives in view of the SDGs. The overarching theme

of the YEF is “Bridging the Gap To 2030: The Future We Want”. In light of the ongoing COVID-19 pandemic, the third YEF was executed as a webinar on 11<sup>th</sup> May 2020 with the theme “Youth Perspectives on COVID-19”.

### *13th Caribbean Conference on National Health Financing Initiatives*

The Centre co-hosted the 13th Caribbean Conference on National Health Financing Initiatives with Anguilla Social Security Board—the national agency with almost four decades of experience in the social security business in Anguilla from November 6-8, 2019. The overall objectives of these conferences are to share knowledge, increase understanding, test ideas, enhance national expertise and deepen regional collaboration in designing and managing national health financing initiatives. The theme of the conference was *‘Fiscal Space and Sustainability in Caribbean Health Financing’*. The conference attracted more than eighty participants from nineteen countries, as well as sixteen public and private organisations.

### *IMPACT: HEU Bi-Annual Bulletin*

The HEU’s Bi-Annual Bulletin, IMPACT, offers a critical platform for the Centre to contribute to the regional discourse on human development and apprise partner agencies and professionals of its work and by extension, that of The University of the West Indies. [The Special Edition Volume 2 Issue 1](#) was entitled “Exploring the Socioeconomic Impact of the COVID-19 pandemic”. This Special Edition Bulletin contributed to the dialogue on the COVID-19 pandemic by highlighting some of its multi-dimensional impacts in the Region including, the macroeconomic implications and the outlook for economies; the hidden mental toll at the community and individual levels, and the widened social gaps created by the outbreak. The list of external contributors for the Special Edition of the Bulletin included Dr Peter Weller - Clinical Psychologist; Professor Gerard Hutchinson - Clinical Psychologist, Faculty of Medical Sciences, and Dr Varma Deyalsingh - Clinical Psychologist. Key informant interviews were conducted with Dr Erica Wheeler, PAHO Country Representative- Dutch Overseas Territory and Trinidad & Tobago and Ms Jessie Schutt-Ainé, Caribbean Subregional Program Coordinator PAHO.

# Centres & Institutes

## STRATEGIC REVIEW

### Access

The HEU co-hosted the Youth Economic Forum with the Department of Economics on the theme “Youth Perspectives on COVID-19” and hosted the 13th Caribbean Conference on National Health Financing Initiatives. During the 2019/2020 period the HEU also developed the preliminary HEU Health Costs Estimation Tool and produced, published, and disseminated the Special Edition of *IMPACT: HEU Bi-Annual Bulletin*.

### Alignment

The HEU participated in high level meetings with Managers and Heads of Departments of Health Facilities in Barbados on the Costing of Health Programmes and was designated as a WHO Collaborating Centre for Health Economics and Financing. The HEU also collaborated with the Institute for Clinical Effectiveness and Health Policy institution in Argentina on a Project entitled, “Empowering healthcare decision makers to achieve regional needs for sugar-sweetened beverages consumption’s control in Latin America: building a framework to evaluate current available policies, burden of disease and cost-effectiveness and applying it to four countries.”

Other collaborations included Cave Hill Campus - George Alleyne Chronic Disease Research Centre, Faculty of Medical Sciences, Public Health Group; Mona Campus - Department of Gender and Development Studies; The UWI Caribbean Institute for Health Research (CAIHR); the University of Technology Jamaica; **Mc Gill University**, Canada, and **University of Cambridge**, UK on the project entitled “Improving Household Nutrition Security and Public Health in the Caribbean Community”.

### Agility

During the 2019/2020 review period the HEU completed funded research on the Comprehensive Costing of Public Sector Health Services in Barbados and initiated funded research on the Provision of Services for the Design and Development of a National Health Insurance System for Antigua and Barbuda. A **PAHO** funded research project was initiated on the Health Sector: COVID-19 Economic Impact Assessment. The HEU was also able to transition to remote working and teaching in response to the COVID-19 pandemic and updated, expanded and improved the content of the Centre’s website.

## Institute for Gender & Development (IGDS)

Over academic year 2019/2020, the St. Augustine Unit of the Institute for Gender & Development Studies (IGDS) continued to focus on fulfilling The UWI’s Triple A Strategy by concentrating on three key areas: mainstreaming, movement-building and mentorship, through resource-mobilisation, media and branding. In addition, the IGDS continued to develop its approach to outreach and impact through engagement programmes such as IGDS Reach, IGDS Ignite, IGDS CV+, IGDS Silver and Gold, and IGDS Impact.

### International and Regional Collaborations

For the second year straight the IGDS collaborated with the Sir Arthur Lewis Institute of Social and Economic Studies (SALISES) to offer a study-abroad programme to visiting US-based students. In addition to offering three courses, a study tour took students from the **Arcus Centre for Social Justice Leadership** at **Kalamazoo College**, to seven historical sites in Trinidad and a day trip to Tobago, over a nine-week period. This was an income-generating project and provided an opportunity for young staff to teach Caribbean feminist scholarship.

As the Caribbean organised to support the countries affected by Hurricane Dorian, the IGDS supported a Relief Drive for The Bahamas between September and October 2019.

The IGDS collaborated with the **United Nations Fund for Population Activities** (UNFPA) to produce its State of World Population 2020 report: “Confronting the silent and endemic crisis of harmful practices, specifically on the current issues surrounding Child Marriage in T&T”. **Dr Gabrielle Hosein** and **Mr Marcus Kissoo** were interviewed for the report’s accompanying short video, <https://www.unfpa.org/swop#!/child-marriage>.

After the pandemic-related closure of educational institutions and sites of public life in Trinidad & Tobago, from 13 March 2020, IGDS-SAU staff contributed to seven webinars, and produced seven public articles on the gendered and other impacts of COVID-19. The IGDS was represented on the UWI COVID-19 Task Force, and contributed to the report, “*Evidence base to guide the safe reopening of the UWI Campuses*”, published on 30 June 2020.

### *National Partnerships and Collaborations*

The IGDS worked on amendments to the Domestic Violence (DV Act) as part of the civil society coalition, the **Alliance for State Action to End Gender Based Violence** and collaborated with **Inter-club**, a network of women's organisations, on a public forum on trafficking for the International Day for the Elimination of Violence Against Women. Additionally, the Institute worked alongside the **2 Cents Movement, 868Change, Ile EGBE Yemoja, Ozone Protect, Mamatoto Resource and Birth Centre, Mindwise Project, Caribbean Male Action Network, Heart of a Sister Foundation, Oilfield Workers Trade Union (OWTU), Single Mothers Association of Trinidad & Tobago, The Silver Lining Foundation, Soroptimist International Chaguanas, Trinidad & Tobago Unified Teachers' Association, WOMANTRA, Yoga 4 Youth**, and others to organise the International Women's Day Rally and March on 7 March 2020. This was part of the Unit's work toward movement-building.

The IGDS St. Augustine Unit's flagship project during the review period was the *Sexual Cultures of Justice* project, led by **Dr Angelique Nixon**. The project's activities included the course, Transforming Each Other's Advocacy, and ongoing work to document the life stories of working-class LBGTI persons, completion of a National School Survey, various action campaigns in support of policy and legislative reform, and continued advocacy through the Add All Three campaign. These were only some of the activities undertaken by this highly successful research and advocacy project with significant impact on movement-building.

To advance its mentorship goals, the first *Reach for Rights* camp was held in July 2019, coordinated by **Dr Deborah McFee**, and bringing together youth, including from some Spanish-speaking migrant communities, to learn more about the social justice and community development work of select Faculties of the UWI St. Augustine Campus. The MatchMe Internship programme selected two secondary school students, who contributed to organising the camp which led the **United Nations High Commissioner for Refugees (UNHCR)** to approach the IGDS to partner in 2019.

### *Resource Mobilisation*

Significant funds were raised for events such as the annual IWD march, this year amounting to TT\$90,000. **Ms Tricia Basdeo** coordinated the IGDS' contribution to organising the commemoration. As well, the SAU embarked on a partnership with **UNFPA** on health and family life education in primary and secondary schools. The project, valued at USD\$94,000, will be implemented over the next academic year, and is led by **Dr Gabrielle Hosein** and **Ms Tricia Basdeo**. As well, the Unit worked with the **Pan American Development Foundation** to produce a migrant-sensitive, Spanish-language version of the BTS Toolkit, relevant to Trinidad & Tobago, and Guyana. Training will be rolled out over the next academic year on the basis of the toolkit, under the oversight of **Dr Deborah McFee**.

In 2019, the On Her Voice Regional Secondary School Secondary School Programme was launched. IGDS trained poets to facilitate the design and development of a secondary school policy manual. This gave the poets tools to guide 200 students in 15 schools across the region to design their own policies.

### *Teaching and Assessment*

The IGDS transitioned its course delivery to Blackboard Collaborate and Zoom to replace face-to-face teachings. Undergraduate course assessments were adjusted for online delivery from 60% coursework and 40% exam to 100% coursework. The learning objectives of the courses remained and were aligned with each assessment. All skills are tested, with skill demands increasing with each assignment.

Pre-pandemic assessments tested, largely but not exclusively, recall, analysis and evaluation in the final exam, and research and application through coursework assignments. While staff would generally prefer to return to face-to-face work and teaching, they are prepared to teach online for as long as necessary and make the most of opportunities arising out of this period.

# Centres & Institutes

## COVID-19 and Enrolment

Before the pandemic, the IGDS staff and the Ignite club members actively engaged and attracted students through activities such as poster presentations and pocket course card distribution at Faculty Orientation Day, UWI Guild Fest and SPEC's Information Village. The IGDS has also typically used graduation commemorations in October as a way to connect to undergraduate students who are performing well in the courses to encourage them to register for the Minor and to pursue post-graduate study with the IGDS.

The Institute recorded a decline in enrolment in the Institute's main introductory course following the cancellation of face-to-face academic advising which made it much more difficult to access students and encourage enrolment. This is of concern as it lays the foundation for further studies and interest in the field.

In light of lockdown limitations, the IGDS increased its use of online and social media platforms, held virtual academic advising sessions for students via Zoom, and a virtual open day facilitated by the Campus Marketing and Communications Office. The St. Augustine Unit continued to provide a list of IGDS courses to all Deans and specific Department Heads, who might recommend IGDS courses to students as electives.

## RESEARCH AND PUBLICATIONS

The Institute's staff at the SAU continue to be productive both in their personal research agenda and in their unstinting efforts during the last academic year to enhance the collective research profile of the IGDS. Graduate student research is being aligned with the research themes identified by staff and the IGDS for informed and strategic research supervision and output.

### Technical Reports

To further promote mainstreaming the Institute completed two reports: the first for **UN ECLAC**, "*Gender Mainstreaming in National Sustainable Development in the Caribbean*", and the second for the **Inter-American Development Bank (IDB)** on "*Engaging Men to End Violence Against Women and Girls in the Caribbean: Expanding the Possibility Frontier*". Both reports were produced by **Dr Gabrielle Hosein** and **Ms Tricia Basdeo**.

## Publications

Issue 13 of the *Caribbean Review of Gender Studies (CRGS)*, "*African-Caribbean Women: Migration, Diaspora, Post-diaspora*" was published in the second half of 2019, furthering mainstreaming efforts. The work of the CRGS is overseen by SAU PhD student, **Ms Tivia Collins**, who remains the journal's Editorial Assistant.

## Research Projects

### Dr Angelique V. Nixon

Submitted a project extension request to the **European Commission, Trinidad & Tobago Delegation** (Europe/Aid/151167/DD/ACT/TT) for *Respect for fundamental human rights and freedoms in Trinidad & Tobago*. The original duration of the project was from April 2017 to September 2020. The latest request was for an extension to March 2021. Potential income generation to The UWI - EU €12,297.00. The project involves six LGBTI and feminist civil society organisations - **CAISO: Sex and Gender Justice, Friends For Life, I Am One, The Silver Lining Foundation, Womantra, and Women's Caucus**.

*A Sexual Culture of Justice: Strengthening LGBTQI & GBV Partnerships, Capacity & Efficacy to Promote & Protect Rights in T&T*. This is an activity-based, human rights project funded by the **European Union** and implemented by The University of the West Indies, Institute for Gender and Development Studies (IGDS). This project is a community-university collaboration that provides support for some of the longest-standing and emerging local efforts to transform approaches to partner violence, homophobia, bullying and policing, while building partnerships and organisational capacity.

## OUTREACH

### Online Outreach

After many years working with internal and external IT professionals, the IGDS SAU launched its new web platform that makes the areas of work and outputs more accessible to the general public and interested prospective students and partners. This upgrade of the web platform, <https://sta.uwi.edu/igds/> and coordination of IGDS' social media presence, has been led by **Ms Kathryn Chan** with support from **Ms Tessa Ottley** and **Ms Renuka Anandjit**.

### Workshops & Training Sessions

- **Student Support Central Division Social Workers** trained 21 social workers on issues of gender, child sexual abuse and HIV. The BTS toolkit was used as the guide for this workshop held on 11 October 2019.
- **SERVOL**, El Socorro - Gender, child sexual abuse and HIV safety conversation held on 25 October 2019 at IGDS seminar room.
- **UTT Institute of Criminology and Public Safety** - Presentation on Gender and Victimisation: Rape and Sexual Assault. This session, held on October 31, 2019, focused on the gendered nature of victimisation with a focus on sexual victimisation and sexual assault, rape myths and rape myth acceptance, and criminal justice treatment and processing of sexual assault victims in the course Gender and Crime. Students attending will be part of the Bachelor of Applied Science in Criminology and Public Safety.
- **2Cents movement** - IGDS BTS conducted a Train the Trainers on School Related Gender-Based Violence (SRGBV), Policy Development, and Activism on November 4 and 5, 2019.
- **Soroptimist International**, Newtown - BTS conducted a workshop with students from Mucurapo Secondary School on gender-based violence on 12 November 2019 for 43 students.
- **Human Rights committee of Hugh Wooding Law School** and BTS hosted a 1-hour conversation on Migrants and Child Sexual Abuse for students of The UWI on 22 November 2019.
- **SERVOL**, El Socorro - Pre Carnival conversation on gender, sexual abuse and HIV, held on 31 January 2020 for 19 students.
- **Cashew Gardens community** and BTS hosted an International Women's Day (IWD) poster making event on 29 January 2020, where children and women from the community created messages for the IWD Rally 2020.
- **CREDO Drop-In Centre** and BTS hosted a poster making event that supported the women and children of East Port of Spain on 5 March 2020 to develop messages for the IWD rally 2020.
- **SERVOL**, El Socorro Beauty culture class visited the IGDS to learn about IWD and create posters and messages on 6 March 2020.

### Completed Activities

The Institute completed a number of activities during the 2019/2020 period. These included:

- Creation of new accessible knowledge products (toolkits, research, and media) that strengthen local advocacy grounded in Caribbean theories, praxis, evidence, and analysis through the Online Knowledge E-Portal, which features outputs of the project ([www.portal.caribbeansexualities.org](http://www.portal.caribbeansexualities.org)).
- Completed Gender-Based Violence (GBV) training for a diverse group of 15 men to champion a new culture of gender equality and non-violence in their different communities, which facilitated media creation of scripted messages and the #PullUpYuhBredren campaign through five public service announcement videos – Men Speak Up! Champions Against GBV – which were shared widely across social media and attracted thousands of views. The Institute also supported four GBV Community Actions, led by men who participated in, or facilitated the GBV training, using the #PullUpYuhBredren campaign and a peer-to-peer training pedagogy. Each action included 10 to 20 persons and therefore the actions' impact extends to over 50 persons.
- Trained 46 teachers and guidance counsellors during two cycles of teacher training workshops; developed the "Safer Schools Teacher Training" toolkit and facilitator guide, focused on preventing the culture of bullying of young people related to sex and gender.
- Provided support for over 10 families and guardians of LGBTQI youth and 10 LGBTQI persons through the Stronger Families group and individual therapy and completed a National Survey of Bullying and Gender Based Violence of 40 secondary schools (38 in Trinidad and 2 in Tobago) with an average of 60 students per school. The survey followed the two cycles of teacher training workshops. More than 2,285 secondary school students were surveyed. Data analysis and the final report are in progress.
- Collected 18 life stories of working-class LGBTQI people that offer reflections on experiences with family, support systems and violence, as well as a needs assessment and ideas for social change and transformation. These life stories are pioneering research and will directly contribute to policy development and recommendations for legislative action.

# Centres & Institutes

- Campaigned for legal protection for LGBTI persons from unjust discrimination through the ongoing “Add All Three to the EOA” - a public awareness and legislative campaign to expand protections in the Equal Opportunity Act on the basis of Age, Health Conditions, and LGBTI Status. The campaign includes four radio ads broadcast on four stations (61 rotations over 3 weeks), plus an animated video launched across social media featuring prominent public voices as Champions of the Add All Three campaign. The video was watched more than 40,000 times on Facebook.
- Developed the 2020 Alliance for Justice and Diversity LGBTIQ Agenda – 13 Policy Actions, which were co-created based on research from this project and experiences/work of the AJD partners and finalised through community forums. Completed a desk review of legislative and policy-related advocacy by LGBTI organisations in the past 5 years. Supporting research and materials on how to engage national decision makers in progress and will be made available to community members.
- Organised and facilitated the “Transforming Each Other’s Advocacy” Action-Learning course with 22 participants and 7 facilitators representing 18 organisations/coalitions from a wide spectrum of civil society working on human rights, social justice, governance and development. This was a 6-month action learning course held from October 2019 to March 2020 in collaboration with **UNAIDS Caribbean, Lloyd Best Institute**, and two other EU-funded projects (*Veni Awpan - CSOs for Good Governance; Cropper Foundation - CSOs for Good Environmental Governance*). The course included five day-long sessions (with specialised workshops on Governance and Mobilisation, and Communication and Advocacy Capacity Building), as well as mentorship coaching and collaborative decision-making on funding and support for several action campaigns.

The action campaigns were co-created through the course and meant to be completed by March 2020, along with the final event for the course, but all had to be postponed because of the COVID-19 lockdown. Therefore, one final event remains for the TEOA course postponed to the end of the project and the action campaigns are in progress or changing strategies.

All the project activities are connected and lead into these final activities (in progress), which have been delayed due to the extenuating circumstances of the COVID-19 Pandemic.

## *Actions in Progress*

### *Break the Silence (BTS) Campaign*

Child Sexual Abuse is a child rights issue described by some as a global humanitarian crisis. In 2019, the BTS campaign was guided by two overall aims: to continue to bring a gender analysis to BTS interventions, and to expand the reach of the campaign to new communities and groups.

In 2020, children were faced with an increased risk due to the COVID-19 pandemic. The Break the Silence project received a grant from the **Pan American Development Fund** to produce a migrant-centred, Spanish language version of the BTS Teachers Toolkit and related communication materials. The BTS attended the **Office of the Prime Minister’s** nationwide school fair alongside three volunteers from the **Institute for Law and Academic Studies** on 4 June 2019, reaching over 150 persons. The BTS also partnered with **Women of Substance Tobago** to host a symposium in September 2019 for 130 boys on the issues of gender and child sexual abuse on September 9, 2019.

On International Women’s Day BTS was responsible for mobilising several children-based organisations to help them create messages around girl’s vulnerabilities, barriers, needs, and empowerment. **CREDO, Servol, Cashew Gardens** and **Women of the Soil** were networked in Trinidad and **Women of Substance** in Tobago. More than 75 children attended the rally with posters and messages.

### *“Artivism”*

*Artivism* is an art campaign where students learn about gender, CSA and create a mural in schools to raise awareness. The Institute partnered with the school Social Work Caroni Central Division, Ministry of Education (MOE) and was able to get five schools to participate during the review period. These included the **Saraswati Girls High School, and Carapichaima East Secondary School; the ASJA Boys, and Girls Charleville** (training completed and

murals in progress), and **Preysal High School** (training completed).

#### Movements Against Gender-Based Violence

In 2019, the IGDS partnered with the 2 Cents Movement to provide GBV and Gender Policy training to its core teaching artists and staff, in preparation for a **British High Commission** funded project, On Her Voice - Regional Secondary School Secondary School Programme. The performance tour and workshop took place in 15 secondary schools across five Caribbean territories - **Barbados, Belize, Jamaica, Saint Lucia, and Trinidad & Tobago**. At the end of this project, all participating schools would have produced a brave space policy manual to promote the new behaviours that would create a safer environment for girls and boys.

The IGDS also joined the **Trinidad & Tobago Civil Society National Reference Group** for the **Spotlight Initiative**, which aims to address all forms of violence against women and girls (VAWG), and harmful practices.

#### Inter-American Development Bank

The Adolescents as Agents of Change (Gender-Based Bullying) project is funded by the **IDB** and will be implemented by **CariMAN** with IGDS as a partner. The goal is to pilot the use of Virtual Reality for a bullying prevention programme as well as Program H which uses traditional methods of intervention.

#### Advancing Gender Responsive Budgeting in the Public Sector

In 2019 the IGDS, the **Ministry of Housing and Urban Development**, and the **Office of the Prime Minister (Gender and Child Affairs)** delivered Gender Responsive Budgeting training to 28 technical staff from these and other organisations including the **Housing Development Corporation**, the **East Port of Spain Development Company Limited, East Side Plaza**, the **Trinidad & Tobago Mortgage Finance Company Limited**, the **Ministry of Finance (Budgets Division)**, the **Ministry of Planning and Development**, the **Inter-American Development Bank**, and the **National AIDS Coordinating Committee**.

The IGDS continued to collaborate with the **Ministry of Housing and Urban Development** on a Gender Responsive Budgeting Project. In 2020, an MOU was drafted to develop initiatives to advance gender mainstreaming and gender responsive budgeting in the operations of the Ministry and by extension, in the wider public sector in Trinidad & Tobago.

#### DISTINGUISHED VISITORS

##### Adam Hosein

Associate Professor of Philosophy  
and Affiliate Professor of Law  
Northeastern University, USA

##### Vashty Maharaj

Media and Communications Specialist  
Editor/Publisher Central Beat, Trinidad

##### Dr Kimberly Williams

Assistant Professor of Education at Vassar College  
Brown Vassar College, USA

# Centres & Institutes

## Institute of International Relations

### OVERVIEW

The Institute of International Relations (IIR) at The University of the West Indies is a regional, autonomous academic institution at the St. Augustine Campus, with associate fellows at the Mona and Cave Hill Campuses, and within other organisations. Since its founding in 1966, the Institute has been dedicated to the conduct of advanced research and teaching concerning the international challenges of the contemporary world, with special emphasis upon the Caribbean and Latin American regions. As a vital part of the infrastructure for its teaching and research, the Institute has developed a Library that constitutes one of the best information resources available, regarding the international relations of the Caribbean. In addition to its Postgraduate Diploma, MSc and MPhil/PhD programmes, the Institute of International Relations, through the Diplomatic Academy of the Caribbean (DAOC), meets related regional and national human resource development needs by offering short intensive modular training programs for public and private sector and civil society personnel. The Institute also offers international policy research and advisory services and consultancies.

### DIRECTOR'S SUMMARY

For The UWI Institute of International Relations and the Diplomatic Academy of the Caribbean, as indeed for most of the world, academic year 2019/2020 has been marked by upheaval, disrupted work processes and emergency adjustments that resulted from the COVID-19 global pandemic, announced in March 2020. The report reflects these events which dramatically reconfigured the latter part of the year. Semester I and the first two months of Semester II progressed normally. The Institute had an ambitious work programme which focused on the scheduled Quality Assurance Review process (QAR), a mandatory procedure for all units of the UWI every few years. Another major focus was Curriculum and Pedagogical Reform (CPR), and advances were made in this respect. The IIR and DAOC organised several public events, including two symposia. The first was a tribute to Sir Alister McIntyre in September 2019, and the second was organised in partnership with the **Association of Caribbean States** (ACS) in February 2020 to commemorate the 25th anniversary of the Association's founding.

However, with effect from mid-March 2020, all activities requiring a physical presence on The UWI campus were suspended because of the public health emergency regulations. Many key events were postponed and the energies of staff and students at the IIR and the DAOC were diverted to refocus on keeping administrative, teaching, research, other scholarly and public service activities going by means of digital technology. The pandemic has given us greater experience and confidence in working with distance and blended learning technologies. This will certainly engender new areas of innovation and growth in our operations. Semester II teaching and examinations were piloted to a successful conclusion in which academic and support staff responded very well, and most students were able to cope. We ended Semester II looking forward to holding some important activities of the DAOC and the IIR which had been postponed. They included DAOC training modules, the eight-week WTO Regional Trade Policy Course, which should have been held in June-July 2020, various public events and the visit of the Quality Assurance Review team which should have taken place during March 2020, and which was eventually conducted in the first semester of the academic year 2020/2021.

### STAFF

The IIR/ DAOC welcomed **Dr Nand Bardouille** as Manager of the Diplomatic Academy of the Caribbean in July 2019. Dr Bardouille's appointment is for a three-year period. The Diplomatic Academy which has struggled with high turnover of managerial staff and it is hoped that more stable staffing will lead to consolidation and growth for the DAOC.

### STUDENTS

#### *Achievements & Awards, Enrolment, Graduation*

**Ms Asabi Rawlins**, of the MSc Global Studies class, was awarded a **Chevening scholarship** and is now pursuing doctoral studies in the United Kingdom.

An initiative was launched in April 2020 to regularly engage with the MPhil/PhD student group via Zoom. It is hoped that the systematic use of such distance technologies will strengthen links with student researchers and will enable them to construct their own collegial support network and assuage the feelings of isolation that busy people on the PhD journey can sometimes experience.

During the year, two candidates, **Drs Indera Sagewan** and **Faies Jafar** were awarded their doctoral degrees, and **Ms Natasha Lalla** completed her MPhil degree. Three candidates had their PhD Viva (oral) exams and proceeded to complete the requirements for the award of degree. The research conducted by MPhil and PhD candidates during the period have important policy implications for international relations in the Caribbean. They include:

- *Extracting, Understanding and Explaining the Foreign Policy Formulation and Implementation Process of Trinidad and Tobago* - Presented by: **Faies Jafar**, IIR, Yves Collart Boardroom, September 30, 2019
- *Deconstructing the Good Governance Agenda: A Comparative Analysis of Selected Caribbean Small Island Developing States and Sub-National Island Jurisdictions — (Curaçao, Sint Maarten and Trinidad and Tobago)* - Presented by **Genève Phillip-Durham**, IIR, Yves Collart Boardroom, October 4, 2019
- *Sustainable Tourism Development and Network Governance: A Critical Examination of Sustainable Tourism Networks in Three Caribbean Destinations - Jamaica, Trinidad, and Tobago* - Presented by: **Lynelle Clarke**, IIR, Yves Collart Boardroom, December 9, 2019

## PROGRAMMES

IIR students regularly benefit from exposure to multilateral organisations with offices in Trinidad and Tobago. During 2019/2020 four local field trips were organised to the **Caribbean Court of Justice, the European Union Delegation, the Red Cross Headquarters in Trinidad and Tobago** and for the PG Dip students, a visit to the **Chilean Embassy** for a special lecture.

The broadening of the curriculum continued with the introduction of a second new course in International Security and Strategy - Diplomacy and Strategy: Wargaming Simulation. Participants gained several new skills in strategic military planning, negotiating techniques, teamwork and coordination and expanded their experience with using certain communications technologies. Students enrolled in the course - Climate Change: Policy and Economic Options for SIDS, recorded and presented documentary films on Climate Change responses in SIDS.

## *Diplomatic Academy of the Caribbean*

The Diplomatic Academy of the Caribbean, as part of its mandate to complement the teaching programmes of the IIR, successfully delivered the following training modules:

- Understanding International Sanctions: Implications for the Caribbean (9 - 12 March 2020)
- The Art of Corporate and Diplomatic Communication (11-14 November 2019)
- Protocol and Diplomacy: A Guide for the Modern Professional (14 - 17 October 2019)

## *Harvard National Model United Nations (HNMUN)*

Notable among the activities under the IIR was participation at the **Harvard National Model United Nations (HNMUN)** event, held annually in February. HNMUN is a simulation of the UN General Assembly which brings together 3,000 students and faculty members from colleges and universities globally to address and experience the challenges associated with international negotiations and diplomacy. The St. Augustine Campus through the Institute of International Relations has been participating in a One UWI team at the HNMUN since February 2017, together with the other two Campuses. At the HNMUN held in February 2020 in Boston Massachusetts, the St. Augustine Campus was represented by four postgraduate students from the IIR: **Terri Ann Baker, Danielle Lewis, Joneille Johnson and Ryan Abraham**. Dr. Abraham and Ms. Baker (double delegate) received Diplomatic Commendation for representing India on the World Health Organisation and Ms Johnson received Diplomatic Commendation for representing Sahrawi Arab Democratic Republic on the African Union. This is the second year in a row that the STA members of The UWI team were successful.

## *UWI STA Model UN Club*

In December 2018, the UN Model United Nations Club was officially established at the St. Augustine Campus. The Club in collaboration with the UN Information Centre also hosted an open discussion forum in commemoration of United Nations Day on 24 October 2019. The Club collaborated with the Dean's Office, Faculty of Science & Technology and **Trinidad & Tobago National Commission for UNESCO** on an interdisciplinary Panel Discussion in commemoration of World Science Day in 2019. The theme was "Open Science: Climate Change and Small Island Developing States (SIDS). What Now?"

# Centres & Institutes

## RESEARCH

Academic Staff continue to collaborate with national, regional, and international colleagues, programs, and projects to lead scholarly activities and to publish in their respective disciplines. IIR Academic staff also support global research by routinely contributing as peer reviewers for academic journals.

In the 2019/2020 academic year, **Dr Jacqueline Laguardia** was a researcher for the Project *La presencia China en el Gran Caribe: Ayer y hoy*, sponsored by the **Centro de Estudios Caribeños of the PCUMM**, Dominican Republic (October 2019 – March 2021). Dr Laguardia also was one of the organisers of the CLACSO Seminar *Marxismos negros: raza y clase en el pensamiento crítico afrodescendiente y africano*, sponsored by the **CLACSO Working Group** Crisis, Respuestas y Alternativas en el Gran Caribe (May – August 2020).

### Published Research

**Drs Laguardia, Chami, Montoute and Mohammed** co-authored the book *Changing Cuba-US Relations: What Implications for CARICOM States?* published September 2019 (New York: Palgrave Macmillan). This text is timely and policy-relevant in the current context of US-Caribbean relations. Overall, IIR full time academic staff published in 2019/2020, one co-authored book, ten book chapters in edited collections, thirteen peer-reviewed journal articles and six encyclopaedic entries. In addition, **Dr Samantha Chaitram**, published one article and a major text on US-Caribbean Foreign Policy with Palgrave Macmillan.

### Research funding.

**Dr Michelle Scobie** was awarded a prestigious **Belmont Forum** grant, as part of an international consortium of five principal investigators from the UWI, **University College London, RAND (USA), and the Norwegian Institute of Health** for a 3-year research project entitled “Community collective action to respond to climate change influencing the environment-health nexus.” The team is studying how volunteer-based, local groups self-organise to respond to climate change and its environmental impacts to contribute to health systems, formal and informal, which can adequately address changes to heat stress, infectious disease, and food systems.

## OUTREACH

### Public Outreach & Collaborative Events

2019/2020 was a truncated academic year for conference activity with major research expeditions and academic gatherings in the second semester being cancelled or converted, where possible, into virtual events. Nonetheless, IIR academics participated in and presented at over 20 conferences and workshops during the year. These included face to face events such as the UWI/CARIFESTA 2019 conference, the IIR's own symposia, conferences in Panama City, Havana, the Dominican Republic, and virtual conferences organised by LASA and CRIES/Stanley Foundation, among others.

The IIR had a busy schedule of public events. They included the Sir Alister McIntyre *Caribbean on the Edge* symposium, a two-day tribute to the life and tremendous contribution to Caribbean development by the former UWI Vice Chancellor, held in September 2019. This event received material contributions from the UWI Research and Publications Fund and the **Central Banks of The Bahamas, Barbados and Trinidad and Tobago**. There was also the ACS 25th Anniversary Symposium in February 2020, a collaborative effort between the IIR and the **Association of Caribbean States** (ACS) Secretariat.

**Dr Cary Fraser**, Associate Professor at **Appalachian State University**, delivered a public lecture on the United States in a Changing Global Order in January 2020, and in January, the IIR hosted **Dr Christopher Hackett**, former Barbadian representative to the UN New York, arranging a discussion panel for the launch of his autobiography *Small State Diplomacy: Representing Barbados at the United Nations*. Both individuals are distinguished alumni of the IIR. The Institute is focused on strengthening ties with its extensive alumni network, pursuing collaborative projects, and drawing on their resources whenever possible.

There were three Diplomatic Dialogues arranged jointly by the IIR and DAOC.

**Mr Andreas Haack**, Charge d'Affaires at the **German Embassy** delivered a thought-provoking session in October 2019, on Germany's experience in the transition to renewable energy 1990 to the present. A month later, **H.E. Arun Kumar Sahu, the High Commissioner of India** gave a presentation on India's foreign policy, a continuation of the IIR's focus on the international relations of the Asia-Pacific region, and **Mr Gian Piero Leoncini**, Representative of the **Latin American Development Bank** or the **CAF** in Trinidad spoke on "A Success Story in regional integration: the growth of the Latin American Development Bank". All these events were well attended by the public and by UWI students and staff, and all provided fascinating perspectives on important issues for regional and global affairs.

IIR students benefited from approximately 16 guest lectures in their various courses, including a special guest lecture by **H.E. the High Commissioner of New Zealand Mr Anton Ajala** on "Comparative Perspectives on Caribbean and Pacific SIDS" and the lecture by **Dr Ruben Gonzales Vicente, University of Leiden** on "The Rise of Populist Politics during Late Capitalism". Both presentations took place early in Semester II.

#### *Visiting Guest Lectures 2019/2020*

##### *Climate Change: Financing & Investment Options*

Lecture presented by **Mr Kishan Kumarsingh**, Head, Multilateral Environmental Agreements Unit, Government of Trinidad & Tobago  
March 31, 2020

##### *Professional/Business Etiquette and Diplomatic Correspondence & Writing*

Interactive sessions conducted by **Ms Gail Guy**, Former Chief of Protocol, T&T  
March 6, 2020

##### *The Role of Regional Trade Agreements in International Trade and Development: The EPA*

Lecture presented by **Dr Kusha Haraksingh**, Lead Negotiator, Legal and Institutional Issues, College of Negotiators for the CARIFORUM-EU Economic Partnership Agreement and Senior Fellow, Institute of International Relations  
March 2, 2020

##### *Intersection of International & National Climate Change Policies (Common but Differentiated Responsibilities): Nationally determined contributions (NDCs) and their implementation.*

Lecture presented by **Mr Vintura Silva**, United Nations Framework Convention on Climate Change  
February 11, 2020

##### *The Pacific Territories, including its connections with New Zealand and its parallels (and differences) with the Caribbean.*

Lecture by **H.E. Anton Ojala**, High Commissioner of New Zealand to Trinidad and Tobago  
February 5, 2020

##### *The UNFCCC: The treaty and its mechanisms*

Lecture presented by **Ms Rueanna Haynes**, Climate Analytics  
February 4, 2020

##### *Protocol & Etiquette*

Lecture presented by **Ms Gail Guy**, Former Chief of Protocol, T&T and Ambassador Dennis Francis, Former Ambassador of Trinidad and Tobago,  
November 11, 2019

##### *Constructivism: Theory, Application and Value*

Lecture presented by **Dr Courtney Lindsay**, IDB Barbados Office  
November 7, 2019

# Centres & Institutes

## STRATEGY REVIEW

Area	Indicators	UWI Strat. Plan Axes
<b>Staffing</b>	DAOC and IIR Secretariat staff stabilised. Other matters still pending.	Axis Three: Agility
<b>Quality Assurance</b>	SAR completed, review team selected, programme prepared. Review visits postponed due to COVID-19 lockdown.	Axes One, Two and Three
<b>Curriculum and Pedagogical Reform (CPR)</b>	2 new M. Sc electives approved; Revised M. Sc/ PGDip programme document in final stages of completion before submission for approval by OGSR and BGS.  DAOC new module	Axis One: Excellence in Teaching and Learning; Axis Two: Strategic partnerships; Axis Three: Agility via greater competitiveness, increased student nos., increased tuition revenue. Axes 1, 2, 3
<b>Research and Publication</b>	30 peer reviewed publications spread across various categories. For 10 FT academic staff, this exceeds the norm of 2 publications per annum. One CJIRD issue currently in press.	Axis One: Access Axis Two: Alignment Axis Three: Agility
<b>Public Engagement</b>	IIR/DAOC 11 public events encompassing symposia, public lectures, diplomatic dialogues, and book launch. N.B. postponement of three public lectures. Average attendance at events 23-25? Approximately ten engagements with local and international media outlets by academic staff.	Axes One, Two and Three
<b>Institutional Collaboration</b>	Collaborative partnerships: IOs – ACS, ECLAC; CARICOM entities; CAF; CCJ; CFATF; Caribbean Govts: Gov SVG, various GOTT entities; Embassies: Germany, Chile, India, Mexico, Sth Africa; EU Delegation; US Embassy. CSOs: CLACSO, Canadian Council of Americas, Flacso/DR; the Red Cross; Living Waters.	Axes One, Two and Three
	Universities (non-exhaustive): U. Havana, U. Panama, U. Antilles, U. Puerto Rico, PUCMM DR, U. Geneva, Grad. Institute of Geneva, U. Malta; UWI – various Campus and Cross-Campus collabs.	
<b>Alumni Engagement</b>	Two public events featuring prominent alumni; research groundwork completed for starting UWI Alumni IIR chapter; initial meeting with alumni postponed due to COVID-19 lockdown.	Axis Two: Alignment; Axis Three: Agility.
<b>Infrastructural Maintenance and security Upgrades</b>	Roof repairs implemented; Security audit completed; security upgrade students' washrooms almost completed; securitisation of entry points to DAOC/IIR in progress; quarterly ozone treatment of Secretariat & staff offices ongoing;	Axes One and Three

## DISTINGUISHED VISITORS

The IIR has in 2019/2020 hosted a long list of distinguished visitors which include many ambassadors and members of the diplomatic corps, retired ambassadors, officials of international and regional organisations and university academics, in collaboration with the DAOC which are listed below:

### Mrs Tricia Barrow

Political Advisor  
The Association of Caribbean States

### Professor Thomas Biersteker

The Graduate Institute of International Development Studies, Geneva

### Mr Collin Constantine

PhD Student  
Department of Economics  
Kingston University  
London, UK

### Dr Carlos Elias

Adjunct Professor of Economics  
Radford University, USA

### Dr Cary Fraser

Associate Professor of Government and Justice Studies  
Appalachian State University, Boone, North Carolina

### Senator the Hon. Paula Gopee-Scoon

Minister of Trade and Industry  
Government of the Republic of Trinidad and Tobago

### Mr Andreas Haack

Chargé d'Affaires  
Embassy of the Federal Republic of Germany,  
Port-of-Spain

### Ambassador Dr Christopher Hackett

Former Ambassador of Barbados to the United Nations

### Dr Zuzana Hudakova

The Center for International Studies (CERI),  
Sciences Po, Paris

### Mr Gianpiero Leoncini

Representative, Trinidad and Tobago  
CAF Development Bank of Latin America

### Dr Arnold McIntyre

Deputy Division Chief  
Caribbean Division Western Hemisphere  
Department  
International Monetary Fund,  
Washington D.C.

### Mr Nicholas McIntyre

Vice President  
Citibank, Port of Spain

### His Excellency Anton Ojala

High Commissioner  
High Commission of New Zealand to  
Trinidad and Tobago

### His Excellency Arun Kumar Sahu

High Commissioner  
High Commission of India, Port-of-Spain

### Ambassador Dr June Soomer

Secretary General  
Association of Caribbean States

### Dr Helvia Velloso

Economic Affairs Officer  
United Nations Economic Commission for  
Latin America and the Caribbean  
Washington D.C., USA

### Dr Ruben Gonzalez Vicente

Lecturer  
Leiden University in the Netherlands

## Seismic Research Centre (SRC)

### Director's Summary

The UWI Seismic Research Centre (SRC) is the regional institution responsible for surveillance of, and fundamental research into, volcanoes and earthquakes, in and around the English-speaking islands of the Eastern Caribbean. The SRC provides the governments of its nine contributing territories with accurate and up-to-date information about earthquake, volcanic and other geologic activity, including the 19 live volcanoes, in the Eastern Caribbean. The Centre has been providing these services for over 65 years. Its work has, and will, continue to have direct impact on vulnerable island communities throughout the Eastern Caribbean. All aspects of the work undertaken by the SRC are of direct and immediate relevance and importance to public safety and sustainable development in the region. The income received from our contributing territories continues to be inconsistent and provides sufficient funds for routine monitoring (i.e. operation of a minimal seismic network) only. We continued to lobby vigorously during the year for payment of outstanding debts. All other work, including most research, major developments in the network and outreach, were undertaken through grant funding, mainly from external sources or from applications to the SRC Departmental Consultancy Fund (DCF).

Geologically, the high level of seismicity seen in recent years in the Eastern Caribbean persisted although, at a somewhat reduced level in this reporting period. The seismograph

# Centres & Institutes

network recorded more than 9,400 earthquakes, which includes more than 3,780 low magnitude volcanic earthquakes, occurring in the Dominica area and more than 1,430 associated with the Kick-'em-Jenny submarine volcano. Locations were determined for about 2,060 earthquakes, of which 1,727 were of a magnitude 2.0 or greater. At least 33 of those events were reported felt. The largest earthquake for the period occurred north-west of Tobago/south-east of Grenada, on 7 April 2020, and was of magnitude 5.3. The areas north of Dominica and near the north coast of Saint Lucia continued to manifest a significant level of low magnitude, shallow earthquakes. West of Trinidad, in the Gulf of Paria there was also significant shallow seismicity. Moderate magnitude, shallow earthquakes located directly under densely populated urban centres have the potential to deal disastrous impact on cities. High-level activity is characteristic of the Antigua/Barbuda and Paria peninsula areas and is more marked in recent years. Including the moderate magnitude earthquake already mentioned, there were six events of magnitude 5.0 and larger and 81 in the magnitude range 4.0 - 4.9, during the period.

Activity at the Soufrière Hills Volcano in Montserrat, is now at a low level, but continues to be closely monitored by the Montserrat Volcano Observatory. Volcanoes falling within our area of responsibility, other than the southern Dominica and Kick-'em-Jenny systems, exhibited background levels of activity. Research being conducted at the SRC continues to suggest that the global seismogenic system is poised

to deliver its largest earthquakes and the mega-earthquakes that have occurred since 2004 support this conclusion. Our region has not seen its largest earthquake for well over 150 years. Since 2013, there has been an increase in number of earthquakes of magnitude greater than 6.0, indicating that background seismicity patterns in the region are changing. It is for this reason that we seek to foster collaborations that allow us to enhance our monitoring and seismic hazard and risk capability, take an active role in promoting the development and legislation of Building Codes, and our Education and Outreach thrust is being maintained at a high level.

## STUDENTS

### *Postgraduate Programme*

During the reporting period, the SRC's postgraduate programme expanded with a total of seven postgraduate students employed as Research Assistants working on projects that contribute to our key areas of research and monitoring. Of these, two were registered for postgraduate degrees in Seismology and three for postgraduate degrees in Volcanology. The other two postgraduate students were part of joint projects in collaboration with the Departments of Geography and Engineering.

## RESEARCH & INNOVATION

### *Volcanology*

**Dr E. Joseph** and **Dr G. Ryan** *Disaster risk management in the Caribbean, support for the Seismic Research Centre.* This project, funded by the **Government of New Zealand** through its **Ministry of Foreign Affairs**

**and Trade**, was extended by one year to allow completion of all activities. It involves **GNS Science** of New Zealand helping the SRC to build capacity in continuous monitoring of volcano-hydrothermal systems using remote techniques; ground deformation monitoring using remote sensing, and improved alerting systems for volcanic emergencies. The prototype volcano-hydrothermal monitoring stations have since successfully been tested in New Zealand at White Island and Te Maari, with the parameters of temperature and water levels of pools being monitored.

### **Dr E. Joseph**

*Geochemistry and microbial ecology of hydrothermal areas in Dominica, Lesser Antilles.* (CRP.3.MAR19.4)

Funding: TT\$44,700.00. The SRC is also collaborating with the Department of Life Sciences' **Professor Jayaraj Jayaraman** and **Dr Adesh Ramsubhag** to study the relationship between the geochemistry of hydrothermal gas and waters at various hydrothermal areas of Dominica in relation to the microbial ecology that exists at these sites. The results of this study will contribute to the monitoring of chemical changes in hydrothermal fluids at geothermal systems in Dominica, and to identifying microbiotic species with the potential for bioprospecting.

### **Dr Erouscilla Joseph**

*UK Global Challenges Research Fund (GCRF). Caribbean Resilience and Recovery Knowledge Network.* Funding: £144,963.00 (June 2019 – June 2021). The SRC will contribute to the GCRF Caribbean Resilience and Recovery Knowledge Network in collaboration

with **Dr Emily Wilkinson** (Overseas Development Institute) and **Dr Donovan Campbell** (UWI, Mona). The overall aim of the Network is to create a new culture for responding to, and preparing for hazardous events - one that promotes sustainable and equitable recovery and resilient development pathways in Caribbean islands. The project consists of three key activities to take place in the region: a forensic workshop, scenario roadshows, and an interdisciplinary webinar series. New knowledge will be co-produced between the research, practitioner and policymaker communities. This will take the form of policy briefs, scenario exercises, new (bespoke) principles and strategies for disaster recovery and new research manifestos and proposals.

#### **Professor R. Robertson**

*Volcano-Ready Communities in St. Vincent.* This is a project funded by a grant of US\$618,700 from the **Community Disaster Risk Reduction Fund** administered by the **Caribbean Development Bank**. The project is being carried out in St. Vincent, in collaboration with the **National Emergency Management Organisation of St. Vincent & the Grenadines**. It provides scientific information, downscaled to support community level volcano contingency planning, community-led multi-hazard mapping and capacity building for disaster risk reduction.

**Drs Karen Pascal, Victoria Miller, Adam Stinton, Thomas Christopher and Mr Dike Rostant** (E&O Officer) *"Mountain Aglow" Montserrat* (14 -17 November). Each team member assisted with development of a

mobile exhibit entitled "Mountain Aglow" (<https://mountainaglow.com>) coordinated by Professor Jenni Barclay at the **University of East Anglia**. Dr Pascal visited the UK to assist with the launch of the exhibit at the Norwich Science Festival in October 2019, following which it arrived on Montserrat in November 2019 during Montserrat's annual Festival of the Word.

#### **Dr Victoria Miller**

*Quantitative methods for hazard assessment at the Soufriere Hills Volcano, Montserrat.* This research project will employ quantitative methods for hazard assessment at the Soufriere Hills Volcano, Montserrat. A new hazard map will be developed in collaboration with researchers at the **University of Edinburgh**, scientists at UWI-SRC and the **Government of Montserrat**, with a focus on pyroclastic flows and lahars, to differentiate hazard levels within the existing Zone V (exclusion zone). The micro-zonation of Zone V will provide input to risk assessment for the volcano and an evidence base for decision-making regarding access management and long-term development planning on the island of Montserrat.

*SHV25 International Conference* (scheduled 20 -24 July 2020) was postponed to July 2021 due to COVID-19. In commemoration of the start of the eruption on 18 July 1995, the MVO hosted and delivered a series of talks, interviews and panel discussions entitled MVO Talks from 13 -17 July (available online through ZJB and the Government Information Unit).

#### *Geophysics*

##### **Dr I. Papadopoulos**

The UWI SRC Geophysics team continues this year to work on the *Trinidad & Tobago Microzonation project* (TTMP), funded by the **Ministry of Planning & Development**. The area of investigation this year is the Diego Martin basin, and operations included extensive geological surveys and geophysical prospecting. The team also got involved in the archaeometric investigation of the Banwari Burial Heritage Site in St. Francique, Siparia. Operations started in February 2019 and were expected to conclude in September 2019. A comprehensive report was to be submitted to **The National Trust of Trinidad & Tobago** early in 2020.

The UWI SRC continues to expand the *urban strong-motion network* with additional installations of stations in Port of Spain and Diego Martin. Currently there are eight stations in Port of Spain and one in Diego Martin, recording continuously the seismic activity and online streaming data back to The UWI SRC.

#### **OUTREACH**

The Education & Outreach section of the Centre aims to bridge the gap between the science of the geological hazards monitored by The UWI-SRC and public understanding and knowledge of these phenomena in the region. The section focuses on student outreach, stakeholder sessions, special projects and collaborations throughout the islands, along with social media posts with the aim of raising awareness to the geological hazards and helping to reduce the risk via preparedness and

# Centres & Institutes

mitigation messages. The start of 2020 saw the COVID-19 pandemic impact the work of the Centre and the section had to take steps to move to online platforms to conduct sessions. Our robust social media platforms were fully implemented, and we engaged the online and general community through various activities.

## *Student Outreach*

Tours continued at the Centre during the reporting period. Students of **Tableland Government Secondary** and **North Gate Secondary** school visited the Centre. They experienced tours that followed the 'Data Trail' of seismic data throughout the building and ends with an interactive session. The tour can be adapted for the varying age groups and or subject(s) being studied by the visiting students. Presentations were made to various schools and institutes in Trinidad & Tobago. The E&O team also erected booths at certain school events.

## *Science and Safety Sessions*

Science and safety presentations on earthquakes, volcanoes, tsunamis or all three hazards are given to private firms, government offices and other entities in Trinidad & Tobago upon request. Sessions with **Telecommunications Service of Trinidad & Tobago** (TSTT) and the **Power Generation Company** (PowerGen) were scheduled but ultimately postponed. Sessions held after March 2020 had to be conducted online due to the pandemic and requests also dwindled during the reporting period due to various lockdowns and changes to work policies. The Section used a Zoom account and will switch to the Microsoft 365 Suite later in the year.

## *Proposed Events*

Proposed collaborations included a tsunami campaign with the **Department of Emergency Management, Barbados**, a Volcano Awareness Week in St. Vincent & the Grenadines, a geological hazards campaign for St. Kitts & Nevis, the annual Trinidad & Tobago public awareness campaign, and the Seismology in Schools (SIS) and Creating Opportunity from Research Experience (C.O.R.E.,) internships. All these events were postponed due to the COVID-19 pandemic.

## *Caribbean Development Bank Volcano Ready Communities Project (VRCP)*

The Section began assisting the project team with the production of new information material for all three geological hazards for both print and social media.

## *Online Activities during COVID-19 Lockdown*

The following activities were piloted during the national restrictions:

### *Tobago Anniversary Earthquake and Earthquake Safety Online Campaign*

To commemorate the 1997 Tobago earthquake and conduct an online earthquake science and safety campaign, the Open house videos from the 2019 and infographics were shared in April 2020.

## *SRC Chats 'Quarantine Edition'*

The section used the SRC Chat format from previous events to launch a 'Quarantine Edition' and seven episodes were filmed with the Centre's staff. The videos aimed to provide the general public with a behind the scenes look at the work undertaken by the various sections at the Centre and the challenges faced with doing this work during a lockdown.

## *SRC 'Snapchats'*

To commemorate the 25th anniversary of the eruption of the Soufrière Hills Volcano (SHV), Montserrat, the section recorded two videos with senior scientists that recalled poignant memories during that eruption period. A slideshow video was also created and shared on the anniversary of the eruption.

## *Dominica Unrest*

As the Dominica volcanic unrest continued, the section shared the '2-minute science' video done for the island and also information and graphics regarding the situation.

### *Volcano Top Trumps Competition and 'My Volcano Story – Saint Lucia'*

In the previous reporting period, the section submitted a proposal for the Volcano Top Trumps Competition under the STREVA project as was successful. The proposal outlined a short film titled 'My Volcano Story – Saint Lucia' and aimed to dispel misconceptions regarding the Soufrière Volcanic Centre (SVC). Filming began in Saint Lucia in November 2019 with a local producer and the film was to be reviewed and launched in Saint Lucia in 2020 but the pandemic caused a delay.

## STRATEGY REVIEW

In addition to routine monitoring operations, the SRC was engaged with the following key projects as summarised below. All of these projects are ongoing and will continue during the 2020/2021 period.

**Management of the Montserrat Volcano Observatory.** Successful execution of the new contract signed in 2016 for the management of the Montserrat Volcano Observatory continued. The contract is for a fixed sum of EC\$17.9 million and largely supports the employment of 8 members of staff (6 based at MVO and 2 at SRC).

**Seismic Microzonation Studies in Trinidad & Tobago.** This project, funded by the **Ministry of Planning and Sustainable Development, Government of Trinidad & Tobago**, continued with the collection of data moving to the Diego Martin area. It caters for microzonation of ten major population centres in Trinidad & Tobago over the next 10 years and has a total budget of US\$1.7M.

**C.O.R.E. (Creating Opportunity from Research Experience) Programme.** This is the SRC's annual summer internship programme for highly motivated university level students interested in pursuing geoscience careers. The programme is funded entirely from the SRC Departmental Consultancy Fund and caters for up to three interns spending 2 months attached to the SRC, either based in Trinidad, or at the Montserrat Volcano Observatory.

**Disaster risk management in the Caribbean, support for the Seismic Research Centre.**

This project funded by the **Government of New Zealand** through its **Ministry of Foreign Affairs and Trade** was extended by one year to allow completion of all activities. It involves GNS Science of New Zealand helping the SRC to build capacity in continuous monitoring of volcano-hydrothermal systems using remote techniques; ground deformation monitoring using remote sensing, and improved alerting systems for volcanic emergencies.

**Seismology in Schools project.** This is an ongoing collaboration with **NIHERST**, Trinidad & Tobago that involves several involving UK-based researchers from **Imperial College, London; Durham University;** and the **British Geological Survey.**

**Montserrat Geothermal Project.** This is a multiple component project involving the analysis of drill cores and modelling of the Montserrat geothermal system by various techniques. Funding is from various sources including DFID, Campus Research Fund and SRC DCF.

**Volcano-Ready Communities in St. Vincent.** This is a project funded by a grant of US\$618,700 from the Community Disaster Risk Reduction Fund administered by the **Caribbean Development Bank** that is being done in **St. Vincent**, in collaboration with the National Emergency Management Organisation of St. Vincent and the Grenadines. It involves the provision of scientific information and its downscaling to support community level volcano contingency planning, community-led multi-hazard mapping and capacity building for disaster risk reduction.

## PROJECTED ACTIVITIES 2020/2021

In addition to routine monitoring operations and continuing of ongoing projects previously listed, the main new areas with which the Centre will be engaged during the 2019-2021 period are summarised below.

Establish a communications hub co-located with a multi-parametric monitoring station (consisting of 3-component broadband seismic station, accelerometer & continuous GPS station) at Mt. St. Benedict's. This will involve the construction of a vault, erection of a communications tower and installation of seismic monitoring equipment. This work is being entirely funded from the SRC Departmental Consultancy Fund.

**Explore options for developing and expanding work in terms of geothermal consultancy services.** This will involve an investigation of the demand for, and requirements of, providing professional services to geothermal production companies in the Eastern Caribbean.

**Ongoing improvement of existing facilities for post-graduate students** including new offices, improvements in library services, support and encouragement to attend on overseas conference per year, training in monitoring techniques, attachment to the Montserrat Volcano Observatory and accessing funds for attachments to collaborating Universities for specialised training.

# Centres & Institutes

*Finalise the outfitting and occupation of the entire new SRC building.* This includes the provision of space for postgraduate students and the Education and Outreach section, the provision of space for lectures, and the transferral of our existing IT server room to the new building. We anticipate that we can raise sufficient funds from our DCF to enable these activities to be undertaken. It should be noted that thus far the entire outfitting and modifications necessary for occupation of the new building with this planned work has been funded from SRC DCF.

*Revised web site for the SRC & more effective use of social media and developing video products.* Work on our revised website is now nearly completed and is expected to be launched during the 2019/2020 period. Attention will continue to be focused on enhancing the education and outreach work of the Centre to vulnerable island communities using social media but also developing short videos.

*Re-location of computer servers to new building and expansion of the SRC IT infrastructure.* This work is still outstanding but expected to be completed during the upcoming year. The estimated cost is as follows: servers for data - US\$32,000, storage for data - US\$15,000, network infrastructure (racks, switches, UPS) - US\$50,000. (TOTAL - US\$100,000 from Grant funding or SRC DCF).

## Sir Arthur Lewis Institute of Social & Economic Studies (SALISES)

In the academic year 2019/2020, SALISES St. Augustine continued to meet targets and requirements linked to The UWI Triple A Strategy 2017-22.

### RESEARCH

One PhD student was being supported in her research through a project entitled "Comparing Small Island States and Subnational Island Jurisdictions: Towards Sustainable Island Futures." This project is funded by the **University of Prince Edward Island**, Canada, in the sum of CAD\$11,800.00 and is overseen by **Dr Preeya Mohan**, Fellow, SALISES, St. Augustine. Dr Mohan is both the supervisor for the student as well as the project lead at SALISES for the Sustainable Island Futures project funded by the **Social Sciences and Humanities Research Council (SSHRC) of Canada** and coordinated by the University of Prince Edward Island. The project aims to compare governance and sustainability in small island states and sub-national island jurisdictions and is being conducted across 12 islands globally.

### STRATEGY REVIEW

#### Alignment

The SALISES continued to make significant contributions to the national and regional discourse on matters related to social and economic development.

Of particular note was the Third Annual Sir Arthur Lewis Memorial Symposium, hosted by the Institute on Thursday 23 January 2020. This symposium series was started in 2018 to highlight the life and work of Sir Arthur Lewis. The accompanying Distinguished Lecture at The University Inn and Conference Centre was delivered by **Professor Gordon Houlden**, Director of the China Centre at the **University of Alberta**, Edmonton, Canada on the topic: "CHINA'S RISE AS A GLOBAL ECONOMIC POWER: What are the implications for the Developing World?"

The Third Annual SALISES St. Augustine Research Days: A Festival of Seminars took place from 3 – 5 February 2020 at the SALISES Conference Room. This event highlighted the research being conducted by SALISES Fellows, Affiliates, Associates, as well as MPhil and PhD students.

Also in its third edition was the publication of the SALISES Abstracts in January 2020. This is a compendium of all the research being undertaken at SALISES St. Augustine as well as projects to be completed or initiated by the publication date. These Research Abstracts are normally linked to the SALISES St. Augustine Research Days.

The SALISES St. Augustine and the **International Labour Organisation (ILO)** co-hosted a webinar on Labour Markets and Resilience in the Caribbean on 29 May 2020. This virtual event was sponsored by the ILO as part of

their contribution to the 21st Annual SALISES Conference which was to be held in May 2020 but was postponed because of the COVID-19 pandemic. The research is part of on-going collaboration between the SALISES at St. Augustine and the ILO. It is financed within the framework of the ILO's Caribbean Resilience Project. In this virtual event, three regional and international researchers who were successful in bidding for the ILO's research grant, presented the key findings of their research and participated in a moderated discussion with ILO, UWI and IDB officials.

#### *Access*

Staff at the three units of the SALISES commenced instruction in the fully online MSc Development Studies at the start of the academic year (September) 2020/2021. This is one of just a few online Master's degrees offered by The UWI and it is in keeping with both the alignment imperative to promote a cohesive Single UWI Brand Consciousness (AL3) and to improve the number of students enrolled in its postgraduate programme (AC1). The decision to introduce a fully online MSc Development Studies was made in 2018 and the programme was ready for delivery by September 2020. There are four courses that overlap courses with the older MSc Development Statistics programme at SALISES. These are delivered partially through the cross-campus Moodle platform and the remainder are delivered through the Campus mylearning platform with Blackboard Collaborate.

#### *Agility*

SALISES St. Augustine fast-tracked the digital transformation of its business operations by completing its teaching programmes in an online mode after 14 March 2020 when a Government-ordered lockdown was instituted as part of the response to the pandemic. All teaching and examinations were successfully completed using alternative assessments. A summer programme was mounted from 29 June 2020, making available four courses from the MSc Development Statistics focused on Development Theory and Policy, Research Methods in the Social Sciences, Monitoring and Evaluation, and Techniques of Applied Social Statistical Analysis.

All SALISES Staff who were to be involved in the delivery of the new online MSc Development Studies programme successfully completed the course on the Essentials of Online Facilitation in July 2020.

## Faculty of Engineering

### Journal Publications - Refereed Publications

#### Department of Chemical Engineering

Akeem Mohammed, Arianne Rivers, David C. Stuckey, and **Keeran Ward**. (2020) Alginate extraction from Sargassum seaweed in the Caribbean region: Optimization using re-sponse surface methodology. *Carbohydrate Polymers*, 116419.

Akeem Mohammed, Arianne Rivers, David C. Stuckey, and **Keeran Ward** (2020) Datasets on the optimization of alginate extraction from sargassum biomass using response surface methodology. *Data in Brief* 31.

Amihere-Ackah P., **Hosein R.** and Tiimub B. M. (2020) A Field Development Plan for Catshill Brown Oilfield in Trinidad Utilizing Waterflood Simulation. *Journal of Petroleum & Environmental Biotechnology*, 11, 2, No: 405.

**Blake O.O.**, Faulkner D.R., and Bascombe R. (2020) Using Q factor to detect closed microfractures. *Geophysics* 85: MR285-MR295. <https://doi.org/10.1190/geo2019-0093.1>.

**Blake O.O** and Faulkner D.R. (2020) Using Velocities, Density, and Bulk Modulus to Predict the Permeability Evolution of Microfractured Rocks. *Rock Mechanics and Rock Engineering*. <https://doi.org/10.1007/s00603-020-02163-7>.

**Blake O.O, Ramsook R.**, Faulkner D.R., **Iyare U. C.** (2020) The Effect of Effective Pressure on the Relationship Between Static and Dynamic Young's Moduli and Poisson's Ratio of Naparima Hill Formation Mudstones. *Rock Mechanics and Rock Engineering*. <https://doi.org/10.1007/s00603-020-02140-0>.

Cao, F., **Eskin, D.**, Leonenko, Y. (2020) Modeling of ex-situ dissolution for geologic sequestration of carbon dioxide in aquifers, *Journal of Petr. Sci. and Eng.*, 187, 2020, 106835.

Celeste Jaggai, Zaeem Imkaraaz, Kirsten Samm, Andrew Pounder, Natalia Koylass, **Dhurjati Prasad Chakrabarti**, Miao Guo and Keeran Ward (2020) Towards greater sustainable development within current Mega-Methanol (MM) production. *Green Chemistry*, 22, 4279-4294.

Chadee, S. & **Maharaj, R.** (2020) An Environmental Gap Analysis at a University Campus. *Environmental Monitoring and Assessment*, 192, 9: 525.

Deodath, R. and **C. Riverol** (2020) Comprehensive reliability analysis of a pool of competing designs for treating liquefied natural gas (LNG). *Journal of Manufacturing Technology Research*, 12, 3-4, 2020, 45-59.

**Edwards, L, Keeran Ward**, Dhurjati Prasad **Chakrabarti** (2020) Phase inversion in liquid phase for air-liquid horizontal flow by. *Cogent Engineering*, Volume 7, 1, 1782622.

**Eskin, D.**, Meretskaya, E., Vikhansky, A. (2020) A model of break-up of a rising bubble in a turbulent flow. *Chemical Engineering Science*, 226, 115846.

Falloon, O. **Mujaffar, S.** and D. Minott (2020) Physicochemical and functional properties of starch from ackee (*Blighia sapida*) seeds. *The West Indian Journal of Engineering*, 42, 2: 54-65.  
George, E. and **C. Riverol** (2020) Effectiveness of amine concentration and circulation rate in the Co2 removal process. *Chemical Engineering and Technology*, 2020, 942-949.

**Hosein R.** and Balgobin A. (2020) An Analysis of the Use of Hydraulic Jet Pumps, Progressive Cavity Pumps and Gas Lift as Suitable Artificial Lift Methods for Heavy Oil Production in East Soldado Reservoirs, Offshore the Southwest Coast of Trinidad. *The West Indian Journal of Engineering*, 42, 2, 44-53.

**Iyare U.C, Blake O.O, and Ramsook R.** (2020) Modelling the Failure Behaviour of Mudstones under High Pressures. *Rock Mechanics and Rock Engineering*.

**Iyare U.C, Blake O.O, and Ramsook R.** (2020) Estimating the Uniaxial Compressive Strength of Argillites using Brazilian Tensile Strength, Velocities, and Elastic Properties. *Rock Mechanics and Rock Engineering*.

**Iyare U.C, Ramsook R, Blake O.O,** and Faulkner D.R. (2020) Petrographical and Petrophysical Characterization of the Late Cretaceous Naparima Hill Formation, Central Range, Trinidad, West Indies. *International Journal of Coal Geology*. <https://doi.org/10.1016/j.coal.2020.103592>.

**Iyare U.C, Blake O.O, and Ramsook R.** (2020) Brittleness Evaluation of Naparima Hill Mudstones. *Journal of Petroleum Science and Engineering*. <https://doi.org/10.1016/j.petrol.2020.107737>.

Jaggai, C., Zaeem Imkaraaz, Kirsten Samm, Andrew Pounder, Natalia Koylass, **Dhurjati Prasad Chakrabarti**, Miao Guo, Keeran Ward (2020) Towards greater sustainable development within current Mega-Methanol (MM) production. *Green Chem.*, 22, 4279-4294.

**Maharaj, S.**; Manna, V.; McGaw, D.R. (2019) Life cycle analysis for glass manufacture in a small island developing country situation. *International Journal of Case Studies*, 8, 64-68.

**Maharaj, S.**; **McGaw, D.** (2020). Mathematical model for the removal of essential oil constituents during steam distillation extraction. *Processes*, 8, 400, 8040400.

**Mujaffar, S.** and S. Bynoe (2020). Microwave drying of West Indian bay leaf (*Pimenta racemosa*). *The West Indian Journal of Engineering*, 42, 2: 87-95.

Osman, A., Steel, R., Moonan, X., and **Ramsook, R.** (2019). A Review of the Tectonic Evolution and Sedimentary Fill of the Southern Basin, Trinidad, Middle Cretaceous to Pleistocene, in: Bartolini, C., ed., South America-Caribbean-Central Atlantic Plate Boundary: Tectonic Evolution, Basin Architecture, and Petroleum Systems, American Association of Petroleum Geologists, Memoir.

Persad N., **Hosein R.** and **Jupiter A.** (2019) A comparative analysis of two methods of wax treatment for a waxy oil well in Southwest Trinidad. *Petroleum Science and Technology*, 37, 4, 452-460.

Racine Basant, Graham Ryan, Jared Peacock, Oshaine Blake, Bridget Lynne, Antonio Camacho, Stefanie Hautmann (2020). Multi-geophysical parameter classification of the Montserrat geothermal system. <https://doi.org/10.1016/j.geothermics.102006>. *Geothermics*.

Sadeek Sherard, **Thérèse Lee Chan**, Rukam Ramdath, Aqueel Rajkumar, Miao Guo, and **Keeran Ward** (2020) The influence of raw material availability and utility power consumption on the sustainability of the ammonia process. *Chemical Engineering Research and Design* 158, 177-192.

Sadeek Sherard, **Thérèse Lee Chan**, Rukam Ramdath, Aqueel Rajkumar, Miao Guo, and **Keeran Ward** (2020) The influence of raw material availability and utility power consumption on the sustainability of the ammonia process. *Chemical Engineering Research and Design* 158: 177-192.

Sadeek Sherard, **Thérèse Lee Chan**, Rukam Ramdath, Aqueel Rajkumar, Miao Guo, and **Keeran Ward** (2020) life cycle inventory and assessment datasets on the operational sustainability of the ammonia process. *Data in Brief* 30:105593.

Samaroo, Nicolas, Natalia Koylass, Miao Guo, and **Keeran Ward**. (2020) Achieving absolute sustainability across integrated industrial networks-A case study on the ammonia process. *Green Chemistry* 22:16547-6559.

**Singh-Gryzbon, S.**, Ncho, B., Sadri, V., Bhat, S., Kollapaneni, S., Balakumar, D., Wei, Z.A, Ruile, P., Neumann, F.J., Blanke, P., Yoganathan, A. (2020) Influence of patient-specific characteristics on transcatheter heart valve neo-sinus flow: An in-silico study, *Annals of Biomedical Engineering*.

**Tamitha, R.** and **Hosein, R.** (2019) Radio frequency heating combined with solvent extraction - A method for oil recovery from surface Tar Sands. *Journal of Petroleum Science and Engineering*, 179, 328-336.

**Ward, Keeran**, Juan Guillermo Cediél Cortés, and David C. Stuckey (2019) Alginate as a support ligand for enhanced colloidal liquid aphron immobilization of proteins and drug delivery. *Biotechnology and Bioengineering* 116, 12, 3168-3178.

Wei, Z.A., **Singh-Gryzbon, S.**, Trusty, P., Yoganathan, A. (2020) Non-Newtonian effects on patient-specific modeling of Fontan Hemodynamics. *Annals of Biomedical Engineering*.

Yusupov, R., Meretskaya, E., Cheremisin, A., **Eskin, D.** (2020) Modeling steam flow in an injection tubing and analysis of flow regimes for high pressure-high temperature initial parameters, *Chemical Engineering and Processing – Proc. Intensification*, 158, 108168.

#### *Department of Civil and Environmental Engineering*

Adesina, Peter A., and **Festus A. Olutoge** (2019) Structural properties of sustainable concrete developed using rice husk ash and hydrated lime. *Journal of Building Engineering* 25: 100804. <https://doi.org/https://doi.org/10.1016/j.job.2019.100804>.

Amrita Milling **Abrahams Mwashia, Hector Martin** (2020) Exploring the full replacement of cement with expanded polystyrene (EPS) waste in mortars used for masonry construction. *Construction and Building Materials*, 253.

Anthony O. Bucknor, Fisayo M. Animashaun, **Festus A. Olutoge** and Oluwaseun A. Adetayo. (2019) Exploring the Sustainability of Nigerian-based Rice Husk Ash for High Strength Concrete production for use in Construction. *International Journal of Civil and Structural Engineering Research Asian Journal of Civil Engineering* 7, 1, 8-15.

Ajayi A. S., Oluwoye J., **Olutoge, F. A.**, and Coker, A. O. (2019) Impact of Palm Kernel Shell Ash (PKSA) on the Strength and Water Absorption Properties of Earth Blocks. *International Journal of Advanced in Scientific Research and Reviews (IJASRR)*, 04 (03) 23, 129-135.

**Banerjee K.S.** and Kassie S. (2020) Testing of Physical-Mechanical Properties of Blue Limestone Used in Pavements in Trinidad and Tobago: A Preliminary Study. *West Indian Journal of Engineering*, 43, 1, 21-25.

**Banerjee K.S.**, Jittan L., and Ramkalawan, S. (2019) Spatial variational characteristics analysis of heavy metals pollution in the water of the Caroni River System: Case Study from a Tropical river. *Water Supply*, 19, 2288–2297.

Campbell, K. and **Townsend, T.** (2020) Driver Gap Acceptance Behaviour at Roundabouts in Trinidad and Tobago. *The West Indian Journal of Engineering*, 42, 2, 77-86.

**Festus A. Olutoge** and Peter A. Adesina (2019). Effects of rice husks ash prepared from charcoal- powered incinerator on the strength and durability properties of concrete. *Construction and Building Materials* 196, 386-394.

Hosein, G. and **Ray, I.** (2020) Priority Analysis of Pre-Investment Risks. *Cogent Engineering*, 7, 1, 175-183.

Hosein, G. and **Ray, I.**, (2020) The Need for Implementation of More Technology in the Local Construction Industry. *The Association of Professional Engineers of Trinidad and Tobago (APETT) Engineering Magazine*, February Edition, 34-36.

Iworo, Joseph and **Abrahams Mwashia** (2019). Effects of Using Coconut Fiber-Insulated Masonry Walls to Achieve Energy Efficiency and Thermal Comfort in Residential Dwellings (ASCE) *Journal of Architectural Engineering*, Issue 1.

Jiao, P., Ro, M., Barri, K., **Ray, I.**, and Alavi, A. H. (2019) High-performance fibre reinforced concrete as a repairing material to normal concrete structures: Experiments, numerical simulations and a machine learning-based prediction model. *Construction and Building Materials*, 223, 1167-1181.

Lawrence, K., **Cooper, V.** and Kissoon, P. (2020) Factors for sustaining voluntary recycling programmes in a country transitioning to an integrated solid waste management system. *J. Environmental Management*, 257.

**Leon, L.P. and Ray, I.** (2020) Estimating unconfined compressive behaviour of HMA using soft computing. *Innovative Infrastructure Solutions*, 6, 1, 1-16.

Narcis, N, **Ray, I.**, and Hosein, G. (2019) Construction and Demolition Waste Management Actions and Potential Benefits: A Perspective from Trinidad and Tobago. *Buildings*, 9, 6, 150.

Oyebisi, Solomon, Anthony Ede, **Festus Olutoge**, and David Olukanni (2020) Assessment of activity moduli and acidic resistance of slag-based geopolymer concrete incorporating pozzolan. *Case Studies in Construction Materials*: e00394

Oyebisi, Solomon, Anthony Ede, **Festus Olutoge**, and Samuel Ogbiye (2020) Evaluation of reactivity indexes and durability properties of slag-based geopolymer concrete incorporating corn cob ash. *Construction and Building Materials* 258, 119604. Yabefa, B.E., **F. A. Olutoge**, F. C. Sagba and T. E. Gede (2019) Impact of Sodium Hydroxide Concentration on the Compressive Strength of Periwinkle Ash Blended Metakaolin Based Geopolymer Mortar. *International Journal of Scientific and Engineering Research*, 10, Issue 10, 117-128.

*Department of Electrical and Computer Engineering*

**Adams, Richelle V;** Deborah Villarroel-Lamb and **Fasil Muddeen** (2019) CubeSat Communication Sub-system Design for Coastal Marine Monitoring. *Applications*.

**Adams, R.V.** and Blair, E. (2019) Impact of Time Management Behaviors on Undergraduate Engineering Students' Performance. *Sage Open*, 9, 1.

**Arvind Singh, Sean Rocke, Akash Pooransingh, Craig J. Ramlal** (2019) Improving Student Engagement in Teaching Electric Machines Through Blended Learning. *IEEE Transactions on Education*.

**George Marcus Lloyd** (2020) Effective Teaching and Examination Strategies for Undergraduate Learning during COVID-19 School Restrictions. *SAGE Journal of Educational Technology Systems*, 49, 1, 23-48.

**George Marcus Lloyd** (2020). A Concise Review of Fifteen Intelligent Street Lighting Systems Which Can Pave the Way for the Emergence of Smart Cities in the Caribbean. *i-manager's Journal on Future Engineering and Technology*, 15, 4, 28-38.

**George Marcus Lloyd** and Vedesh Mohit (2020) Learning Tool for Static-1 Hazard Identification in Digital Electronic Circuits. *i-Manager's Journal on Software Engineering* 14 (3): 1-21.

**George Marcus Lloyd** (2020) Study on the Effect of Tutorial, Email and Office Consultations on Undergraduate Performance in the Topic of Finite State Machines. *International Journal of Advanced Science and Technology*, 29, 2, 1225-1233.

**George Marcus Lloyd** (2020) Principles and Policies for Development of a Breathalyzer-enabled Ignition System for Reduction of Road Fatalities in Trinidad and Tobago. *International Journal of Computing and Technology (IJCAT)*, 7, 1, 92-97.

**George Marcus Lloyd** and Simeon Ramjit (2019) Front-Interface of Smart Agricultural Irrigation Monitor to Aid Crop Production in Trinidad and Tobago. *International Journal of Computing and Technology (IJCAT)*, 6, 9, 107-117.

**George Marcus Lloyd** and Avidesh Bissoon (2019) Port Mapping Tool for Digital Logic Development. *i-Manager's Journal on Software Engineering*, 14, 1, 20-39.

**George Marcus Lloyd** and Geetam Singh Tomar (2019) Comparative Review of Floating-Point Multiplier Systems. *International Journal of Hybrid Information Technology*, 12, 2, 21-48.

Meetoo, C; G. Hosein, **S. Bahadoorsingh**, and C. Sharma (2019) Considerations for Electric Vehicle Adoption in Small island Developing States" *Caribbean Electric Industry Journal*, 15, 65-69.

**Muddeen, F.** (2020). Electrical Engineering and the New SI Definitions. *West Indian Journal of Engineering*, 42, 2, 96-104.

**Ramlal, C; A. Singh, S. Rocke, and M. Sutherland** (2019). Decentralized fuzzy h<sub>∞</sub>-iterative learning lfc with time-varying communication delays and parametric uncertainties. *IEEE Transactions on Power Systems*.

**Ramsamooj, N;** L. Ramdath, **S. Bahadoorsingh**, and C. Sharma. (2019). [A Comparison of Memetic Algorithms in a Generator Maintenance Scheduling Problem for Trinidad and Tobago](#). *The West Indian Journal of Engineering*, 41.

[Department of Mechanical and Manufacturing Engineering](#)  
**Adeyanju, A. Anthony**, and **K. Manohar** (2020) Design and Analysis of a Thermoelectric Air-conditioning System. *Journal of Scientific Research and Reports* (2020): 1-11.

**Adeyanju, A.A., K. Manohar.** (2019) Theoretical and Experimental Analysis of Waste Heat Recovery Effectiveness of a Diesel Engine. *Current Journal of Applied Science and Technology*, 1-17.

**Adeyanju, Anthony Ademola, K. Manohar, and S. Poonwassie.** (2019) Development of the Performance Characteristics of a Vertical Axis Wind Turbine. *Global Journal of Research In Engineering*.

**Adeyanju, Anthony.** (2020) Theoretical and Experimental Analysis of a Thermoelectric Air-conditioning System. Low-temperature Technologies. *IntechOpen*.

**Bachoo, Richard, and Jacqueline Bridge** (2020) Random vibration analysis and modal energy characteristics of fiber-reinforced composite beams. *Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications*, 1464420720958746.

**Chowdary, B.V., C. Fullerton** (2019) Improvement of steel melting operations at a Caribbean company: a lean manufacturing approach. *International Journal of Advanced Operations Management* 11, 1-2, 102-125.

**Chowdary, B.V., M. A. Richards, and T. Gokool** (2019) An integrated approach for sustainable product design: concurrent application of DFMA, DFE and CAD/CAE principles and tools. *Latin American Journal of Management for Sustainable Development*, 4, 259-275.

**Chowdary, B.V.**, M. Richards, T. Gokool (2019) Redesign of a Furniture Industry Component: A Sustainable Design Approach. *West Indian Journal of Engineering*, 41, 2, 77-83.

**Chowdary, B.V.**, R. Jahoor, F. Ali, and T. Gokool (2019) Optimisation of Surface Roughness when CNC Turning of Al-6061: Application of Taguchi Design of Experiments and Genetic Algorithm. *Journal of Mechanical Engineering* 16, 2, 77-91.

**Ekwue, Edwin I.**, Aliyah Abasali, Carlotta Bharat, and **Robert A. Birch** (2020) Density-Moisture Relations of Two Trinidad Soils Obtained with a Soil Vibratory Compactor. *West Indian Journal of Engineering* 43, 1, 4 – 10.

**Ellis, R.L.A.**, and K.D. Gordon. (2019) Employee Perception of the Impact of Occupational Health and Safety Management on Organisational Commitment: A Case Study of an Energy Sector Organisation in Trinidad and Tobago. *West Indian Journal of Engineering*, 41, 2, 62-69.

Harnarinesingh, R.E.S., and **C.S. Syan**. (2019), Investigation of the mirrored-word reading paradigm for BCI implementation. *Biomedical Engineering/Biomedizinische Technik* 64, 3, 325-337.

Hassanali, K.N., and **K.F. Pun**. (2019) Modelling Productivity Dynamics of Manufacturing Capital Investment Projects in Trinidad and Tobago: A Study Agenda, *The Journal of the Association of Professional Engineers of Trinidad and Tobago*, 47, 2, 20-28

Ibrahim, Y., Davies, **C. M., Maharaj, C.**, Li, Z., Dear, J. P., and Hooper, P. A. (2020) Post-yield performance of additive manufactured cellular lattice structures. *Progress in Additive Manufacturing*, 1-10.

Jodhan, M., and **J. Bridge**. (2019) Characterization of Induction Motors based on Vibration Signal Analysis using Machine Learning Techniques. *The Journal of the Association of Professional Engineers of Trinidad and Tobago*, 47(2).

Jordan, P. and **Maharaj, C.**, and Maharaj, R., (2020) Asset Management Strategy for HAZ Cracking caused by Sigma-Phase and Creep Embrittlement in 304H Stainless Steel Piping. *Engineering Failure Analysis*.

**King, Graham S.**, Jason R. Rameshwar, and **Chanan S. Syan**. (2020), "Industry 4.0 in a Small Commodity-Based Economy: A Vehicle for Stimulating Innovation". *Journal of Industrial Integration and Management*.

Koonj-Beharry, A. and **K.F. Pun**. (2019) Transitioning of manufacturing towards Industry 4.0 in Trinidad and Tobago: A proposed framework with discussions of the role of industrial engineer, *The Journal of the Association of Professional Engineers of Trinidad and Tobago*, 47, 2, 39-45.

Koonj Beharry, A. and **K.F. Pun**. (2020) Contextual analysis of innovation process models toward the Fourth Industrial Revolution, *West Indian Journal of Engineering*, 43, 1, 43-54

**Lalla, Terrence RM**, and Nadine Sangster. (2020) Differences between Technicians and Engineers: An Analysis Based on UK-SPEC. *West Indian Journal of Engineering* 43.1.

Lemessy, Kevin G., **Krishpersad Manohar**, and **Anthony Adeyanju**. (2020) Reducing the Barriers to Wave Energy Harvesting. *Journal of Scientific Research and Reports*: 107-116.

Leonard, L., **E.I. Ekwue**, A. Taylor, and **R. Birch**. (2019) Evaluation of a machine to determine maximum bulk density of soils using the vibratory method. *Biosystems engineering*, 178, 109-117.

**Maharaj, C.**, A. Marquez, and R. Khan. (2019) Failure Analysis of Incoloy 800HT and HP-Modified Alloy Materials in a Reformer. *Journal of Failure Analysis and Prevention* 19, 2, 291-300.

**Maharaj, C.**, K. Ragoo, V. Sirjoosingh, S. Sahadeo, D. Lall, and B.V. Chowdary. (2019) Design and performance evaluation of 3D printed writing and typing assistive devices: A pragmatic single participant study. *Technology and Disability*, 31, 1-2, 51-61.

**Maharaj, C.** and Marquez, A. (2019) *Failure Analysis of a Stainless-Steel Pipe Elbow in a Purge Gas Line*, *Journal of Failure Analysis and Prevention*. 19, 1, 15-23.

**Maharaj, C.**, V. Sirjoosingh, A. Ali, S.J. Primus, and S. Arjoon. (2019) Help Me Else I Might Fail! Solutions for Academically Challenged Engineering Students. *Journal of College Student Retention: Research, Theory & Practice*, p.1521025119865747.

Maharaj, R., **C. Maharaj**, M. Mahase. (2019) The performance and durability of polyethylene terephthalate and crumb rubber-modified road pavement surfaces. *Progress in Rubber, Plastics and Recycling Technology* 35, 1, 3-22.

**Manohar, K., A. Adeyanju**, and K. Vialva. (2019) Performance characteristics of a small water-hammer head pump. *Drinking Water Engineering and Science* 12, 2, 59-64.

**Manohar, K., A. Adeyanju**, and K. Vialva. (2019) Predicting the Output of a Hydraulic Ram Pump". *Current Journal of Applied Science and Technology*: 1-7.

Marquez, A., Ramnanan, A., and **Maharaj, C.** Failure Analysis of Carbon Steel Tubes in a Reformed Gas Boiler Feed Water Preheater. *Journal of Failure Analysis and Prevention*. 2019. 19, 3, 592-597.

Mohamed, Shivan, **Edwin I. Ekwue**, Carlotta Bharat, and **Robert A. Birch** (2020) A Compact Urban Aquaponic Irrigation System for the Caribbean Region. *The Journal of the Association of Professional Engineers of Trinidad and Tobago*, 48, 1, 31-38.

**Murray, R.J.**, A. D'Arbasie. (2019) Automated Identification of Vehicular Accidents from Acoustic Signals Using Artificial Neural Networks. *West Indian Journal of Engineering*, 41, 2, 55-61.

**Murray, R.J., G.S. King**, and R. Wyse-Mason. (2019) Micro-emulsification vs. transesterification: an investigation of the efficacy of methanol use in improving vegetable oil engine performance. *Biofuels*: 1-10.

**Murray, R.J.**, and **J. Bridge**. (2019) Assessing combustion performance of a diesel reciprocating engine under various fuel blends using a calculus-statistical time-series vibration-based approach. *Journal of Engineering for Gas Turbines and Power* 141, 7, 071018.

**Murray, R.J, Bachu, S., Pemberton, C and Birch, R.** (2020) Investigation of Cocoa Pod Husk Mechanical Behaviour and the Impact upon Specific Cutting Energy. *The Journal of the Association of Professional Engineers of Trinidad and Tobago*, 48, 1, 22-30.

Raeburn-Marcano, P. and **K.F. Pun** (2020) Assessing small enterprises' maturity levels of knowledge, attitudes and practices towards emergency preparedness in Trinidad: A pilot study, *The Journal of the Association of Professional Engineers of Trinidad and Tobago*, 48, 2, 67-74

Ragoo, K., V. Sirjoosingh, S. Sahadeo, **B.V. Chowdary**, and **C. Maharaj**. (2019) Design and development of a pool and billiards assistive device for the physically challenged. *Disability and Rehabilitation: Assistive Technology*, 14, 6, 628-634.

Ramkissoon, D. and **K.F. Pun** (2020) Assessing human factors at the design stage of upstream oil and gas projects: A risk assessment methodology. *The Journal of the Association of Professional Engineers of Trinidad and Tobago*, 48, 2, 60-66.

Rampat, K., and **C. Maharaj**. (2019) Creep embrittlement in aged HP-Mod alloy reformer tubes. *Engineering Failure Analysis* 100: 147-165.

Ramrose, M. and **K.F. Pun** (2020) DIALux capabilities with planning of LED lighting solutions: Some findings in Trinidad and Tobago. *The Journal of the Association of Professional Engineers of Trinidad and Tobago*, 48, 1, 39-48.

Ramrattan, H., T. Markeset, and **C.S. Syan**. (2019) Sustaining Asset Integrity in the Trinidad and Tobago's Energy Sector: An Assessment. *West Indian Journal of Engineering*, 42, 1, 12-21

Sieunarine, S., Maharaj, R., White, D., and **Maharaj, C.**, (2019) Ceramic potential of some Trinidad clays. *Clay research*. 37, 2, 41-49.

**Syan, C.S.**, and G. Ramsoobag. (2019) Maintenance applications of multi-criteria optimization: A review. *Reliability Engineering & System Safety*, 106520.

**Syan, Chanan S.**, Geeta Ramsoobag, Kavisha Mahabir, and Vikash Rajnauth. (2020) A Case Study for Improving Maintenance Planning of Centrifugal Pumps Using Condition-Based Maintenance. *West Indian Journal of Engineering* 42.2.

Tyagi, Ruchi, Suresh Vishwakarma, Kishan Kumar Singh, and **Chanan Syan**. (2020) Low-Cost Energy Conservation Measures and Behavioral Change for Sustainable Energy Goal. *Affordable and Clean Energy*. *Encyclopedia of the UN Sustainable Development Goals*. Springer, Cham. [https://doi.org/10.1007/978-3-319-71057-0\\_155-1](https://doi.org/10.1007/978-3-319-71057-0_155-1).

Wilson, S., **Maharaj, C. S.**, and Maharaj, R. (2020) Formalising the National Innovation System in a Developing Country. *West Indian Journal of Engineering*, 42(2).

Zhang, X., Liu, H., **Maharaj, C.**, Zheng, M., Mohagheghian, J., Zhang, G., and Dear, J.P., (2020) Impact Response of Laminated Glass with Varying Interlayer Materials. *International Journal of Impact Engineering*, 139

Zhang, X., Zheng, M., Ge, Y., Wang, T., Liu, H., **Maharaj, C.**, Dear, J.P., and Yan, Y., (2020), Microstructure and Tensile Properties of Injection Molded Thermoplastic Polyurethane with Different Melt Temperatures. *Journal of Applied Polymer Science*. <https://doi.org/10.1002/app.48891>

#### *Department of Geomatics Engineering and Land Management*

Cassandra Nanlal, **Keith Miller, Dexter Davis & Michael Sutherland** (2020) Establishing Vertical Separation Models for Vulnerable Coastlines in Developing Territories, *Marine Geodesy*, DOI: 10.1080/01490419.2020.1844825.

Daniel, Desiree, **Michael Sutherland** and Chinwe Speranza (2019) The Role of Tenure Documents for Livelihood Resilience in Trinidad and Tobago. In *Land Use Policy* 87, 104008, <https://doi.org/10.1016/j.landusepol.2019.104372>.

**Griffith-Charles, C. and M. Sutherland** (2020) 3D cadastres for densely occupied informal situations: Necessity and possibility. In *Land Use Policy*, Volume 98, November 2020, 104372, <https://doi.org/10.1016/j.landusepol.2019.104372>. [Cited by 3] Impact Factor = 3.682.

Melville, T., **Sutherland, M.** & Wuddivira, M.N. (2020) Assessing trends and predicting the cover management factor in a tropical island state using Enhanced Vegetation Index. *SN Applied Sciences* 2, 1686.

Paul, J. and **Edwards, E.** (2019) Temporal availability of public health care in developing countries of the Caribbean: An improved two-step floating catchment area method for estimating spatial accessibility to health care. *The International Journal of Health Planning and Management*, 34(1), e536-e556.

**Ramlal, B., Davis, D. and Edwards, E.** (2019) Strengthening Geospatial Data Ecosystems in Caribbean Countries: A Role for Academic Institutions. *The West Indian Journal of Engineering*, 41(2), 43-54.

Ramlal, Craig, Arvind Singh, Sean Rocke and **Michael Sutherland** (2019) Decentralized Fuzzy-Iterative Learning LFC with time-varying communication delays and parametric uncertainties. In *IEEE Transactions on Power Systems*.

**Ramlal, B. and Edwards, E.** (2019) Establishing a National Spatial Data Infrastructure in Trinidad and Tobago. *Journal of Surveying and Land Information Science*, Vol.78, No.1, pp.21-30.

Seegobin, D. Rostant, L. Persad, S. **Ramlal, B** and Umaharan, P. (2019) A geospatial analysis of agro-ecological factors affecting cocoa production in Trinidad. *Applied Geography*.

Seepersad D, Erikson O, Greenland A and **Miller K.** (2020) Benefits of assessing risk in maritime navigation using IALA and LINZ methods. *International Hydrographic Review*, International Hydrographic Organization, Monaco.

Sekac, Tingneyuc, Sujoy Kumar Jana, **Michael Sutherland**, and Sailesh Samanta (2020). Temperature Variability and Trends Assessments parts of Highland and Momase region of Papua New Guinea. In *International Journal of Advanced Science and Technology*, 29, 7, 323-341.

Tambie, J.D, M. Farag-Miller, K. Miller, **B. Ramlal**, and **M. Sutherland** (2019). Wavelet-based Technique for Eddy Identification and Tracking using MSLA data. *Marine Geodesy*, Vol. 43, 1, 225-247.

Weber J, Geirsson H, La Femina P, Robertson R, Churches C, Shaw K, Latchman J, Higgins M, and **Miller K** (2019). Fault Creep and Strain Partitioning in Trinidad – Tobago: Geodetic Measurements, Models, and Origin of Creep. *Tectonics, American Geophysical Union*, 39:1, pp1-15. November.

#### **Books & Book Chapters**

##### *Department of Chemical Engineering*

Osman, A., Steel, R. J., Moonan, X., and Ramsook, R. (2018) *A Review of the Tectonic Evolution and Sedimentary Fill of the Southern Basin, Trinidad*. AAPG Books, Special Publication

##### *Department of Electrical and Computer Engineering*

**Mallalieu, K.** (2020) Following the Lead of Fishers in ICT Development in the Caribbean. In *Information and Communication Technologies for Small-scale Fisheries (ICT4SSF) - A Handbook for Fisheries Stakeholders*. FAO and World Fish. Bangkok, Thailand. <https://doi.org/10.4060/cb2030en>. 22 pages.

*Department of Geomatics Engineering and Land Management*

Collins, Matthew, (Coordinating Lead Author), **Michael Sutherland** (Coordinating Lead Author), Laurens Bouwer, So-Min Cheong, Thomas Frölicher, H  l  ne Jacot Des Combes, Mathew Koll Roxy, I  nigo Losada, Kathleen McInnes, Beate Ratter, Evelia Rivera-Arriga, Raden Dwi Susanto, Didier Swingedouw, Lourdes Tibig (2019). Chapter 6: Extremes, Abrupt Changes and Managing Risks. In: *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* [H.-O. P  rtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, M. Nicolai, A. Okem, J. Petzold, B. Rama, N. Weyer (eds.)]. IPCC, Geneva, Switzerland.

**Michael Sutherland et al.**, (2019) IPCC, Summary for Policymakers. In: *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* [H.-O. P  rtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, M. Nicolai, A. Okem, J. Petzold, B. Rama, N. Weyer (eds.)]. IPCC, Geneva, Switzerland.

Mahabir, R., **R. Al-Tahir, B. Ramlal**, I. Saeed and O. Gkountouna (2020). The use of geoinformatics for combining in situ and satellite-derived data for the assessment of land degradation in Trinidad. In *Space Infrastructures: From Risk to Resilience Governance*, U. Tatar et al. (Editors). NATO Science for Peace and Security Series. Springer Science and Business Media, The Netherlands. pp. 273-293.

**Mycoo, M.** (2019). Chapter 28: Planning for Climate Change: Sustainable Tourism, Climate Change and Sea Level Rise Adaptation Policies in Barbados. In: E. M. Hamin Infield, Y. Abunnasr and R. L. Ryan (Eds). *In A Reader in Green Infrastructure and Sustainable Design for Resilient Cities. Section VI: Introduction to Green Infrastructure for Rising Sea Levels and Coastal Risks*. pp. 315-324. Routledge. New York and London.

**Conference Presentations - Non-Refereed Publications***Department of Chemical Engineering*

**Blake O.O.**, Iyare U.C, and Ramsook R. *Compressive and tensile strength of Naparima Hill organic mudstone*. Abstract, 13th EURO-Conference on Rock Physics and Geomechanics, Potsdam, Germany. 2019

**Iyare U.C, Ramsook R, Blake O.O.**, and Faulkner D.R. *Petrographical and Petrophysical Characterization of the Late Cretaceous Naparima Hill Formation, Central Range, Trinidad, West Indies*. Abstract, 13th EURO-Conference on Rock Physics and Geomechanics, Potsdam, Germany. 2019

Ramsackal, K.N., **Keeran Ward**, J.V. Smith *Determination of Intrinsic Viscosities and Mark-Houwink-Sakurada Constants for Sodium Alginate*. Caribbean Science and Innovation Meeting Le Gosier (Guadeloupe), France. hal-02899128 2019

Ramsackal, K.N., **Keeran Ward**, Jeffrey V. Smith *Determination of intrinsic viscosities and Mark-Houwink-Sakurada constants for sodium alginates*. Caribbean Science and Innovation Meeting Le Gosier, France. hal-02899128. October 2019

**Singh-Ackbarali, D., Maharaj, R.**, Ali, R., Mohammed, N. & Maharaj, R. *Recycling coconut husk fibre in paving material as an environmentally attractive waste solution and asphalt modifier*. Proceedings of the 9th International Congress on Sustainability, Science & Engineering (ICOSSE'20), Aug 3-5, 2020, <http://icosse.org/2020/technical-program>.

**Singh-Gryzbon, S.**, Bhat, S., Ncho, B., Sadri, V., Wei, Z.A, Ruile, P., Neumann, F.J., Blanke, P., Yoganathan, A. *Patient-Specific Evaluation of Neo-sinus Flow after Transcatheter Aortic Valve Replacement: a computational fluid dynamics study*. 9th International Bio-Fluid Mechanics and Vascular Mechano-Biology Symposium, Tuscon, AZ, USA, February 2020

**Th  r  se Lee Chan** and **David A. Janes**. *Industrial Symbiosis in Trinidad and Tobago: A Focus on Carbon Dioxide* AIChE Annual Meeting, Orlando, Florida. 2019.

Wei, Z.A., Ratnayaka, K., Biao, S., **Singh-Gryzbon, S.**, Lewis, C., Fogel, M.A., Slesnick, T., Nigro, J, Yoganathan, A. *Hemodynamic Analysis of a Novel Fontan Connection with an Anterior Anastomosis*. Western Thoracic Surgical Association 46th Annual Meeting, Vail, CO, June. 2020

# Publications & Conferences (Online Only)

## Department of Electrical and Computer Engineering

**Bahadoorsingh, S.** – Panelist: Building a Safe Infrastructure for Electric Vehicles Workshop, Trinidad and Tobago Bureau of Standards, Trincity, Trinidad and Tobago.

### **Mallalieu, K.**

*Platform regulation and the demand for spectrum.*

The Small Nations Regulators' Forum (SNRF) at the International Institute for Communications IIC's International Regulators' Forum.

London UK, October 7 – 8. 2019

### **Muddeen, F.**

Panelist: National Quality Forum - Building a Culture of Quality in Trinidad and Tobago - Roles and Responsibilities.

Nov 6th and 7th, Port of Spain Trinidad. 2019

## Conference Papers & Proceedings

### Department of Chemical Engineering

Edwards, L., **Dhurjati Prasad Chakrabarti**

*Phase Inversion And Viscosity In Pipe Flow*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), 2020, <https://doi.org/10.47412/RORH7651>.

Maharaj, S., Watson, M., McGaw, D.R., Sonilal, S., Thomas, S.  
*Optimisation of the Supercritical Fluid Extraction of Extracts from Vetiver Roots.*

International Conference on Emerging Trends in Engineering & Technology (IConETech-2020),

Faculty of Engineering, The UWI, St. Augustine, Trinidad and Tobago. 2020

### **Mujaffar, S.** and A. Lalla

*Drying Behaviour of cassava (Manihot esculenta) chips.*

IConETech-2020 International Conference on Emerging Trends in Engineering and Technology,

June 1 – 5, The UWI, Saint Augustine. 2020

**Mujaffar, S.** and T. Dipnarine (2020). The production of a dried avocado (*Persea americana*) powder. Full paper accepted for publication. IConETech-2020 International Conference on Emerging Trends in Engineering and Technology, June 1 – 5, The UWI, Saint Augustine. 2020

Preya Ramdeen, **Dhurjati Prasad Chakrabarti**

*Dissolved Oxygen In Gasoline And Tank Corrosion*

The International Conference on Emerging Trends in Engineering and Technology (IConETech- 2020).

Faculty of Engineering, The UWI, St. Augustine, Trinidad and Tobago.

**Thérèse Lee Chan**, Venessa K. K. Bhagwat and **David A. Janes**

*Developing Network Models of Industrial Symbiosis.*

International Conference on Emerging Trends in Engineering and Technology (IConETech-2020),

Faculty of Engineering, The UWI, St. Augustine, Trinidad and Tobago.

**Thérèse Lee Chan**, Venessa K. K. Bhagwat and **David A. Janes**

*Developing Network Models of Industrial Symbiosis*

International Conference on Emerging Trends in Engineering and Technology (IConETech-2020),

Faculty of Engineering, The UWI, St. Augustine, Trinidad and Tobago.

Wahid, S., R. Maharaj, D. Boodlal, and **J. Smith**

*Process Optimization for the Production of Activated Carbon using Waste Coconut Shell in Trinidad & Tobago.*

International Conference on Emerging Trends in Engineering & Technology (IConETech-2020),

Faculty of Engineering, The UWI, St. Augustine, Trinidad and Tobago.

### Department of Chemical Engineering

**Mujaffar, S.** and Bynoe. S.

*Investigations into hot air and microwave drying of the West Indian bay leaf (Pimenta racemosa)*

Full Paper subjected to peer review and accepted for Proceedings, Eurodrying,

Torino, Italy, July, 10-12. (2019).

### **Ramsook, R.**

Poster Presentations at the AAPG (2019).

Annual Convention & Exhibition (ACE) San Antonio, Texas 19-22 May.

*Department of Mechanical and Manufacturing Engineering***Adeyanju, Anthony Ademola***Theoretical and Experimental Analysis of Atmospheric Water Harvesting Device*

Proceedings of the Canadian Society for Mechanical Engineering International Congress 2020, CSME Congress 2020, Charlottetown, PE, Canada. 2020

**Aleong, T., and Pun, K. F.***RFID Tags Used in Preventive Maintenance Programme for Motors and Generators.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

**Ali, Fahraz, and Boppana V. Chowdary***Natural Frequency prediction of FDM manufactured parts using ANN approach.*

IFAC-PapersOnLine 52.13 403-408. 2019

**Bachoo, R. and J. Bridge***Analysis of the Power Flow and Modal Energy Distribution in Fiber Reinforced Composite Beams*

Proceedings of the 26th International Congress on Sound and Vibration, Montreal, Canada, 7-11 July. 2019

**Bachoo, Richard, Shurland Balliram, and Jacqueline Bridge***Experimental and Numerical Vibration Analysis of Printed Circuit Boards.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

**Beharry, N., and Chowdary, B. V.***Investigating the Effects of Process Parameters on the Flexural Strength of 3D Printed Plastics.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

**Chong, P. P., and Lalla, T. R.***A Review of Bias in Decision-Making Models.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

**Chong, Peter Poon, and Terrence RM Lalla***Applying Fuzzy Qfd Mcdm To Evaluate Musical Instruments.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

**Davis, Goldie, Edwin Ekwue, and Vincent Cooper***Comparison of Four Fabrics for Filtering Turbid Water in a Two-Stage Cross-Flow Filter.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>, 839 – 848. 2020

**Ekwue, Edwin I.***Quality Assurance And Accreditation Of Engineering Programmes At The Faculty of Engineering at The University of the West Indies, St. Augustine Campus, Trinidad.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>, 1076 – 1084. 2020

**Ellis, Ruel LA.***Stimulating Regional Economic Development: A Case for Informal Science Education*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

**Ellis, Ruel, Gerardo Fernandez-Lopez, and Gerard Pounder**  
*Validation of a Simulated Environment Developed for Validating Cfs Autonomy.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

# Publications & Conferences (Online Only)

Fernandez-Lopez, Gerardo, **Ruel Ellis**, and Gerard Pounder  
*Description of a Simulated Environment Developed for Validating CFS Autonomy.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

George, N., and **Chowdary, B. V.**  
*Design Complexity As A Driver For Additive Manufacturing Process Improvement.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

Gokool, T., and **Chowdary, B. V.**  
*Manufacturing Engineering Education In Trinidad And Tobago: Review And Future Research Agenda.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

Gokool, T., and **Chowdary, B. V.**  
*Survey of Current Trends In Manufacturing Engineering Postgraduate Programmes In The UK.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

Harrison, S., **Bansee, J.**, **Chowdary, B.**, Seepersad, R., & Frederick, D.  
*Exploring An Optimization Strategy At The Maintenance Department Of An Oil Company.* The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

Maharaj, Bhopendra S., and **Graham King.**  
*A Real-World Energy And Cost Comparison Between An Electric Vehicle And A Petrol Vehicle In The Trinidad And Tobago Context.* The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

Mallian, S. N., and **Chowdary, B. V.**  
*Multi-Optimization of Empirical Models for the Material Extrusion Process.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

Mohammed, A., and **Chowdary, B. V.**  
*Analysis of The Cause and Effects of Part Defects in Abs Samples Made Using Additive Manufacturing.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

**Pun, Kit Fai**, and Cherisse S. Lashley  
*Exploring Quality of Service and Its Challenges at The MOE Port Of Spain Office.*

The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

Rameshwar, Jason R., and **Graham S. King**  
*Case Studies in Engineering and Technology Innovation in the Caribbean: A Focus on Educolcom and Bevcom.* The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020), Faculty of Engineering, The UWI, St. Augustine, June 1st – 5<sup>th</sup>. 2020

Ramnarace, S. and **Bridge, J.**  
*Analysis of a shape memory alloy spring system under harmonic excitation*  
New Trends in Nonlinear Dynamics: Proceedings of the International Nonlinear Dynamics Conference (NODYCON 2019), 17-20 February. 2019

Ramnarace, S. and **Bridge, J.**  
*Periodic solutions of a shape memory alloy spring system under harmonic excitation by an iterative method*  
Recent Advances in Nonlinear Mechanics 2019, Lodz, Poland, 7 – 10 May. 2019

Rayside, A., **Chowdary, B.**, and Dey, P.  
*Circular Economy Adoption within 3D Printing Industry: The State of the Art, Major Issues and Challenges.*  
 The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020),  
 Faculty of Engineering, The UWI, St. Augustine, June 1st – 5th. 2020

Rooplal, S., and **Chowdary, B. V.**  
*A Feasibility Study for Implementation of a Smart Parking System in Port of Spain Trinidad and Tobago.*  
 The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020),  
 Faculty of Engineering, The UWI, St. Augustine, June 1st – 5th. 2020

Singh, D. and **Bridge, J.**  
*Nonlinear Response of an elastic spherical cap to a descending rigid plate,*  
 Recent Advances in Nonlinear Mechanics 2019,  
 Lodz, Poland, 7 – 10 May. 2019

Thomas-Martin, Alice O., and **Ruel LA Ellis**  
*Transforming the Delivery of Curriculum in the Caribbean SIDS Through Mobile Learning*  
 The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020),  
 Faculty of Engineering, The UWI, St. Augustine, June 1st – 5th. 2020

Tiu, Johnny, and **Richard Bachoo**  
*Wave Analysis of a L-Beam Structure with a Blocking Mass.*  
 The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020),  
 Faculty of Engineering, The UWI, St. Augustine, June 1st – 5th. 2020

Yorke, E., **Chowdary, B. V.**, and **Bansee, J.**  
*A Study on the Improvement of a Local Bottle Manufacturing Operation: Deployment of Lean Principles and Discrete Event Simulation.*  
 The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020),  
 Faculty of Engineering, The UWI, St. Augustine, June 1st – 5th. 2020

*Department of Civil and Environmental Engineering*  
 Ali, A. and **Villaroel-Lamb, D**  
*On The Forchheimer Coefficients for Unsaturated Flows.*  
 Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020).  
 The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

Ali, A. and **Villaroel-Lamb, D**  
*A Swash zone Seaward Condition for Impermeable Beaches.*  
 Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020).  
 The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

Baal, A. and **Outridge, D.**  
*Subsidiary Project Plan Requirements For Public Construction Projects in Trinidad and Tobago.*  
 Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020).  
 The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

Bissoon, S. and **Outridge, D.**  
*Delayed Payments Impacts on Planned Cash Flow of Small and Medium Contractors for a Special Purpose Company.*  
 Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020).  
 The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

Braithwaite, S. and **Villaroel-Lamb, D**  
*Evaluation of Wave Run-Up Predictions from Parametric Models of Trinidad Beaches.* Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020).  
 The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

Buari, T.A., **Olutoge, F.A.** and Ayininyoula, G.M.  
*Relationship between Compressive Strength and Modulus of Elasticity of Seld-Consolidating High performance Concretes (SCHPCS) incorporating GSA as SCM.*  
 Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020).  
 The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

Dolcy, K. and **Townsend, T.**

Transportation Sustainability Framework.  
Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020).  
The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

Dolcy, K. and **Townsend, T.**

*Adoption and Development of Alternative Fuel Vehicles in Trinidad and Tobago.*  
Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020).  
The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5, 2020. <https://doi.org/10.47412/TMDM6163>.

Ellis, L., **Martin H.**, and Charles, M. BIM

*Implementation in the practice of Architecture in Trinidad and Tobago.*  
Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020).  
The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

Hosein, G. and **Ray, I.**

*Managing the Risk and Uncertainty in Coastal Residential Building Codes,*  
The 35th Indian Engineering Congress, Institution of Engineers (India) (online) December 18-20, 10 pages. 2020

Hosein, G., and **Ray, I.**

*Evaluating the Effectiveness of the Job Hazard Analysis and Risk Assessment Reports for Building Services Installation*  
Proceedings of The International Conference on Emerging Trends in Engineering and Technology (IConETech-2020),  
Faculty of Engineering, The UWI, St Augustine, June 1-5. 2020

**Lee, Leon, P.**

*Aggregate Angularity Effects on Mechanical Properties of Asphalt Concrete.*  
Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020).  
The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

**Leon, Lee P.**, and Derek Gay

*Finite Element Modelling of Repeated Load Axial Test of Laboratory Cylindrical HMA Using Constitutive Creep Model.*  
International Conference on Transportation and Development 2020, pp. 41-50.  
Reston, VA: American Society of Civil Engineers. 2020

**Leon, Lee P**

*Statistical Regression and Soft Computing in Estimating Permanent Deformation of HMA with the Inclusion of AIMS Coarse Aggregate Angularity Index.*  
International Conference on Transportation and Development 2020, pp. 32-40.  
Reston, VA: American Society of Civil Engineers. 2020

Maharaj, D., **Mwasha, A.** and Zyuzikov

*Development of Attenuated Energy Spectrums at X-Ray Energies of 60keV and 150keV Using Concrete Manufactured with Electric Arc Furnace Slag Aggregates.*  
Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020).  
The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

**Olutoge, Festus** and Ogundeji, Oluwaseun

*Residual Strength and Post-Cracking Behaviour of Glass Wool Fibre-Reinforced Concrete Embedded with Steel Reinforcement.*  
International Conference on Emerging Trends in Engineering and Technology (IConETech-2020).  
The University of the West Indies, St. Augustine Campus, Trinidad and Tobago, June 1-5. 2020

Oyebisi, S, A Ede, **F Olutoge**, T Igba, and J Ramonu

*Rheology of slag-based geopolymers using corncob ash as a pozzolanic material.* IOP Conference Series: Materials Science and Engineering. 2019

Oyebisi, S, A Ede, **F Olutoge**, T Igba, and J Oluwafemi.

*Effects of rest period on the strength performance of geopolymer concrete.*  
IOP Conference Series: Materials Science and Engineering. 2019

Oyebisi, Solomon, Anthony Ede, **Festus Olutoge**, Tobit Igba, John Oluwafemi, and Adekunle Ajao.

*Investigation of the Catalytic Liquid System Ratio on the Strength Performance of Geopolymer Concrete.*  
Journal of Physics: Conference Series. 2019

Rampit, R., **Smith, J.** and **Ray, I.**

*A Review of Recycled Concrete Aggregates as a Sustainable Building Solution.*

Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020). The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

Stephen, J. and **Townsend, T.**

*Estimation of Value of Travel Time in Trinidad & Tobago.*

Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020). The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

Wright, L. and **Townsend, T.**

*Mode Choice Modelling of Paratransit Modes in Trinidad and Tobago.*

Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020). The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

Wright, L. and **Townsend, T.**

*Socio-Demographic Characteristics as it relates to Travel Behaviour in SIDS – A Case Study in Trinidad.*

Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020). The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

**Outridge, D.** and Patel, R.

*Mitigating Contractor Problems Experienced in The Construction Industry in Trinidad & Tobago.*

Proceedings of the International Conference on emerging Trends in Engineering and Technology (IConETech-2020). The University of The West Indies, Faculty of Engineering, St. Augustine, Trinidad and Tobago, June 1-5. 2020

*Department of Electrical and Computer Engineering*

Addison, L.M., G. A. Hosein, and **S. Bahadoorsingh**  
*Goodness of Fit of Probabilistic Models for Electric Vehicle Charging Behaviour.*

Presented at the International Conference on Emerging Trends in Engineering and Technology, Virtual, June 1 to 5. 2020

Darren Ramsook, Patrick Hosein and **Akash Pooransingh**

*Intrusion Detection and Avoidance for a Heterogeneous Cluster of Web Sites.*

6th International Conference on INTERNET SCIENCE, Perpignan, France, December, 2-5. 2019

Hosein, P., Ramoudith, S. and **Mallalieu, K.**

*On Internet Resilience in Small Island States*

Proceedings of the 6th International Conference, INSCI 2019. Perpignan, France, December 2–5. 2019

**Mallalieu, K.**

*Competition in the Global Market amidst the 4th Industrial Revolution and Digitisation - a View from a Developing Country.*

International Institute of Communications (IIC) Annual Washington DC Conference: The restart agenda. Online. December 8 – 10. 2020

Meetoo, C. , **S. Bahadoorsingh**, and C. Sharma

*Development of a Demand Side Management Device for Electric Vehicle Charging in Developing Countries.*

Presented at the IEEE Transportation Electrification Conference and Expo, Virtual. 2020

Sahil A. K. Ramlogan , **Akash Pooransingh** and Daniel J. Ringis  
*Semi-Automated Cricket Broadcast Highlight Generation.*

International Conference on Emerging Trends in Engineering & Technology (IConETech-2020)  
St. Augustine, Trinidad & Tobago. June 1 to 5, 2020

*Department of Geomatics Engineering and Land Management*

**Al-Tahir, R., and T. Barran**

*Earthwork Volumetrics with Unmanned Aerial Vehicles: A Comparative Study.*

International Conference on Emerging Trends in Engineering and Technology (IConETech-2020). Trinidad and Tobago. 2020

**Hosein, T., Ramlal, B. Kirton-Reed, L. and Trotman, A.**

*An Analytical Approach to GIS Analysis and Map Making Using Open Source Software.* Published in the Proceedings of the International Conference on Emerging Trends in Engineering and Technology (IConETech-2020),

The UWI, St. Augustine, June 1-5, 2020, pg 707-718. <http://conferences.sta.uwi.edu/iconetech2020/postconferenceproceedings.php>. Paper DOI: <https://doi.org/10.47412/JKKP1396>.

**Mycoo, M.**

*Opportunities for Transforming Informal Settlements in Caribbean Small Island Developing States.*

Conference proceedings of The International Conference on Emerging Trends in Engineering & Technology (IConETech-2020)

Faculty of Engineering, The University of the West Indies, St. Augustine, Trinidad. 1-5 June, 2020

*Department of Geomatics Engineering and Land Management*

**Ramlal, B. Davis, D. and E. Edwards**

*Assessing the National Geospatial Data Ecosystems of the Caribbean*

Presented at URISA Caribbean GIS Conference Hyatt Hotel, Port of Spain, Trinidad, November 2019.

**Seerattan, C, D. Mahadeo, and R. Al-Tahir**

*Unmanned Aerial Vehicles for Forest Management.*

URISA 2019 Caribbean GIS Conference. November 18-21, Trinidad. 2019

**Lalla, G. and R. Al-Tahir**

*Analysing the Growth of the Unmanned Aircraft Systems Industry in Trinidad.*

URISA 2019 Caribbean GIS Conference. Trinidad, November 18-21, 2019

**Douglas, A., Miller, K., Davis, D., Sutherland, M., and Edwards, E.**

*Low cost solutions for improved Vertical Modelling for Small Island Territories.*

URISA Caribbean GIS Conference Trinidad November. 2019

**Davis, D., Addo, S., Morris, N. and Mahabir, A.**

*Photogrammetric Applications for Natural Resource Management in Caribbean SIDS – A Case Study in Guyana.*

ISTT Caribbean Land Conference October. 2019

**Dookree, C., Al-Tahir, R. and Davis, D.**

*Challenges to the Use of Geoinformatics for the Assessment of Urban Growth in Tropical Small Islands.*

40th Canadian Symposium on Remote Sensing & Geomatics Atlantic. 2019

**Ramlal, B.**

*The Caribbean Geospatial Development Initiative*

Presented at URISA Caribbean GIS Conference Hyatt Hotel, Port of Spain, Trinidad, November. 2019

**Ramlal, B. Davis, D. and E. Edwards**

*Assessing the National Geospatial Data Ecosystems of the Caribbean*

Presented at URISA Caribbean GIS Conference, Hyatt Hotel, Port of Spain, Trinidad, November. 2019

**Other Publications***Department of Chemical Engineering***Patents**

**Dr Shelly Singh-Gryzbon** (2020). U.S. Patent Application No. 63/054,822: Method to Minimize the Likelihood of Thrombosis in Heart Valve Implementation. Filed: July 22, 2020, "patent pending"

*Technical Papers/Presentations/Reports*

**Jupiter, A.** (2020). Update on the development of a National Carbon Capture and Storage Programme in Trinidad and Tobago. CCs conference in Bergen, Norway.

**Jupiter, A.** (2019). Petroleum Industry Careers for Exploration and Production, Launch Symposium, University of Guyana.

**Jupiter, A.** (2019). Port System of Trinidad and Tobago Point Lisas, Galeota and La Brea. Paper presented at the IV Latin American and Caribbean Regional Meeting of Logistics Port Communities, at the Trinidad Hilton.

**Jupiter A.,** Alexander D. and Boodlal D. (2019). The Development of a National Carbon Capture and Storage Programme in Trinidad and Tobago COP 25 Madrid, Spain.

**Ward, K.** (2020). Achieving absolute sustainability across integrated industrial networks-A case study on the ammonia process. Proman Limited (Trinidad and Tobago).

**Ward, K.** (2020). Towards greater sustainable development within current Mega-Methanol (MM) production. Proman Limited (Trinidad and Tobago).

**Ward, K.** (2020). Model of the AUM Ammonia plant with Sensitivity Analysis and Life Cycle Assessment. Proman Limited (Trinidad and Tobago).

*Department of Electrical and Computer Engineering*  
*Short Course Development and Delivery*

**Bahadoorsingh, S.** - Coordinator and Lead Trainer for 5 Day Grid Modelling with Renewable Energy Training Programme for the United Nations Development Programme (UNDP) Barbados – Introduction of the fundamentals of grid modelling focusing on the impact of renewable energy integration. Participants from the following organisations in Barbados: Government Electrical Engineering Department (GEED), Ministry of Energy and Water Resources (MEWR), Fair Trading Commission (FTC) and UNDP.

## Faculty of Food & Agriculture

### Journal Publications

Atwell, M.A., **Wuddivira, M.N.** (2020) Soil Organic Carbon Characterization in a Tropical Ecosystem Under Different Land Uses Using Proximal Soil Sensing Technique. *Archives of Agronomy and Soil Science (Taylor & Francis)* <https://doi.org/10.1080/03650340.2020.1831693>.

Augustus, E., **I. Francis-Granderson** and K.D. Rocke. (2020) The Impact of a Ketogenic Dietary Intervention on the Quality of Life of Stage II and III Cancer Patients: A Randomized Controlled Trial in the Caribbean. *Nutrition and Cancer Journal, Taylor and Francis Online Journal*. <https://doi.org/10.1080/01635581.2020.1803930>.

**Barry, T.**, and L. Grahman. (2020) Agrarian struggle and food system injustice in the Anglo-Caribbean: Centering social reproduction by (re)turning to Creft and Fanon. *Human Geography Journal*. <https://doi.org/10.1177/1942778620925824>.

Bekele F.L., Bidaisee, G.G., Singh, H. and **Saravanakumar, D.** (2020) Morphological characterisation and evaluation of cacao (*Theobroma cacao* L.) in Trinidad to facilitate utilisation of Trinitario cacao globally. *Genetic Resources and Crop Evolution* 67: 621–643.

Bramble, D.E., Gouveia, G.A., **Ramnarine, R.**, and Farrell, R.E. (2020) Short-term effects of aglime on inorganic- and organic-derived CO<sub>2</sub> emissions from two acid soils amended with an ammonium-based fertiliser. *Journal of Soils and Sediments*. 20: 52–65. Publisher: Springer.

**Daley, O.**, Roberts-Nkrumah, L., Alleyne, A., Francis-Granderson, I, Broomes, J. and **Badrie, N.** (2020) Assessment of breadfruit (*Artocarpus altilis* (Parkinson) Fosberg) cultivars for resistant starch, dietary fibre and energy density. *African Journal of Food, Agriculture, Nutrition and Development*. 19 (4) 15060-15076.

Gahman, L., **Thongs, G.** and Greenidge, A. (2020) Disaster, Debt, and Underdevelopment. *Palgrave Macmillan Journal of Springer Nature*.

Gahman, L. and **Thongs, G.** (2020) Colonialism, Climate Change, and the Caribbean: A Political Ecology of Hurricanes Irma and Maria. *Transactions of the Institute of British Geographers* <https://doi.org/10.1111/tran.12369>.

George, D.A and **S. Nichols.** (2020) The Accuracy of the Equation used to predict Resting Metabolic Rate (RMR) requirements in Acutely Ill Adults in Trinidad and Tobago: Aged 18 to 65 years. *Applied Physiology, Nutrition, and Metabolism*, 45(4): S20. <https://doi.org/10.1139/apnm-2020-0129>.

George, D.A. and **S. Nichols.** (2020) Accuracy of Equations Used to Predict Resting Metabolic Rate (RMR) Requirements among Healthy and Acutely ill Females in Trinidad and Tobago; Aged 18 to 65 years. *Current Developments in Nutrition* 4 (Supplement 2): 628. [https://doi.org/10.1093/cdn/nzaa049\\_021](https://doi.org/10.1093/cdn/nzaa049_021).

George, D.A. and **S. Nichols.** (2020) The Accuracy of Equations Used to Predict the Resting Metabolic Rate (RMR) Requirements of Males: Aged 18 to 65 years in Trinidad and Tobago. *Current Developments in Nutrition*: 4 (Supplement 2): 629. [https://doi.org/10.1093/cdn/nzaa049\\_022](https://doi.org/10.1093/cdn/nzaa049_022).

Gow, G., A. Chowdhury, J. Ramjattan and **W. Ganpat.** (2020) Fostering Effective Use of ICT in Agricultural Extension: Participant Responses to an Inaugural Technology Stewardship Training program in Trinidad. *The Journal of Agricultural Education and Extension*, 1-16. doi: 10.1080/1389224x.2020.1718720.

Melville, T., Sutherland, M. and **Wuddivira, M.N.** (2020) Assessing trends and predicting the cover management factor in a tropical island state using Enhanced Vegetation Index. *Springer Nature Applied Sciences (Springer)*, 2(10): 1-14. <https://doi.org/10.1007/s42452-020-03482-8>.

Persaud, R., Persaud M, **Saravanakumar, D** and Homenauth, O. (2020) Identification of causal agent and management of grain discolouration in rice. *Journal of Plant Diseases and Protection* 127: 183–196.

Ramdwar, M.N.A., **W. Ganpat** and L.A.R Solomon. (2020) Welfare Employment and Its Impact on the Agricultural Sector Workforce in Trinidad, West Indies. *Journal of Agricultural Science* 12 (12): 49-60. <https://doi.org/10.5539/jas.v12n12p49>.

Ramjattan, J., A. Chowdhury and **W. Ganpat**. (2020) Agricultural Extension Agents' use of Learning-based Extension Methods in Trinidad and Tobago. *Journal of Learning for Development* 7(2): 142-160.

Smith, B.A.M.\*, **Eudoxie, G.**, Stein, R., Ramnarine, R., Raghavan, V. (2020) Effect of neem leaf inclusion rates on compost physico-chemical, thermal and spectroscopic stability. *Waste Management*. 114: 136–147. Publisher: Elsevier.

**Thongs, G.** and Griffith, K. (2020) Building Resilient Caribbean Small-Island Developing States through Community-Based Disaster Risk Perceptions. *Journal of Caribbean Environmental Sciences and Renewable Energy*.

**Webb, M.**, D. Chong and S.H. Bawa. (2020) Consumption Patterns of Nonnutritive Sweeteners among University students at a Caribbean Institution. *Journal of American College Health*. doi: 10.1080/07448481.2019.1706531.

Zhao, M., D.C. Behringer, J. Bojko, A. Kough, L.V. Plough, C. P. dos Santos Tavares, A. Aguilar-Perera, O.S. Reynoso, **G. Seepersad**, O. Maharaj, M. Sanders, D. Carnales, G. Fabiano, D. Carnevia, M. Freeman, N. Atherley, L. Medero-Hernández and E.J. Schott. (2020) Climate and season are associated with prevalence and distribution of trans-hemispheric blue crab reovirus (*Callinectes sapidus* reovirus 1). *Inter-Research Science Publisher*. doi: <https://doi.org/10.3354/meps13405>. IF: 2.326.

Atwell, M.A., **Wuddivira, M.N.** (2019) Electromagnetic-induction and Spatial Analysis for Assessing Variability in Soil Properties as a Function of Land Use in Tropical Savanna Ecosystems. *Springer Nature Applied Sciences* (Springer). 1: 856. <https://doi.org/10.1007/s42452-019-0902-9>.

**Barry, T.**, L. Grahman, A. Greenidge and A. Mohamed. (2019) Wrestling with Race and Colonialism in Caribbean Agriculture: Toward a (Food) Sovereign and (Gender) Just Future. *GeoForum*. <https://doi.org/10.1016/j.geoforum.2019.12.018>.

Daley, O., L.B. Roberts-Nkrumah, A.T. Alleyne, **I. Francis-Granderson, J.** Broomes and N. Badrie. (2019) Assessment of Breadfruit (*Artocarpus Altilis*, (Parkinson) Fosberg) Cultivars for Starch, Dietary Fibre and Energy Density. *African Journal of Food, Agriculture, Nutritional and Development*.

Farrick, K., **Wuddivira, M.N.** and Martin, O. (2019) Estimation of soil texture from permanent wilting point measured with a chilled-mirror dewpoint technique. *Journal of Plant Nutrition and Soil Science* (Wiley), 182 (1):119-125. <https://doi.org/10.1002/jpln.201700573>.

**Farrick, K.K.** Wuddivira, M.N. and Martin, O. (2019) Estimation of soil texture from permanent wilting point measured with a chilled-mirror dewpoint technique. *Journal of Plant Nutrition and Soil Science*. 182: 119-125.

Ganpat, W.G., **Isaac, W.A.P.**, De Chi, W., Sewsaran, R. and Murphy, B. (2019) An Assessment of Plant Quarantine Officers' Self-Perceived Competencies in the Caribbean Region. *Journal of Agricultural & Food Information*, 20(2):147 – 158.

Martin, W., **Isaac, W.A.P.**, Khan, A. and Persad, A. (2019) Effect of sustainable fertilizer regime on papaya (cv. 'Red Lady' and 'Tainung No. 2') yield parameters. *Acta Horticulturae* 1250 (1): 7-14.

Persaud, R., A. Khan, W. Isaac, W. Ganpat and **D. Saravanakumar**. (2019) Plant extracts, bioagents and new generation fungicides in the control of rice sheath blight in Guyana. *Crop Protection*, 119: 30-37.

Persaud, R., **Saravanakumar, D.** and M. Persaud. (2019) Identification of resistant cultivars for sheath blight and use of AMMI models to understand genotype and environment interactions. *Plant Disease*, 103, 9:2204-2211.

**Ramnarine, R.**, Persad, S., and Rampersad I. (2019) Soil resilience and management of former sugarcane (*Saccharum officinarum* L.) lands on the Naparima Peneplain, Trinidad and Tobago. *Tropical Agriculture*. 96: 40-46. Publisher: Faculty of Food and Agriculture, The UWI.

Ronen, F., **Wuddivira, M.N.**, Darsan, J. and Wilson, M. (2019) Soil slaking sensitivity as influenced by soil properties in alluvial and residual humid Tropical soils. *Journal of Soils and Sediments* (Springer). <https://doi.org/10.1007/s11368-018-2189-7> . 19(4):1937-1947.

**Saravanakumar, D.**, Thomas, A., Banwarie, N. (2019) Antagonistic potential of lipopeptide producing *Bacillus amyloliquefaciens* against major vegetable pathogens. *European Journal of Plant Pathology*, 154 (2): 319–335.

Smith, BAM., G. Eudoxie and **D. Saravanakumar.** (2019) Identification of *Phytophthora capsici* causing collar rot in hot peppers in Trinidad. *Canadian Journal of Plant Pathology*, 41(1):129-134.

Sundar, R. and **Darsan, J.** (2019). A geomorphological analysis of the Piparo and Digity mud volcanoes in South Trinidad. *Caribbean Journal of Earth Science* 49: 23-34.

Thomas, A. and **Saravanakumar, D.** (2019) Effect of host extract on growth and sporulation of *Cercospora lactucae-sativae*. *Australasian Plant Disease Notes*, 14 (1), 19.

**Thongs, G.** and Griffith, K. (2019) Developing Urban Resilience through the Evaluation of Landslide Causative Factors. *Caribbean Urban Forum*. <http://bluespacecaribbean.com/wp-content/uploads/2020/03/Thongs-and-Griffith-Landslides-2019.pdf>.

**Wuddivira, M.N.**, De Shorn, E.B., Alexander, M., Gouveia, G.G., Francis, R.C. and Farrick, K.K., (2019) November. Aggregate Stability and Moisture Dynamics of Humid Tropical Soils Under Ammonium Chloride Amendment. In *ASA, CSSA and SSSA (2019)*. ASA, CSSA, and SSSA.

### Abstracts

**Badrie N.** and Singh, M. (2020) CNC editor. Safe hygiene practices important for food safety too in commemoration of World Food Safety Day, June 7th, 2020. <https://www.cnc3.co.tt/safe-hygiene-practices-important-for-food-safety-too/>

Henry, S. and **Badrie, N.** (2020) Wheat pancake with added breadfruit, cassava and quinoa Flour: proximate composition and sensory evaluation. Paper Number 214, oral accepted. S61. Indigenous and Traditional Foods: Their Reinvention for Modern Consumers. International Union of Food Scientists and Technologists (IUFOST), Food for Changing World, Safe/ Secure/Sustainable. 20th *World Congress of Food Science and Technology Auckland*. 17th- 20th August, 2020 (Abstract accepted postponed due to COVID 19) New Zealand.

Phillips, M.A., **Badrie, N.** and Singh, M. (2020) The National food control system in Guyana: Evaluation of the Current Regulatory Framework for Food Control. *International Conference on Emerging Trends in Engineering and Technology (IConETech-2020)* to be held at the University of The West Indies, St. Augustine Campus, Trinidad and Tobago on March 13th -15th, 2020.

Rampat, M., Singh, M. and **Badrie, N.** (2020). Shelf-life study, sensory evaluation and nutritive value of wheat flour/ dasheen (*Colocasia esculenta* (L.) Schott taro/cocoyam flour sweetbread". *International Conference on Emerging Trends in Engineering and Technology (IConETech-2020)* to be held at the University of The West Indies, St. Augustine Campus, Trinidad.

**Badrie, N.** (2019) - CAS/UWI participation at the Inter-American Network of Academy of Sciences (IANAS)/Brazilian Academy of Sciences, Rio de Janeiro, Brazil. *CAS Newsletter*, Vol 1, Issue 4, pp 4 Sept 2019. [http://www.caswi.org/cas\\_home/cas\\_newsletter](http://www.caswi.org/cas_home/cas_newsletter)

**Badrie, N.** (2019) Food Safety, Everyone's Business. *CAS Newsletter*, September 2019, Vol 2 (No. 3). p. 1. <https://docs.google.com/a/caswi.org/viewer?a=v&pid=sites&srcid=Y2Fzd2kub3JnfHd3d3xneDo0N2VjMThhMDI4NTNINjk0>

**Roopnarine, R.**, Montoute, M., Walter, L., McLean, S. Lewis, S., and Geoghagen-Martin, J. (2019) SDG 6 Monitoring Guide for the Caribbean SIDS. Global Water Partnership.

## Books & Book Chapters

**Isaac, W.A.P., Ganpat, W.G.,** Bridgemohan, P. and Attzs, M. (2020) Defining a policy nexus for sustainable agriculture and food security in the Caribbean Region. In *Global Climate Change: Resilient and Smart Agriculture*. V. Venkatramanan, Shachi Shah and Ram Prasad (editors). Springer Nature Singapore Pte Ltd., Chapter 1: 1-13. ISBN: 978-981-32-9855-2.

Bridgemohan, P. and **Isaac, W.A.P.** (2019) Agricultural Diversification – A Strategy out of Economic Difficulties of the Sugarcane Industry. In: *Development, Political and Economic Difficulties in the Caribbean*. Ann-Marie Bissessar editor, Chapter 14: 187-200. Palgrave Macmillan Publishers.

Bridgemohan, P. and **W. A. P. Isaac** (2019). Agricultural Diversification – A Strategy out of Economic Difficulties of the Sugarcane Industry. In *Development, Political and Economic Difficulties in the Caribbean*. Ed. Ann-Marie Bissessar. Palgrave Macmillan Publishers.

Campo, K.R., Isaac, W., **Badrie, N.**, Webb, M. and Granderson, I. (2019) Beyond the Fields and Tables: Contributions to Health, Nutrition and Well Being in the CARICOM region (abstract). In *Beyond the Kitchen Table: Exploring the Role of Black Women in Global Food Systems*.

Frances Henry, Milena Cabrera Maldonado, **Neela Badrie**, Mónica Moraes R., María Eugenia García, Christina Villamar, Banu Örmeci y Dayra Álvarez (2019). Gender Perspectives-Water Quality in Latin American and Caribbean Homes Water Quality in the Americas: Risks and Opportunities. Pg 434-438. Pg 431-444. *The Inter-American Network of Academies of Sciences IANAS*, Mexico.

**Isaac, W.A.P.**, Ganpat, W.G., Attzs, M. and Isaac, T. Criminological dimensions of agriculture in the Caribbean. (2019) In: *Caribbean Perspectives on Criminology and Criminal Justice*. Wendell Wallace (editor), Volume 1, Chapter 5: 105-121. Westphalia Press, Washington DC.

Isaac, W.A.P., **W. Ganpat**, M. Attzs and T. Isaac. (2019) Criminological dimensions of agriculture in the Caribbean. In: *Caribbean Perspectives on Criminology and Criminal Justice*. W. Wallace (editor) Volume 1, Chapter 5: 105-121. Westphalia Press, Washington DC.

**Isaac**, W.A.P., N. Felix, W. G. Ganpat, D. Saravanakumar and J. Churaman. (2019) Sustainable Climate-Smart Agricultural Solutions to Improve Food and Nutrition Security in Trinidad and Tobago. In *Development, Political and Economic Difficulties in the Caribbean*. Ed. Ann-Marie Bissessar. Palgrave Macmillan Publishers.

Isaac WP, Felix N, Ganpat WG, **Saravanakumar D** and Churaman J. (2019) Sustainable climate-smart agricultural solutions to improve food and nutrition systems in Trinidad and Tobago. In: *Development, political and economic difficulties in the Caribbean*. Editor, A.M. Bissessar (editor) Chapter 8: 88-111 Palgrave Mcmillan Publishers.

Khan, A and **Isaac, W.A.P.** (2019) Biological Control in Trinidad and Tobago. In: *Biological Control in Latin America and the Caribbean: Its Rich History and Bright Future*. Joop C. Van Lenteren, Vanda H.P. Bueno, M. Gabriela Luna and Yelitza C. Colmenarez (editors). CAB International, Wallingford, Oxfordshire, UK, Chapter 27: 437-446. ISBN-13: 9781789242430.

## Conference Presentations

Augustus, E., **I. Francis-Granderson** and K.D. Rocke. *Use of the Ketogenic Diet as an Alternative Treatment for Chronic Diseases among Caribbean Adults: A Descriptive Study*. Poster Presentation at the 2019 International Cancer Education Conference 18 – 20 September 2019. Salt Lake City, Utah, USA. <https://doi.org/10.1007/s13187-019-01590-7>.

## Conference Papers & Proceedings

Churaman, J., Kathiravan, G., Felix, N. and **Isaac, W.A.P.** *Consumers' Acceptability of Lettuce from Different Production Systems: An Evaluation in Trinidad*. Presented at the International Conference on Livestock, Food Security and Food Safety – Challenges, Opportunities and Strategies. Tamil Nadu Veterinary and Animal Sciences University. January 28-29, 2020.

Churaman, J., Gopalan Kathiravan, Nkosi Felix and **Wendy-Ann P. Isaac**. *Contingent Valuation of Consumer's Willingness to Pay for the Lettuce from Controlled Environment Production System*. Presented at the International Conference on Livestock, Food Security and Food Safety – Challenges, Opportunities and Strategies. Tamil Nadu Veterinary and Animal Sciences University. January 28-29, 2020.

**Farrick, Kegan and Darnell Gittens.**

*The Influence of Tree and Stand Age on Soil water movement in Theobroma cacao plantation*

22<sup>nd</sup> European Geophysical Union General Assembly Held online 4-8 May, 2020.

Gow, G., U. Dissanayake, C. Jayathilake, A. Chowdhury, **W. Ganpat** and J. Ramjattan.

*Putting the Capabilities Approach into Action (Research): A Comparative Assessment of a Technology Stewardship Training Program for Agricultural Extension in Sri Lanka and Trinidad.* International Association for Media and Communication Research (IAMCR) 2020 Conference.

Hinkson, L., Uppoor Krishnamoorthy, Adrian Paul and **Wendy-Ann P. Isaac.**

*Nutritional Evaluation of Trichanthera gigantean, Moringa oleifera and Morus alba (L.) Foliage for Ruminants at Different Harvesting Stages.*

Presented at the International Conference on Livestock, Food Security and Food Safety – Challenges, Opportunities and Strategies.

Tamil Nadu Veterinary and Animal Sciences University. January 28-29, 2020.

**Hutchinson, S** and C. Edwards.

*Dominica Fishers' Willingness to Pay for Life Insurance.*

33<sup>rd</sup> West Indies Agricultural Economic Conference, Caribbean Agro-Economic Society, Tobago, Trinidad and Tobago. 2019

**Hutchinson, S** and A. Iton.

*Understanding Consumer Fish Purchase Practices in Trinidad.*

33<sup>rd</sup> West Indies Agricultural Economic Conference, Caribbean Agro-Economic Society, Tobago, Trinidad and Tobago. 2019

**Mathura, Nicola and Kegan Farrick.**

*Analyzing Land Use Impacts on Streamflow Response in a Tropical Watershed: A Hydrometric and Geochemical Approach*

22<sup>nd</sup> European Geophysical Union General Assembly Held online 4-8 May 2020.

Ramjattan, J., A. Chowdhury, **W. Ganpat** and G. Kathiravan.

*Use of Social Media by the Agricultural Extension Community of Practices in Trinidad and Tobago.*

Paper presented at the 2020 Conference of the Association for International Agricultural and Extension Education. 2020

**Saravanakumar, D.**

*Food Safety and Food Security: Perspectives from the impacts of Climate Change.*

In the International Conference on Livestock, food security and food safety - Challenges, opportunity and strategies TANUAS, Chennai, India. 28-29 January 2020

**Saravanakumar, D.**

*Diseases of tropical importance and its management.*

National symposium 'Mitigation of emerging plant diseases under changing climate scenario' organized by the Indian Society of Plant Pathologists at TNAU, Coimbatore, India from 16-17 December 2019

**Thongs, Gabrielle and Deston Pope**

*Integrating GIS & Participatory Mapping for Disaster Prevention at the Caribbean.*

Caribbean URISA Conference

Trinidad, November 19 – 21st 2019.

**Thongs, Gabrielle and Nikia Gooding**

*Assessing 'Green Urbanism' Potentials in Small Island Developing States.*

Caribbean URISA Conference

Trinidad, November 19 – 21st 2019.

**Thongs, Gabrielle and Kyle Alexander**

*The Design and Development of a Drought Monitoring System Using GIS.*

Caribbean URISA Conference

Trinidad, November 19 – 21st 2019.

**Thongs, Gabrielle and Dana Lewis.**

*Measuring Perceived Risk and its Components: The Key to Self-Protective Behaviour.*

11th Caribbean Conference on Comprehensive Disaster Management Resilience Understanding

Sint Maarten, December 2<sup>nd</sup> – 6<sup>th</sup> 2019.

### Other Publications

#### Newspaper Articles

Webb, M. (2020). Not just food but nutritious food. Caribbean News Service. <https://caribbeannewsservice.com/now/not-just-food-but-nutritious-food/> . May 13, 2020.

Webb, M. (2020). Navigating Nutrition during COVID-19. Trinidad and Tobago Guardian. <https://www.guardian.co.tt/sports/navigating-nutrition-during-covid19-6.2.1151838.fb7da25444>. July 5, 2020.

## Faculty of Humanities & Education

### Journal Publications

#### Refereed Publications

Botelho de Magalhães, M., Cotterall, S. and Mideros, D. (2019) Identity, voice and agency in two EAL doctoral writing contexts. in *Journal of Second Language Writing*, 43,4-14. (Impact Factor:3.324)

**Braithwaite, Ben.** (2020) Ideologies of Linguistic Research on Small Sign Languages in the Global South: A Caribbean Perspective. In *Language and Communication*, Volume 74, August 2020, pp. 182-194.

**Brunton, D-W.** (2019) L'homme de la créolisation: Obama, neo-racism and cultural creolization. Chapter in *Perspectives of Neo-Race Realities in the Obama Era*. ed: Heather Harris. Albany: SUNY Press.

**Cateau, H.,** Caribbean Connecticut Intersections, Turning Tides: Caribbean Intersections in the Americas and Beyond, Heather Cateau and Milla Riggio (Kingston, Ian Randle, 2019), pp. 22-35. (Interviewed and Cited in British Financial Times: Jonathan Guthrie, Examining the Slave Trade- Britain has a debt to repay, *Financial Times*, June 2020).

**Chinien, S.** (2020) Pré-littérature ou littérature-monde: Une étude des oeuvres de Chamoiseau, *Interculturel*, N° 25, Lecce (Italy), Alliance Française de Lecce, pp. 147-166.

**De Lisle, J.** (2020) Valuing mixed and multiple methods for educational policy research in the Anglophone Caribbean: Illustrative cases privileging epistemological diversity. *Caribbean Curriculum* 26, 26-64.

**De Lisle, J.,** Anisette, S., & Bowrin-Williams, C. (2020) Leading high-poverty primary schools in Trinidad and Tobago—what do successful principals do? *Educational Management Administration & Leadership*, 48(4), 703-723.

**Hezekiah, G.** (2020) Intuition and Excess: Mona Hatoum's *Measures of Distance* and the Saturated Phenomenon. *Paragraph* 43 (2): 197-211. <https://www.sciencedirect.com/science/article/abs/pii/S0271530920300616>

**Jackson, E.,** (2020) Review of Santanu Das, *India, Empire, and First World War Culture: Writings, Images, and Songs*, Cambridge University Press, 2018, in *The Cambridge Journal of Postcolonial Literary Inquiry*, vol. 7, no. 2, 2020, pp. 232-234

**Jaggernaut, S. J.,** Garib Singh, A., & Hunte, A. (2020) Teachers' perspectives of the introduction of school-based assessment in mathematics in Trinidad and Tobago. *Caribbean Educational Research Journal (CERJ)*, 6(1), 1-33. Available at [https://www.cavehill.uwi.edu/fhe/education/publications/past-issues/volume-6-number-1-special-issue-leveraging-dialo/articles/6\\_cerj-vol-6-no-1-jaggernaut,-garibsingh,-hunte.aspx](https://www.cavehill.uwi.edu/fhe/education/publications/past-issues/volume-6-number-1-special-issue-leveraging-dialo/articles/6_cerj-vol-6-no-1-jaggernaut,-garibsingh,-hunte.aspx)

**Jaggernaut, S. J., Ramsawak-Jodha, N., Kamalodeen, V.J., Dedovets, Z.,** Barrow, D. A., & **Figaro-Henry, S.** (2019). Exploring Gamification for Reinforcing Geometrical Concepts and Skills at the Primary Level in Trinidad: A Mixed Methods Pilot Study. *Caribbean Curriculum*, 26, 65-98.

Joong, Y., **Ramsawak-Jodha, N.,** Wintz, P., Gibbs, Anderson, S. & Hutton, D. (2020) Understanding the Ecologies of Education Reforms: Comparing the Perceptions of Secondary Teachers and Students in Jamaica, Guyana, and Trinidad and Tobago. *Caribbean Journal of Mixed Methods Research*, 1, 134-166.

Kaloo, R., **Jaggernaut, S. J., Ramsawak-Jodha, N., Kamalodeen, V. J., Abdul-Majied, S., Dedovets, Z.,** Barrow, D. A. & **Figaro-Henry, S.** (2019) An exploratory study of game-based approaches in primary mathematics and science classrooms in Trinidad and Tobago. *Journal of Education and Development in the Caribbean* special issue on STEM 2019, 18(1), 30–81.

**Kaloo, R., Jaggernaut, S. J., Ramsawak-Jodha, N., Kamalodeen, V.J., Abdul-Majied, S., Dedovets, Z.,** & Barrow, D. A. (2019). An Exploratory Study of Game-Based Approaches in Primary Mathematics and Science classrooms in Trinidad and Tobago. *Journal of Education and Development in the Caribbean*, 18(1), 21-72

**Laptiste-Francis, N. & Carrington-Blaidies, E. V.** (2020) Teacher Experiences with the Implementation of the Continuous Assessment Component (CAC) at schools facing exceptional challenges. In *Learning and Performance Assessment: Concepts, Methodologies, Tools, and Applications*. Information Resources Management Association (USA) (republished by publisher)

**Maharaj-Sharma, R. & Sharma, A.** (2019) Science teaching: science teachers in Trinidad and Tobago share their stories. *Reflective Practice*, 20(1), 27-41. doi: 10.1080/14623943.2018.1539659.

**Mideros, D.**, Roberts, N., Palma, P., & Cardona-Villa, Natalia (2020) Aprendientes Autónomos de Español en un Contexto del Caribe Anglóparlante: Estudio Fenomenológico en Trinidad y Tobago. In C. Ludwig, M.G. Tassinari, & J. Mynard (Eds.), *Navigating Foreign Language Learner Autonomy* (pp. 414-445). Hong Kong, Hong Kong: Candlin & Mynard ePublishing Limited.

**Morgan, P.**, & Dylan Kerrigan (2020) Eds. Crime in Selected Caribbean Territories Culture and Representation, *Caribbean Quarterly*, 66:2, 169-176. *Caribbean Quarterly A Journal of Caribbean Culture* ISSN: 0008-6495 (Print) 2470-6302 (Online). 2020.

**Morgan, P.**, (2019) Incest, Violation and Trauma in Nalo Hopkinson's "Midnight Robber". In Crime, Gender and Sexuality in the Anglophone Caribbean. Eds. Lucy Evans and Dylan Kerrigan. *Caribbean Journal of Criminology*. <https://www.uwi.edu/cjc/>.

**Morgan, P.**, (2019) Killing Don't Need No Reason: Trauma and Criminality in A Brief History of Seven Killings. In Dylan Kerrigan & Paula Morgan Coeditors. *Crime in Selected Caribbean Territories: Culture and Representation*. *Caribbean Quarterly*, 66:2, 240-257.

**Morgan, P.**, (2020) When Ancestral Faiths Meet Global Modernity in Caribbean Culture. In *Meditating and Mediating Change: State – Society – Religion*. Off-Campus Seggau School of Thought 4. University of Graz. 157-168.

Niles, K., **S. Burke** and **P. Morgan** (2019) The Possible Impact of Brexit on Caribbean European Cultural Relations. in *The Challenges of Cultural Relations between the European Union and Latin America and the Caribbean* Eds. Lluís Bonet and Hector Schargorodsky. Quaderns Gescenic: Col·leccio Quaderns de Cultura. ISBN.4 163-184. ISBN: 978 -84-938519-4-1.

Persad, A.S., & **Maharaj-Sharma, R.**, (2020) The impact of literacy strategies on form 1 secondary students' motivation and performance in integrated science. *Caribbean Curriculum*, 27, 192-214.

**Petronetta Pierre-Robertson** *Caribbean Curriculum* Volume 26, 2018/2019 The academic journal of the SoE, UWI. Managing Editor, Petronetta Pierre — Robertson <https://journals.sta.uwi.edu/cc>

**Renwick, S.** (2019) Information Use Behaviour of Decision-Makers for Food Security in the English-Speaking Caribbean: A Study of Trinidad and Tobago, Belize and Barbados. *Journal of Agricultural Information*. 1-23. doi:10.1080/10496505.2019.1620110.

**Renwick, S.** (2020) Ranking of Scenarios, Actors and Goals of Food Security: Motivation for Information Seeking by Food Security Decision Makers. *Environment Systems and Decisions* :1-19.

Roberts, J., Phipps, S., Subeeksingh, D., **Jaggernaut, S. J.**, **Ramsawak-Jodha, N.**, & **Dedovets, Z.** (2020) Reflections on the effects of concrete mathematics manipulatives and student engagement and problem solving in three secondary school in Trinidad and Tobago. *Caribbean Curriculum* Special Issue on Action Research, 27. Available at <https://journals.sta.uwi.edu/cc/index.asp?action=fullTextPermalink&articleId=7005&galleyId=6895>

Roberts, J., Phipps, S., Subeeksingh, D., **Jaggernaut, S. J.**, **Ramsawak-Jodha, N.**, & **Dedovets, Z.** (2020) Concrete Mathematics Manipulatives and Student Engagement and Achievement in Secondary School in Trinidad and Tobago. *Caribbean Curriculum*, 27.

**Roberts, N.**, (2019) Assessing the Value and Effectiveness of Study Abroad and Exchange Programs in Foreign Language Degree Programs: A Case Study. In *International Journal of Educational Excellence*, Volume 5, Number 1, pp. 15-28. Available online at: [http://umet.suagm.edu/ijee\\_current](http://umet.suagm.edu/ijee_current)

**Steele, G. A.** (2020) Visibility and meaningful recognition for First Peoples: A critical discourse studies approach to communication, culture and conflict intersections in seeking social justice. *Discourse & Communication*. <https://doi.org/10.1177/1750481320917553> Five-Year Impact: 1.194

Taysum, A.; Beutner, M.; Arto Kallioniemi, A.; Imam, H.; Midori, U.; Casado-Muñoz, D.; Ruşitoru, M.V.; Hysa, F. Raj Pathak, A. X.; Al-Farabi, A.; Al-Farabi, Z.; Herzen, V.; Herzen, S.; Pogolian, V.; Tropinova, E.; Arid, A.; Newton, P.; Arar, K.; **James, F.** (2020) EYSIER Charter Mark with ABCDE and Assessment for Personal and Social Learning; a Bottom-up Approach to Building Faculty of Judgement with an Open Access Knowledge Base of Science with and for Society (Swafs). *European Journal of Education* 3(2), 129-150.

Watson, D., Michael Lee Johnson, Nathan Pino & **Paula Morgan**: Police Perceptions of Residents in a High Crime Area in Trinidad and Tobago: Community Framing and Crime Wars. *Criminology & Criminal Justice*. 1-18. ISSN 1748-8958. Official URL: <https://journals.sagepub.com/doi/full/10.1177/1748>.

Williams, J., Baksh, T. & **James, F.** (2020) Transforming teachers' instructional practices through clinical supervision. *Caribbean Curriculum*. 26, 131-152.

### Non-Refereed Publications

**Bonate, L. J. K.**, (2020) Muslim Family and Gender in Northern Mozambique: *Shari'a*, Custom and the State Laws in Pemba City. *Islamic Africa*, 2020.

**Matthews, G.**, (2020) *Calypso Rose: Advocate for a Feminist Perspective*. *Caribbean Quarterly* Volume 66, Issue 1, February 19, 2020, pp. 50 -68.

**Matthews, G.**, (2020) *Lyrics to Build a Nation*, in Shane Pantin and Jerome Teelucksingh *Ideology, Regionalism and Society in Caribbean History*. New York: Palgrave Mc Millan, September 2017 released in February 2020.

**Matthews, G.**, (2019) Pursuing Freedom: Enslaved Revolts in Trinidad and Tobago. in *Foundation Readings on the History of Trinidad and Tobago*. July 31, 2019.

### Books & Book Chapters

**Abdul-Majied, S.** (2019) "Ting- A- Ling Ling"- 20th Century snack time culture and friendship bonds in young Caribbean children. (20 pages). Abstract submitted for consideration as a book chapter 2018, for the book- Reconceptualising quality early childhood education, care and development. Perspectives from the "others". Palgrave Macmillan.

**Ali, T.**, (2019) Solving Problems, Signalling Potential in Writing Programme Administration at The University of the West Indies, St. Augustine Campus, Trinidad and Tobago in Creole Composition: Academic Writing and Rhetoric in the Anglophone Caribbean, Vivette Milson-Whyte, Raymond Oenbring and Brianne Jaquette, Eds., Parlor Press, 2019, pp. 250-267.

**Bonate, L. J. K.** (2019) Muslim Female Political Leadership in Pre-Colonial Northern Mozambique: The Letters by Nunu Fatima Binti Zakaria of Mogincual. In Viera Pawliková-Vilhanová, Ed., AD FONTES: Reflections on Sources of Africa's Pasts, their Preservation, Publication and/or Digitisation. Brussels: Union Académique Internationale and Bratislava: Slovak Academic Press, 2019: 81-105.

**Bonate, L. J. K.** (2020) Muslim Family under Portuguese Rule: Shari'a and Matrilineal Custom in Colonial Northern Mozambique. In Abbas Panakkal, Ed., Matrilineal Islam. The World Muslim Communities Council Press, UAE, 2020.

**Bonate, L. J. K.** (2020) Manuscript Libraries in Muslim Africa. In Toyin Falola, Fallou Ngom, and Mustapha H. Kursi, Eds., Handbook of Islam in Africa, Palgrave Macmillan.

**Cateau, H.** and Milla Riggio (2019) Eds. Turning Tides: Caribbean Intersections in the Americas and Beyond. Kingston, Ian Randle

**De Lisle, J** (2019) Diversity as challenge, culturally sustaining practices as solution, evidence as the future Dennis Conrad & Stacey Blackman (Eds.) Foreword for Book, Caribbean Discourse in Inclusive Education 2: Responding to Learner Diversity and Difficulties (p. xi to xii). Charlotte, NC: Information Age Publishing

**De Lisle, J.** (2019) Insights on the marginalization of poor children in the education system of Trinidad and Tobago. In S. Blackman, D. Conrad, & L. Brown. Achieving inclusive education in the Caribbean and beyond (pp. 89-119). Cham.: Springer.

**Díaz Fernández, A.** (2020) Representing Blackness: Recuperating the Lost Voice in Miguel Barnet's Biografía de un cimarrón. Translated by **Nicole Roberts**, in Regional Discourses on Society and History: Shaping the Caribbean, Jerome Teelucksingh and Shane Pantin, Eds., New York: Peter Lang, 2020, pp. 201-214. DOI: 10.3726/b16393.

**Evans, R. S.** (2019) We reduce it in writing: Assessing the status of Kwéyòl in the criminal justice system in St. Lucia. In W. E. Wallace (Ed.), Caribbean Perspectives on Criminology and Criminal Justice, Westphalia Press. November 2019, pp. 175-197.

**Geofroy, S.,** Bitu, B., Barras, D., Lochan, S., Mc Leod, L., Stephens- James, L., & Valentine-Lewis, A. (2019) Emancipatory teaching practices in the understandings of Social Sciences teachers on a Diploma of Education programme. In J. Mena, A. García-Valcárcel, F. J. García-Peñalvo (Eds.), *Teachers' professional development in global contexts; Insights from Teacher Education* (pp.179–198). Leiden, The Netherlands: Brill|Sense. ISBN 978-90-04-40536-3 (e-book).

**Lee-Piggott, R.** (2019) New principals' emotions: Interactions with 'inherited' school cultures. In I. Oplatka & K. Arar (Eds.), *Emotion management and regulation in teaching and educational leadership: Research and practice in transitional and developing societies.* (pp. 173-192). UK: Emerald Publishing.

**Lystra Stephens-James** (2019) Emancipatory teaching practices in the understandings of Social Sciences teachers on a Diploma of Education programme/Chapter 10 pages xxiv,326pp. In the *Teachers Professional Development in Global Contexts* published by BRILL/Sense. <https://brill.com/view/title/55374?lang=en>

**Maharaj-Sharma, R.** (2020) Reflecting on practice and beliefs can make graduate supervision a craft. In E. Blair, D. Watson & S. Raturi (Eds.), *Graduate Research Supervision in the Developing World: Policies, Pedagogies, and Practices*, (pp. 110-122). Abingdon, Oxon: Routledge.

**Mideros, D., N. Roberts, P. P. Rojas** and Natalia Cardona Villa. *Aprendientes autónomos de español en un contexto del Caribe angloparlante: Estudio fenomenológico en Trinidad y Tobago*, [Autonomous Learners of Spanish in an Anglophone Caribbean Context: A Phenomenological Study in Trinidad and Tobago] in *Navigating Foreign Language Learner Autonomy*, Christian Ludwig, Maria Giovanna Tassinari and Jo Mynard, Eds., Hong Kong: Candlin and Mynard, 2020, pp. 429-459 (Spanish), pp. 421-428 (English short version).

**Mohammed, J.A.** (2019) Education reform in Trinidad & Tobago through the lens of complexity theory. In M. Carmo (Ed.). *Education applications and developments IV*, pp.173-182. Lisboa, Portugal; in Science Press.

**Morgan, P.** & Rene Cozier. (2020) *Unsilencing Dementia: Living, Working and Aging with Dignity.* In *Connecting the Dots: Work. Life. Balance.* Editors: Patricia Mohammed and Cheryl Ann Boodram. Ian Randle Publishers. June 2020.

**Morgan, P.** (2020) *When Memory Is a Bruise Still Tender?: Ageing and Alzheimer's in Cascade and Soucouyant.* In *Connecting the Dots: Work. Life. Balance* Editors: Patricia Mohammed and Cheryl Ann Boodram. Ian Randle Publishers. June 2020.

**Morgan, P.** (2020) *Finding Equilibrium with Lots of Ups and Downs: Narrative Enquiry & Work Life Balance.* In *Connecting the Dots: Work. Life. Balance.* Editors: Patricia Mohammed and Cheryl Ann Boodram. Ian Randle Publishers. June.

**Nazir J.** (2019) *Creation care as a basis for environmental education in preservice teacher education.* In: Karrow D., DiGiuseppe M. (eds) *Environmental and Sustainability Education in Teacher Education. International Explorations in Outdoor and Environmental Education* p. 225-236. Cham: Springer. [https://doi.org/10.1007/978-3-030-25016-4\\_14](https://doi.org/10.1007/978-3-030-25016-4_14)

**Nazir, J.** (2020, 2010, 2001). *Chemistry explained: A CSEC course* (revised edition). Caribbean Educational Publishers: San Fernando, Trinidad and Tobago.

**Noel, R.,** (2020) *The Migration of West Indian Women from the Caribbean Community to the Eastern Seaboard of the United States of America from the 1960s to the 1990s: A Coping Strategy* in *Regional Discourses on Society and History: Shaping the Caribbean*, Eds. Jerome Teelucksingh and Shane Pantin. United States: Peter Lang Publishers.

**Pantin, S.** and Jerome Teelucksingh (2020). Eds. *Regional Discourses on Society and History: Shaping the Caribbean.* New York: Peter Lang

**Pearce, M.** (2019) *Identity: Art and the Process of Becoming*, in the book *The Art Collection: Central Bank of Trinidad and Tobago.*

**Pearce, M.** (2019) *Undead Psyche: Post-colonial Art as Therapeutic Paradox in the Caribbean.* in Daniel Nehring, Ole Jacob Madsen, Edgar Cabanas, China Mills and Dylan Kerrigan (Eds.), *The Routledge International Handbook of Global Therapeutic Cultures.* London: Routledge, 2020. pp 361-371.

**Pearce, M.** (2020) *A Certain Sign of Age: Lessons from Caribbean Visual Histories.* *Connecting the Dots: Work, Life, Balance, Ageing.* Eds. Cheryl Ann Boodram and Patricia Mohammed. Kingston: Ian Randle Publishers, 2020. pp. 171-186.

**Pearce, M.** and María Elena Ortiz (2019) Eds. *The Other Side of Now: Foresight in Contemporary Caribbean Art*. Miami: Pérez Art Museum Miami.

Pedretti, E., & **Nazir J.** (2020) *Correntes na educação CSTA*. In: P.M.M Texeira (Ed.), *Movimento CTS: Estudos, pesquisas & reflexões*, p. 235-278. Curitiba: CRV.

**Ramlal, A. & Augustin, D. S.** (2019) Engaging students in reflective writing: an action research Project. *Educational Action Research*, DOI: [10.1080/09650792.2019.1595079](https://doi.org/10.1080/09650792.2019.1595079)

**Ramsay, A.,** (2020) *Calypso, Soca and Mediating Change: Perspectives from the Anglophone Caribbean*, Eds. Maureen Daly Goggin and Urša Marinšek *Meditating and Mediating Change: State - Society – Religion Off Campus: Seggau School of Thought*, Vol. IV, Graz: Grazer Universitaestverlag, 2020, 169-182.

**Ramsay, A.,** (2020) *Mapping a Musical Journey of Soca in the Crop Over Festival of Barbados*, *Regional Discourse on Society and History Shaping the Caribbean*. New York: Peter Lang Publishing, 175-200.

**Ramsay, A.,** (2020). *Fighting a Losing Battle: Labour in Trinidad*, In *Shane Pantin and Jerome Teelucksingh editors Regional Discourses on Society and History: Shaping the Caribbean (New York: Peter Lang, 2020)*, 139-156.

**Roberts, N.** (2020) *Re-reading Historical Forces, Religion and Culture in Mayra Santos Febres' Fe en disfraz* In *Regional Discourses on Society and History: Shaping the Caribbean*, Jerome Teelucksingh and Shane Pantin, Eds., New York: Peter Lang, 2020, pp. 215-223. DOI: [10.3726/b16393](https://doi.org/10.3726/b16393).

Robertson, Ian E., and **R. Sandra Evans.** (2019) *Systemic Linguistic Discrimination and Disenfranchisement in the Creolophone Caribbean: The Case of the St. Lucian Legal System*. In R. Blake & I. Buchstaller (Eds.), *The Routledge Companion to the Work of John R. Rickford*, Routledge. October 2019, pp. 46-51.

**Sanderson Cole, K.** (2020) *Research Supervision at the University of the West Indies: The Case of Two Veterans In Graduate Research Supervision in the Developing World: Policies, Pedagogies and Practices (Routledge Research in Higher Education)*. Erik Blair, Danielle Watson and Shikha Raturi, Eds., Routledge, 2020, pp. 64-76. ISBN-13: 978-03672439.

**Steele, G. A.** (2019) *Health Communication: Principles and Practices*. Kingston, Jamaica: The UWI Press, 402 pp. ISBN: 978-976-640-723-0

**Teelucksingh, J.** (2019) *Beyond the Legacy of the Missionaries and East Indians: The Impact of the Presbyterian Church in the Caribbean*. Brill: Netherlands

**Teelucksingh, J.** (2019) *Secular, Scarred and Sacred: Education and Religion Among the Black Community in Nineteenth Century*. Canada: Peter Lang

**Teelucksingh, J.,** (2019) Ed. *The Missionary's Right Hand: The Presbyterian Church in Trinidad and Tobago*. Caroni: Eniath's

## Reviews

**Ramsay, A.,** (2020). "Creating a Caribbean Sense of Place: Calypso and Spoken Word Performance, Politics and Traditions," for *Tout Moun: Caribbean Journal of Cultural Studies*, 2020

**Matthews, G.,** (2020). Jeffrey Kerr-Ritchie *Rebellious Passage: The Creole Revolt and America's Coastal Slave Trade*. Cambridge: Cambridge University Press, 2019 to be published by the *American Historical Review*, June 2020.

## Conference Presentations

**Kaloo, R.**

*A mixed methods intervention study using game-based approaches in Mathematics and Science at the primary level in Trinidad.*

Poster presentation at the Third Regional Mixed Methods Conference  
Trinidad 25-28th March. 2019

## Exhibitions & Performances

### Photographs/Films

**Ramesar, Y.** (2019) *Caribbeing Continuum: Progression of a Cinema Eyelect in the Motion Picture Feature Haiti Bride Yao Ramesar* *Black Camera* Vol. 11, No. 1 (Fall 2019), pp. 167-179 (13 pages) Published By: Indiana University Press

**Antonopoulos, A.** (2020) *Rhythms of Trinidad* is an experimental short documentary made entirely from archival material in collaboration with the National Archive of Trinidad and Tobago. The project focused on the transition from colonialism to modernity in Trinidad and Tobago and is not edited taking a linear narrative approach, but one based on movement and rhythm. The film explored the idea that rhythm and

movement can act as communication tools between filmmakers and audiences.

### Exhibitions

**Pearce, M.** (2019) *Better Spent: Gender and Energy in the Caribbean*. November 2019. Online/digital art exhibition curated and published in *PREE Magazine*, issue 4. View at: <https://preelit.com/2019/11/03/better-spent-gender-and-energy-in-the-caribbean/>

**Pearce, M.** (2019) Curated the exhibition titled *Capitalism and Slavery: An Illuminated History*. November 13-14, 2019. The UWI St Augustine Campus. Exhibition installed on the occasion of the two-day symposium: Capitalism and Slavery – 75 Years Later.

**Pearce, M.** (2020). Curated the exhibition titled *Baby Doll Mas: Old and New Interpretations*. February 16-26, 2020. The University of the West Indies, St. Augustine Campus. Exhibition launched at the DCFA Old Yard event. Participating artists: Kevin Adonis Browne, Rebecca Foster, Abigail Hadeed, Donald "Jackie" Hinkson, Arnaldo James, Maria Nunes, Tracey Sankar-Charleau and Colin Williams.

### Other Publications

#### *Edited Volumes*

Larkosh, C., Emanuel da Silva, Maggie Felisberto, and **Jo-Anne S. Ferreira**, Eds., *Luso-American Literatures and Cultures Today (Portuguese Literary and Cultural Studies PLCS 32)*, UMass Dartmouth, Tagus Press, September 2019 (ISSN: 1521-804X) <https://ojs.lib.umassd.edu/index.php/plcs/issue/view/PLCS32>

#### *Creative Writing: Novels/Anthologies*

**Amaye, M.**, Novel Chapter, *Kutes*, Moko 17, *Mokomagazine.org*, May 2020

**Walcott-Hackshaw, E.** *Stick No Bills*, Leeds: Peepal Tree Press, 2020.

**Walcott-Hackshaw, E.** *La Saison des cerfs-volants*, trans. Christine Raguët, Geneva: Éditions Zoë, 2020 [French Translation of *Four Taxis Facing North*]

#### *Creative Writing: Short Story*

**Walcott-Hackshaw, E.**, "Here," in *The Peepal Tree Book of Contemporary Caribbean Short Stories*, Leeds: Peepal Tree Press, 2019, pp. 443-453.

**Walcott-Hackshaw, E.**, "Ashes," in *New Daughters of Africa: An International Anthology of Writing by Women of African Descent*, Edited by Margaret Busby, Ed. Oxford: Myriad Editions, 2019, pp. 430-432.

#### *Creative Writing: Poetry*

**Horsford, J.** 'Eureka', 'I Keep Asking' and 'What the Feminist Teacher of History Says to Me in Response' in *The Caribbean Writer. Dignity, Power and Place in the Caribbean Space*, Volume 34, 2020.

**Horsford, J.** 'Morning Barbados', in *Caribbean Quarterly*, Volume 65, Issue 3, September 2019.

#### *Newspaper Articles*

**Dennis, J.**, A Theatrical Journey Through Anger, Grief, Hope and Finally, Joy. *Trinidad and Tobago Daily Express*. Friday 9 August 2019, p. 36.

**Braithwaite, Ben.**, "Communication during Covid-19: Why are the Needs of the Deaf Not Being Heard?" in *UWI Today*, May 2020. [https://sta.uwi.edu/uwitoday/archive/may\\_2020/article4.asp](https://sta.uwi.edu/uwitoday/archive/may_2020/article4.asp)

**Ferreira, J.A.**, "From John Jacob Thomas to Lawrence D. Carrington: Patois Pioneers of the Past and Present" in *UWI Today*, November 2019. [https://sta.uwi.edu/uwitoday/archive/november\\_2019/article15.asp](https://sta.uwi.edu/uwitoday/archive/november_2019/article15.asp)

#### *Published Interviews*

**Ferreira, J.A.**, Interviewed by Shelly-Ann Innis for Caribbean Beat Jul/Aug 2020, on "Cosmic Creole", p. 24 [https://issuu.com/meppublishers/docs/cbeat\\_ja20\\_digital/26](https://issuu.com/meppublishers/docs/cbeat_ja20_digital/26) or <https://www.caribbean-beat.com/need-to-know-event-calendar-jul-aug-2020> <https://www.montraykreyol.org/article/cosmic-creole-dengolay-star>

**Ferreira, J.A.**, Interviewed by Shirin Haque for The Intellectual: Art, Science and Architecture, "The Intellectual on the move: Naming an Exoworld - Trinidad & Tobago, with Dr Jo-Anne S. Ferreira", pp. 20-22 (June 2020). <http://the-intellectual-magazine.com/index.html> and <https://www.yumpu.com/en/document/read/63563160/theintellectualmagazine-issue12>

**Ferreira, J.A.**, Interviewed by Kimberly Wallace, *T&T Express* on "The Dark Legacy of the N-word" <http://tenders.media-insite-clients.com/content/press/135193> (1 July 2020)

**Ferreira, J.A.**, Interviewed by Kimberly Wallace, T&T Express on "The Mendes legacy" on Alfred H. Mendes, writer [https://trinidadexpress-tto.newsmemory.com/?publink=0762f1bb-b\\_13434d4](https://trinidadexpress-tto.newsmemory.com/?publink=0762f1bb-b_13434d4) (12 January 2020).

**Ferreira, J.A.**, Interviewed by Janine Mendes-Franco, Global Voices on the NameExoWorlds competition names of Dingolay (star) and Ramajay (exoplanet) in the Leo Constellation, 12 and 13 March 2020. Part 1: <https://globalvoices.org/2020/03/12/in-shooting-for-the-stars-this-trinidad-tobago-linguist-highlights-how-language-connects-us/> and Part 2 <https://globalvoices.org/2020/03/13/linguistics-is-in-everything-from-astronomy-to-everyday-life-says-this-linguist-from-trinidad-tobago/>

**Ferreira, J.A.**, Interviewed by Omega Francis, *UWI Today* on the NameExoWorlds competition names of Dingolay (star) and Ramajay (exoplanet) in the Leo Constellation: "To Dance and Sing in the Heavens: UWI Linguistics Lecturer Dr Jo-Anne S. Ferreira wins ExoWorlds competition with Dingolay and Ramajay"" [https://sta.uwi.edu/uwitoday/archive/january\\_2020/article8.asp](https://sta.uwi.edu/uwitoday/archive/january_2020/article8.asp) (January 2020)

**Ferreira, J.A.**, Interviewed by Cherisse Moe, *T&T Express* - "Digging Deep into Portuguese Past" (1 January 2020) [https://trinidadexpress-tto.newsmemory.com/?publink=0e2148d1f\\_13434c9](https://trinidadexpress-tto.newsmemory.com/?publink=0e2148d1f_13434c9)

**Ferreira, J.A.**, Interviewed by Janelle De Souza, *Newsday* - "Dingolay, Ramajay names for star, planet puts Patois in heaven" on the NameExoWorlds competition names of Dingolay (star) and Ramajay (exoplanet) in the Leo Constellation (22 December 2019) <https://newsday.co.tt/2019/12/22/dingolay-ramajay-names-for-star-planet-puts-patois-in-heaven/>

**Ferreira, J.A.**, Interviewed by Kimberly Wallace, T&T Express - "T&T in the Stars" on the NameExoWorlds competition names of Dingolay (star) and Ramajay (exoplanet) in the Leo Constellation (21 December 2019) [https://trinidadexpress.com/features/local/t-t-in-the-stars/article\\_bbf2bc04-245d-11ea-8865-933b7cb214ae.html](https://trinidadexpress.com/features/local/t-t-in-the-stars/article_bbf2bc04-245d-11ea-8865-933b7cb214ae.html)

**Ferreira, J.A.**, Interviewed by Joan Rampersad, *Newsday* - "Portuguese Celebrate 185 Years in TT" (7 December 2020) <https://newsday.co.tt/2019/12/07/portuguese-celebrate-185-years-in-tt>

## Blogs

**Braithwaite, B.**, and **Jo-Anne Ferreira**, Language Blag: A Web Blog on Language and Linguistics. <http://languageblag.wordpress.com>

**Ferreira, J.A.**, "Trini Patois Proverbs". <https://trinlingual.wordpress.com/2018/03/02/trini-patois-proverbs/>

## Website

**Ferreira, J.A.**, Luso-Trinbago: The Portuguese of Trinidad and Tobago. <http://www.ttportuguese.com>

## Other Articles

**Dennis, J.**, "Research Tips: Insight corner for new researchers; EndNoteX9" Research Notes, issue.6, 2019, p. 29, <https://sta.uwi.edu/fhe/dmll/documents/ResearchNotes2019Vol6.pdf>.

## Faculty of Law

### Journal Publications

**Alicia Elias-Roberts**, (2020) A review of the legal framework of local content provisions in Guyana *OGEI Special Issue on the "Regulation of Petroleum Development in Guyana"* (March 2020) Vol. 18, Issue 2 pp. 1-16. Available at <https://www.ogel.org/article.asp?key=3880&fbclid=IwAR0Pi3GFep8d7IFCvirEiQ24YIFbKsUljKGoAlgUWHh2RcXO-BRspI3ENEI>

**Alicia Elias-Roberts** (2020) Balancing Environmental Protection and Offshore Petroleum Developments in Guyana. *Global Energy Law and Sustainability Journal* (April) Vol. 1:1, pp. 1- 27. Published by Edinburgh University Press. Available at <https://www.eupublishing.com/doi/abs/10.3366/gels.2020.0004>

**Alicia Elias Roberts**, (2020) Challenges of the legal and regulatory framework of decommissioning activities in Trinidad and Tobago and Guyana. Chapter 19 (20 pages) in *The Regulation of Decommissioning, Abandonment and Re-Use Initiatives in the Oil and Gas Industry* Eduardo G. Pereira, Keith Hall, Alexandra Wawryk, Heike Trischmann and Catherine Banet (edits) Wolters Kluwer Publishing: The Netherlands.

**Alicia Elias Roberts**, (2020) Local Content in the Extractive Industries in Trinidad and Tobago and Guyana. *Sovereign Wealth Funds, Local Content Policies and CSR – Developments in the Extractive Sector*. Eduardo Pereira, Rochelle Spencer and Jonathon Moses (edits). Published by Springer International Switzerland under the Series - CSR, Sustainability, Ethics and Governance. Series Editors: Samuel Idouwand RenéSchmidpeter.

**Alicia Elias Roberts**, (2020) Corporate Social Responsibility in the Extractive Industries in Trinidad and Tobago and Guyana. *Sovereign Wealth Funds, Local Content Policies and CSR – Developments in the extractive Sectors*, Eduardo Pereira, Rochelle Spencer and Jonathon Moses (eds), Published by Springer International Switzerland in the Series - CSR, Sustainability, Ethics and Governance. Series Editors: Samuel Idowu and René Schmidpeter.

**Alicia Elias Roberts** and Indira Rampaul-Cheddie, (2020) Managing the Heritage and Stabilisation fund in Trinidad and Tobago and the Sovereign Wealth Fund in Guyana. *Sovereign Wealth Funds, Local Content Policies and CSR - Development of Extractive Sector*, Eduardo Pereira, Rochelle Spencer and Jonathon Moses (eds), Published by Springer International Switzerland in the Series - CSR, Sustainability, Ethics and Governance. Series Editors: Samuel Idowu and René Schmidpeter.

**Alicia Elias Roberts**, (2020) CARICOM Regional Integration and Challenges in Maritime Law with Guyana's Offshore Energy Developments. *Current challenges of trade, transnational law and governance facing EU-CARICOM* Alicia Elias-Roberts, Professor Stephen Hardy, and Professor Winfried Huck (eds), Publisher: gLAWcal - Global Law Initiatives for Sustainable Development Routledge Book Series – Transnational Law and Governance. United Kingdom. Series Editor: Professor Paolo Davide Farah <http://www.glawcal.org.uk/research/eu-and-caricom-dilemmas-versus-opportunities-on-development-law-and-economics?fbclid=IwAR2qpGjPO2AEP1qY8QJf-PLlj-CfkEW2zVieLoRkKwSm4ywSpmDK1WOybGRU>.

**Alicia Elias Roberts**, Professor Stephen Hardy and Professor Winfried Huck (2020) Introductory Chapter. *Current challenges of trade, transnational law and governance facing EU-CARICOM*, Alicia Elias-Roberts, Professor Stephen Hardy, and Professor Winfried Huck (eds). Publisher: gLAWcal - Global Law Initiatives for Sustainable Development Routledge Book Series – Transnational Law and Governance. United Kingdom. Series Editor: Professor Paolo Davide Farah <http://www.glawcal.org.uk/research/eu-and-caricom-dilemmas-versus-opportunities-on-development-law-and-economics?fbclid=IwAR2qpGjPO2AEP1qY8QJf-PLlj-CfkEW2zVieLoRkKwSm4ywSpmDK1WOybGRU>.

Afiya France & Michelle Scobie (2020) Child marriage, human rights and international norms: the case of legislative reform in Trinidad and Tobago, *Third World Quarterly*, DOI: 10.1080/01436597.2020.1780908

Eduardo G. Pereira, Tolu Taiwo, Ngozi Chinwa Ole (2020) How to address residual liability and insolvency in disused oil and gas infrastructure left in place? The case of Brazil, Nigeria and Trinidad and Tobago. *The Journal of Sustainable Development and Policy* 2.

**Eduardo G. Pereira**, Eddy Wifa, Jonathon Moses. (2020) Regulating and Managing Hydrocarbon Resources: Lessons learnt from a Norwegian and British perspectives. *The Journal of Sustainable Development and Policy* 2.

**Eduardo G. Pereira**, Cătălin-Gabriel Stănescu, Wan Mohd Zulhafiz, Felipe Rodrigues Caldas Feres, Waniss Almashri Otman, Yanal Abul Failat and Aaron Koenck, (2020) Host Granting Instruments Models: Why do they matter and for whom? *Oil and Gas, Natural Resources and Energy Journal* 6 1.

Cătălin-Gabriel Stănescu, **Eduardo G. Pereira** and Aaron Koenck. (2019) Petroleum Concessions, Licenses and Leases: Same Same but Different? *Journal of Energy Law Resources* 1 8.

**Eduardo G. Pereira**, (2019) Enforceability of Default Provisions under Joint Operating Agreements. *Houston Journal of International Law* 4.

**Eduardo G. Pereira**, Madeleine J. Lewis, (2019) Condition Precedents in Farm-out Agreements: An Overview. *Journal of International Law Review*

Marianthi Pappa, **Eduardo G. Pereira**, (2019) International Energy Investments and Unrecognized States: Opportunities and Risks for Private Actors. *Colorado Natural Resources, Energy Law and Environmental Law Review* 30.

**Eduardo G. Pereira**, Christopher Mathew and Heike Trishmann, (2019) Local Content Policies in the Petroleum Industries: Lessons Learned. *Oil and Gas, Natural Resources and Energy Journal* 4.

**Eduardo G. Pereira**, Marianthi Pappa (2019) The Effects of Default, Transfer, and Withdrawal Provision on JOA Exits: Should I Stay or Should I go? *International Energy Law Review* 39.

**Koo, Justin**, The Influence of Football on the Development of the Communication to the Public Right' (2019) 41(9) *European Intellectual Property Review* 571

**Koo, Justin**, The value of the right of communication to the public for the sporting industry in the Commonwealth Caribbean' (2019) 10(2) *Global Sports Law and Taxation Reports* 55

#### Books & Book Chapters

**Alicia Elias-Roberts** & Rocky R. Hanoman (2019) CARICOM, the CSME, and absolute sovereignty: lessons learnt on the road towards regional integration. *Commonwealth Law Bulletin* pp. 1- 24.

**Alicia Elias-Roberts**, (2019) Chapter - "Constitutional Architecture and the Production of Authoritarianism. In *Unmasking the State 1992-2015* (Ian Randle, 2019), 1-36

Alexandra Waryk, Catherine Banet, **Eduardo G. Pereira** (2020) Regional Chapter. In Eduardo G. Pereira, Alexandra Wawryk, Catherine Banet, Heike Trischmann, Keith Hall (eds.), *Regulation of Decommissioning, Abandonment and Re-Use Initiatives in the Oil and Gas Industry: From Obligation to Opportunities*. Kluwer International Law.

**Alicia Elias-Roberts**, Professor Stephen Hardy, and Professor Winfried Huck (2020) (eds.), *EU and CARICOM: Dilemmas versus Opportunities on Development, Law and Economics*. Publisher: gLAWcal - Global Law Initiatives for Sustainable Development Routledge Book Series – Transnational Law and Governance. United Kingdom. Series Editor: Professor Paolo Davide Farah <http://www.glawcal.org.uk/research/eu-and-caricom-dilemmas-versus-opportunities-on-development-law-and-economics?fbclid=IwAR2qpGjPO2AEP1qY8QJfPLJj-CfkEW2zVieLoRkKwSm4ywSpmDK1WOybGRU>.

**Bulkan, A.** (2019) Constitutional Architecture and the Production of Authoritarianism. In *Unmasking the State: Politics, Society and Economy in Guyana, 1992-2015*. Eds. Arif Bulkan and D. Alissa Trotz. (Ian Randle) ISBN 978-976-637-981-0

**Bulkan, A.** (2020) Clemency Litigation in the Commonwealth Caribbean. In *Executive Clemency: Comparative and Empirical Perspectives*. Eds. Daniel Pascoe and Andrew Novak. (Routledge) ISBN 978-0-367-24357-9

**Bulkan, A.** and Trotz, D. (2019) Eds. *Unmasking the State: Politics, Society and Economy in Guyana, 1992-2015*. Ian Randle co. 551 pages.

**Eduardo G. Pereira** (2019) (ed.), *The Encyclopedia of Upstream Oil and Gas*. 2<sup>nd</sup> edn Globe Law and Business.

**Eduardo G. Pereira**, (2019) Joint Operating Agreements. In Eduardo G. Pereira (ed.), *The Encyclopedia of Upstream Oil and Gas*. 2<sup>nd</sup> edn Globe Law and Business

**Eduardo G. Pereira**, Alexandra Wawryk, Catherine Banet, Heike Trischmann, Keith Hall (2020) (eds.), *Regulation of Decommissioning, Abandonment and Re-Use Initiatives in the Oil and Gas Industry: From Obligation to Opportunities*. Kluwer International Law

**Eduardo G. Pereira**, Damilola S. Olawuyi (2020) (eds.), *Practical Considerations to Negotiate an Enforceable Joint Operating Agreement Under Civil Law Jurisdictions* (2<sup>nd</sup> edn Kluwer International Law 2020),

**Eduardo G. Pereira**, Henrik Bjernebye (2019) (eds), *Regulating Offshore Petroleum Resources: The British and Norwegian Models*. Edward Elgar

**Eduardo G. Pereira**, Henrik Bjernebye, (2019) Conclusion. In Eduardo G. Pereira, Henrik Bjernebye (eds), *Regulating Offshore Petroleum Resources: The British and Norwegian Models*. Edward Elgar

**Eduardo G. Pereira**, Henrik Bjernebye, (2019) Introduction. In Eduardo G. Pereira, Henrik Bjernebye (eds), *Regulating Offshore Petroleum Resources: The British and Norwegian Models*. Edward Elgar.

**Eduardo G. Pereira**, Marianthi Pappa, (2019) The Relationship Between Host Government Contracts for Oil and Gas Activities and Public Participation. In Rachael Lorna Johnstone, Anne Merrild Hansen (eds), *Arctic Voices in Extractive Industries: Strategies for Community Engagement* Routledge 2019

**Eduardo G. Pereira**, Rafael Baleroni, Fernanda Delgado, José Vicente Ducan de Miranda, Pedro Neves Aaron Koenck (2020) Local Content and Sustainable Development in Brazil. In D Olawuyi (ed), *Local Content, Sustainable Development and Treaty Implementation in Global Energy Markets* Cambridge University Press 2020.

**Eduardo G. Pereira**, (2019) Introduction. In Eduardo G. Pereira (ed.), *The Encyclopedia of Upstream Oil and Gas*. 2<sup>nd</sup> edn Globe Law and Business

**Eduardo G. Pereira**, Damilola S. Olawuyi, (2020) Conclusion. In Eduardo G. Pereira, Damilola S. Olawuyi (eds.), *Practical Considerations to Negotiate an Enforceable Joint Operating Agreement Under Civil Law Jurisdictions*. 2<sup>nd</sup> edn Kluwer International Law with Damilola S. Olawuyi).

**Eduardo G. Pereira**, Damilola S. Olawuyi, (2020) Introduction in Eduardo G. Pereira, Damilola S. Olawuyi (eds.), *Practical Considerations to Negotiate an Enforceable Joint Operating Agreement Under Civil Law Jurisdictions*. 2<sup>nd</sup> edn Kluwer International Law 2020

Emma Perot and Frederick Mostert, (2020) 'Fake It Till You Make It: An Examination of The US And English Approaches To Persona Protection As Applied To Deepfakes On Social Media', *Journal of Intellectual Property Law & Practice*, 2020, Vol. 15, No. 1

Erik Jarlsby, **Eduardo G. Pereira**, (2019) *International Petroleum Fiscal Regimes*. Pennwell.

Gabriela Roque, Fernanda Delgado, Pedro Neves, **Eduardo G. Pereira**, (2020) Brazilian chapter in Eduardo G. Pereira, Alexandra Wawryk, Catherine Banet, Heike Trischmann, Keith Hall (2020) (eds.), *Regulation of Decommissioning, Abandonment and Re-Use Initiatives in the Oil and Gas Industry: From Obligation to Opportunities*. Kluwer International Law.

Heike Trichsmann, Arnold Lule Sekiwano, **Eduardo G. Pereira**, (2020) Joint Operating Agreement & Unit Operating Agreement. In Eduardo G. Pereira, Alexandra Wawryk, Catherine Banet, Heike Trischmann, Keith Hall (eds.), *Regulation of Decommissioning, Abandonment and Re-Use Initiatives in the Oil and Gas Industry: From Obligation to Opportunities*. Kluwer International Law with Heike Trichsmann.

**Koo, Justin**. *The Right of Communication to the Public in EU Copyright Law* (Hart Publishing 2019) - Nominated for the IPKat 'Best Copyright Book 2019' award

Ngozi Chinwa Ole, Dickerson Omukoro, **Eduardo G. Pereira**, Keith Hall (2020) Residual Liability chapter. In Eduardo G. Pereira, Alexandra Wawryk, Catherine Banet, Heike Trischmann, Keith Hall (eds.), *Regulation of Decommissioning, Abandonment and Re-Use Initiatives in the Oil and Gas Industry: From Obligation to Opportunities* (Kluwer International Law 2020) (with Ngozi B. and Keith Hall).

Olayemi Anyanechi, **Eduardo G. Pereira**, (2019) 'Farmout Agreement & Sales and Purchase Agreement' in Eduardo G. Pereira (ed.), *The Encyclopedia of Upstream Oil and Gas Law*. 2<sup>nd</sup> edn Globe Law with Olayemi Anyanechi

Olayemi Anyanechi, **Eduardo G. Pereira**, (2019) Procurement. In Eduardo G. Pereira (ed.), *The Encyclopedia of Upstream Oil and Gas*. 2<sup>nd</sup> edn Globe Law and Business.

Reg Fowler, Peter Roberts, **Eduardo G. Pereira**, (2019) *The AIPN JOA: Practical Guide*. Globe Law and Business

### Conference Presentations

#### Justin Koo

*The Role of Copyright for Carnival Industries*  
WIPO Sub Regional Seminar on Enhancing the Competitiveness of Small and Medium-sized Enterprises by Effective Management of Intellectual Property Assets  
Castries, 5 November 2019

#### Justin Koo

*Role of Industrial Designs in Protecting Local Products*  
WIPO Sub Regional Seminar on Enhancing the Competitiveness of Small and Medium-sized Enterprises by Effective Management of Intellectual Property Assets  
Castries, 5 November 2019

#### Justin Koo

*The Value of the Right of Communication to the Public for the Commonwealth Caribbean*  
Mona Law Lecture Series  
UWI, Mona, 10 October 2019

#### Justin Koo

*Bringing Grassroots Sports Coverage to the Public: Using the Exclusive Right of Communication to the Public to Save Local Football*  
WIPO National Workshop on Optimization of Intellectual Property Rights in Sport  
Port of Spain, 4 September 2019

#### Rose-Marie Belle Antoine

*International Aspects: The Caribbean Region and Twinned States*  
Models of Territorial Autonomy: Convergences and Differences,  
Published Conference Proceedings, Dakhla, Morocco, 2019, p. 26.

## Conference Papers & Proceedings

### Arif Bulkan

*Litigation to Address Petty Offenses: About the McEwan Case*  
Petty Offences Symposium, University of Miami School of Law  
Florida, USA, September 21, 2019

### A. Bulkan

*Freedom of Assembly in the jurisprudence of the UN-HRC: Issues for Latin America & the Caribbean*  
Draft General Comment #37 Seminar, Article 19,  
Mexico City, December 4, 2019

### A. Bulkan

*The Scope and Limits of the Constitutional Right to Equality: Distinguishing between Procedural and Substantive conceptions*  
Introducing the Equal Opportunity Act Remedy to the Legal Profession, Joint Law Association of T&T & Equal Opportunity Commission Seminar  
Port of Spain, T&T, December 10, 2019

### A. Bulkan

*Normalising the Exceptional? State responses to COVID 19 in the context of International Human Rights Law*  
COVID 19 Implications: Public and Private Law perspectives,  
Mona Law (UWI Jamaica)  
(webinar), May 19, 2020

### A. Bulkan

*Balancing Safety and Rights in the time of COVID-19*  
Curfews, Lockdowns and Human Rights: The ongoing effect of C-19 driven orders on our citizens, Caribbean Association of Judicial Officers & Eugene Dupuch Law School (The Bahamas)  
(webinar), June 25, 2020

### Jeremie, John SC

*Attribution, limitation and the absence of 'bright lines'*  
Company Lawyer 2020, 41(6) 157-161.

### Eden Charles

*The Enterprise and the Common heritage of mankind, the role of the Caribbean under Part XI of UN CLOS.*  
The International Conference on Legal, Scientific and Economic aspects of Deep Seabed Mining.  
Kingston, Jamaica. 14-16 November 2019

### Eden Charles

*The common heritage of mankind under the UN Convention on the Law of the Sea, in the development of Deep Seabed regulations.*

Meeting on the development of a strategic roadmap for the formulation of DSM regulations in the framework of Africa's Blue Economy.

Addis Ababa, Ethiopia, 28-29 January 2020.

### Eden Charles

*Operationalization of the Enterprise at Part 1 of the 26th Session.*  
The International Seabed Authority,  
Kingston, Jamaica. 26 February- 6 March 2020.

### Sharon Le Gall

*Journey Round Traditional Knowledge Protection in the Caribbean – Tracing International and Regional Policy Initiatives*  
Roundtable on Caribbean Cultural Policy Development for the "Journey Round Myself" Symposium, CARIFESTA XIV, Trinidad and Tobago, held at the Department of Creative and Festival Arts, The University of the West Indies, St. Augustine, Trinidad and Tobago, August 2019.

### Sharon Le Gall

*Individual and Collective Intellectual Property Rights to Ganja: Weeding Through Issues of Protection and Identity.*  
Spotlight Session: Marijuana and Sustainable Livelihoods in the Caribbean for the "Journey Round Myself" Symposium, CARIFESTA XIV, Trinidad and Tobago, held at the Department of Creative and Festival Arts, The University of the West Indies, St. Augustine, Trinidad and Tobago, August, 2019.

### Koo, Justin

*Bringing Grassroots Sports Coverage to the Public: Using the Exclusive Right of Communication to the Public to Save Local Football*

WIPO National Workshop on Optimization of Intellectual Property Rights in Sport  
Port of Spain, 4 September 2019

### Koo, Justin

*Lessons to be Learned from the Development of the EU Right of Communication to the Public*  
Second IP Researchers Europe Conference  
Geneva, 28 June 2019

**Antoine, Rose-Marie Belle**

*Feature Address*

Opening of the Law Term of the Judiciary of Trinidad and Tobago,  
Tobago,  
September 16, 2019.

**Antoine, Rose-Marie Belle**

*CARICOM and the Medical Cannabis Industry – Challenges and Opportunities*

Canadian Council,  
Toronto, September 4, 2019.

**Antoine, Rose-Marie Belle**

*The Contemporary Jamaica Legal Landscape*

HIV Workshop: Jamaicans for Justice, Jamaica, 2019.

**Antoine, Rose-Marie Belle**

*Whistleblowing- Challenges and Opportunities for Law Reform in Trinidad and Tobago and the Caribbean*

Coventry University and UK Parliamentary International,  
London, UK, May 2019.

**Antoine, Rose-Marie Belle**

*Termination of Employment During the Time of COVID-19*

ILO WEBINAIR on Labour and COVID-19, ILO,  
Geneva, June 3, 2020.

**Antoine, Rose-Marie Belle**

*Civil Liberties in The Time of COVID-19-19 Aspects – Focus on Economic and Social Rights*

6th Biennial Conference Webinar Series on “Legal Dimension arising from COVID-19-19 Pandemic”,  
CCJ, General Legal Council of Jamaica and UWI-TV, May 19, 2020.

**Antoine, Rose-Marie Belle**

*Legal Issues for Medicinal Cannabis’ - Medicinal Cannabis Master Rounds*

A CME Course: Seed to Prescription  
March 12 – 15, UWI Cave Hill.

**Antoine, Rose-Marie Belle**

*Social Injustice – the Legal Perspective*

Catholic Commission for Justice  
February 18, 2020

**Antoine, Rose-Marie Belle**

*Address to the Nation*

Family Planning Association of Trinidad and Tobago,  
February 2020.

**Other Publications**

*Technical Reports*

**Alicia Elias-Roberts**, Legal Consultant, “Legislative Review of the Environmental Laws of Guyana in relation to the 2020 CBD targets” as part of a short term Environmental Law consultancy for the World Wildlife Fund (WWF) Guianas Project on Marine Biodiversity and Forest Governance, Guyana (July - Sept. 2019).

**Alicia Elias-Roberts**, Training and Conference Facilitator at Hughes, Fields and Stobey Law Seminar in Guyana (August 2019). (Trained about 30 lawyers in Guyana, including the Chancellor and Chief Justice on the fundamentals of Oil and Gas Law and the main legal challenges in new Oil and Gas Sector.

**Alicia Elias-Roberts**, Legal Consultant, Restructuring the Guyana Geology and Mines Commission (GGMC) (Aug - estimated end date is Dec 2019- ongoing). (Part of a team of consultants with various expertise and tasked, as the legal expert, with doing a legislative gap analysis and drafting new laws to help restructure the GGMC.)

## Faculty of Medical Sciences

### Journal Publications

#### Department of Clinical Medical Sciences

Abdul R, Teelucksingh S, Omar M, Chan Chow A, Boppana LKT, Goli S, Naraynsingh V, **Teelucksingh S.** (2019) Splenic artery pseudoaneurysm presenting with massive rectal bleeding. *Radiology Case Reports* DOI: 10.1016/j.radcr.2019.03.038

Balkaran R, Balkaran Dds, Teelucksingh S, **Teelucksingh S.** (2020) The Use of the Slipping Slipper Sign to Explore the Connection between the Feet and the Mouth in Patients with Diabetes Mellitus. *Puerto Rico health sciences journal* 39(2):216-221

Conyette L, Lutchmansingh F, **Sakhamuri S**, Simeon D, Ivey MA, Burney P, Seemungal T. (2020) Prevalence and risk factors of airflow obstruction in a Caribbean population. *Int J Tuberc Lung Dis.* 2020 May 1;24(5):512-519. (Impact Factor 2.00; Citations 0; Research article)

Deepak Mahabir VS, Hosein AS, **Giddings SL.** (2019) Response to Letter concerning the Article "Pulmonary Embolism: An often forgotten differential diagnosis for Abdominal Pain". *QJM.* Jul 24. pii: hcz183. doi: 10.1093/qjmed/hcz183.

Gosein M, **Maharaj P**, Balkaransingh P, Banfield R, Greene C, Latchman S, Sinanan A. (2019) Imaging features of thalassaemia. *British Journal of Radiology, BJR* 2019; 92: 109620180658. <https://doi.org/10.1259/bjr.20180658>

Gosein M, Mohammed L, Chan A, Sinanan A, Banfield R, **Maharaj P**, Narinesingh D. (2020) A pictorial review of the less commonly encountered patterns of metastatic prostate carcinoma. *Ecancer*, 14 1159 <https://doi.org/10.3332/ecancer.2020.1159>

Hosein AS, Mahabir V, Konduru SKP, **Giddings SL.** Pulmonary Embolism: An often-forgotten differential diagnosis for Abdominal Pain. *QJM.* 2019 Jun 7. pii: hcz138. doi: 10.1093/qjmed/hcz138

Kowlessar A, Naidu R, Ramroop V, Nurse J, Dookie K, **Bodkyn C**, Lalchandani S. (2019) Oral health among children attending an oncology clinic in Trinidad. *Clinical and Experimental Dental Research*; 1-5.

Lutchmansingh K, Venkatesh Y S, Boppana LKT, Seemungal T, Rao A, Sandy S, **Teelucksingh S.** (2020) The Slipping Slipper Sign: A Poor Man's Test for Severe Diabetic Peripheral Neuropathy *Journal of Neuromuscular Diseases* 7(9):1-7 DOI: 10.3233/JND-190422

Lutchmansingh K, Venkatesh YS, Teja Boppana LK, Seemungal T, Rao A, **Sandy S**, Teelucksingh S. (2020) The Slipping Slipper Sign: A Poor Man's Test for Severe Diabetic Peripheral Neuropathy. *J Neuromuscul Dis.* Jan 8. doi: 10.3233/JND-190422. [Epub ahead of print] Impact Factor: H 24; SJR 0.36 Citations 0

Maharaj K, **Bodkyn C**, Greene C, Badhursingh S. (2019) The effect of Hydroxyurea therapy on adverse clinical events and haematological indices in paediatric patients with sickle cell anaemia. *West Indian Medical Journal*;68(2):80-85. DOI:10.7727/wimj.2015.538

Milne D, Sookar N., Umakanthan S, **Rampersad F**, Olivier L, Ali J. (2020) Primary Osteosarcoma of the Breast in a patient treated previously for Invasive Ductal Carcinoma: An Unusual Presentation of a very rare primary breast malignancy. *Case Reports in Surgery.* Volume 2020.

Mohammed S, **Sakhamuri S**, Trotman M. (2019) Efforts to end the Global Emergency in Trinidad and Tobago. *Caribbean Medical Journal.* 2019. (Impact Factor 0; Citations 0; Commentary)

Panday A, Calderon C, **Sandy S**, Ramnarine D. (2019) Mesial temporal lobe epilepsy: A West Indian Neurosurgical Experience. *Int J Surg Case Rep.* 2019;65:275-278 Impact Factor: H Index 15; SJR 0.26 Citations 0

Peedicail JS, **Sandy S**, Singh S, Hader W, Myles T, Scott J et al. Long-term sequelae of amygdala enlargement in temporal lobe epilepsy. *Seizure- European Journal of Epilepsy.* 74:33-40, Jan 2020. Epub 2019 Nov 28; Impact Factor: 2.765; SJR 1.17 Citations 0

Pooransingh S, **Sakhamuri S.** (2020) Need for BCG Vaccination to Prevent TB in High-Incidence Countries and Populations. *Emerg Infect Dis.* 2020;26(3):10.3201/eid2603.191232. (Impact Factor 7.42; Citations 0; Research letter)

Quality of Life and Health Status among those receiving Renal Replacement Therapy in Trinidad and Tobago. West Indies. Sanchez S, **Teelucksingh S**, Ali R G, Bailey H, Legall G March 2020 DOI: 10.21203/rs.3.rs-19194/v1

Rambaran K, Sakhamuri S, Boppana LK T, **Teelucksingh S**. (2020) The development of COPD through the Hindu practice of havan. *The International Journal of Tuberculosis and Lung Disease* 24(4) DOI: 10.5588/ijtld.19.0714

Rambaran K, **Sakhamuri S**, Boppana LKT, Teelucksingh S. (2020) The development of COPD through the Hindu practice of havan. *Int J Tuberc Lung Dis*. 2020;24(4):463-464. (Impact Factor 2.00; Citations 0; Correspondence)

Rambaran K, **Sakhamuri S**, Pereira LP. (2019) E-cigarettes: banning flavours is better than an outright ban. *Lancet Respir Med*. 2019;7(12):e37. (Impact Factor 22.99; Citations 0; Correspondence)

Ramlal R, Taklalsingh N, Ali R G, Rampersad R, Henry R, Henry R, Gieowarsingh S, Dialsingh I, Seemungal T, **Teelucksingh S**. (2020) Acute Coronary Syndrome among Young Adults with modifiable risk factors linked to severe Coronary Artery Disease in Trinidad & Tobago. *Journal of the American College of Cardiology* 75(11):3608 DOI: 10.1016/S0735-1097(20)34235-2

Ramsaroop K, Seecheran R, Seecheran V, Persad S, **Giddings S**, Mohammed B, Seecheran NA. (2019) Suspected hyponatremia-induced Brugada phenocopy. *Int Med Case Rep J*. Feb 27; 12:61-65. doi: 10.2147/IMCRJ.S200201

Reddock R, **Reid SD**, Nickenig T. (2020) Child Sexual Abuse and the Complexities of Gender, Power and Sexuality *Journal of Interpersonal Violence* 2020 Apr 29:886260520909193. doi: 10.1177/0886260520909193. Online ahead of print. PMID: 323450891-33.

**Reid SD**, Reddock R, Nickenig T. (2019) Action research improves services for child sexual abuse in one Caribbean nation: An example of good practice. *Child Abuse & Neglect* 2019 88:225-234. <https://doi.org/10.1016/j.chiabu.2018.11.018>

**Sakhamuri S**, Goli S, Teelucksingh S. (2020) Case Report: Flavored Vaping-Associated Hypokalemia. *American Family Physician* 2020; 102(2): 74-76. (Impact Factor 1.97; Citations 0; Case report)

**Sakhamuri S**, Rampersad C, Ramsingh C, Ivey MA, Pereira LMP. (2020) Risk factors for poor asthma control and impaired quality of life in a Caribbean population. *J Asthma*. 2020;1-9. doi:10.1080/02770903.2020.1778026. (Impact Factor 1.802; Citations 0; Research article)

**Sakhamuri S**, Seemungal T. (2020) COPD: Gaps in the GOLD Recommendations and Related Imperative Research Needs. *COPD*. 2020;1-3. (Impact Factor 2.57; Citations 0; Commentary)

**Sakhamuri S**, Teelucksingh S, BaHammam AS. (2020) Is it time to redefine obstructive sleep apnoea? *Respirology*. 2020;10.1111/resp.13880. doi:10.1111/resp.13880. (Impact Factor 4.756; Citations 0; Commentary)

Sakhamuri S, **Teelucksingh S**, Karan A, Ali K. (2020) The impact of Air Pollution on the Incidence and Mortality of COVID-19. *Global Health Research and Policy* 5(1) DOI: 10.1186/s41256-020-00167-y

**Sandy S**, Richard A. Is Huntington's disease on the threshold of a new era in treatment? *Neurodegener Dis Manag*. 2019 Oct;9(5):255-258. Impact Factor: H Index 15; SJR: 0.63 Citations 0

Seecheran N, Jagdeo C, Seecheran R, Seecheran V, Persad S, Peram L, Evans M, Edwards J, Thackoorcharan S, Davis B, Davis S, Dawkins B, Dayaram A, De Freitas M, Deonarinesingh T, Dhanai J, Didier C, Motilal S and **Baboolal N**. (2020) Screening for depressive symptoms in cardiovascular patients at a tertiary centre in Trinidad and Tobago: investigation of correlates in the SAD CAT study. *BMC Psychiatry* 20, 498 <https://doi.org/10.1186/s12888-020-02909-1>

Seecheran NA, Maharaj A, Boodhai B, Seecheran R, Seecheran V, Persad S, Ramsaroop K, Sandy S, **Giddings S**, Sakhamuri S, Ali R, Motilal S, Teelucksingh S, Tello-Montoliu A. (2019) Prevalence of C10pidogrel 'resistance' in a selected population of patients undergoing elective percutaneous coronary intervention at a tertiary cardiovascular centre in Trinidad: the POINT pilot study. *Open Heart*;6:e000841. doi:10.1136/openhrt-2018-000841

Seecheran R, Narayansingh R, Giddings S, Rampaul M, Furlonge K, Abdool K, Bhagwandass N, **Seecheran N.** (2020) Atrial Arrhythmias in a Patient Presenting With Coronavirus Disease-2019 (COVID-19) Infection. *J Investig Med High Impact Case Rep* [Internet]. 2020 Jan;8:2324709620925571. Available from: <http://dx.doi.org/10.1177/2324709620925571> (Impact Factor N/A, Citations 0).

Seecheran RV, Dookie T, Seecheran VK, Persad SA, Marsang BL, Rampersad F, **Maharaj P**, Seecheran NA. (2020) Partial Anomalous Pulmonary Venous Connection: A Great Imitator? *Journal Investigative Medicine High Impact Case Reports.* 2020 Jan-Dec;8:2324709620933425.

Seecheran RV, Seecheran VK, Persad SA, Rampersad F, **Maharaj P**, Khan S, Seecheran NA. (2020) The Quandary of the Quadricuspid Aortic Valve-The “Unlucky” 4-Leaf Clover: Case Report and Brief Clinical Review. *Journal Investigative Medicine High Impact Case Reports.* Jan-Dec;8:2324709620921626

Seecheran RV, Seecheran VK, Persad SA, Rampersad F, Maharaj P, Khan S, **Seecheran NA.** (2020) The Quandary of the Quadricuspid Aortic Valve-The “Unlucky” 4-Leaf Clover: Case Report and Brief Clinical Review. *J Investig Med High Impact Case Rep* [Internet]. 2020 Jan;8:2324709620921626. Available from: <http://dx.doi.org/10.1177/2324709620921626> (Impact Factor N/A, Citations 0).

Seecheran V, Seecheran V, Persad S, **Rampersad F**, Maharaj P, Khan S, Seecheran N. (2020)The quandary of the quadricuspid aortic valve – the “unlucky” 4-leaf clover: Case Report and Brief Clinical Review. *J Investigative Medical High Impact Case Reports.* Jan-Dec 2020.

Shim A, Seecheran R, Seecheran V, Persad S, Sreenivasan S, Henry R, **Seecheran N.** (2019) Suspected Brugada Phenocopy Secondary to Coronary Slow Flow. *Case Rep Cardiol* [Internet]. Dec 6;2019:9027029. Available from: <http://dx.doi.org/10.1155/2019/9027029> (Impact Factor N/A, Citations 2)

Spence D, Argentieri MA, Andall-Brereton G, Anderson BO, Duggan C, **Bodkyn C**, Bray F, Gibson T, Garcia WG, Greaves N, Gupta S. (2019) Advancing cancer care and prevention in the Caribbean: a survey of strategies for the region. *The Lancet Oncology.* Sep 1;20(9):e522-34.

Talukdar D, Tripathi M, Tripathi V, **Teelucksingh S.** (2020) Prevalence and associated factors of undiagnosed hypertension among women aged 15–49 years in India: an analysis of National Family Health Survey-4 data. *Journal of Human Hypertension*  
DOI: 10.1038/s41371-020-0384-7

Tang B, **Bodkyn C**, Gupta S, Denburg A. (2020) Access to WHO essential medicines for childhood cancer care in Trinidad and Tobago: A health system analysis of barriers and enablers. *Journal of Global Oncology;* 6:67-79.

**Teelucksingh S**, Chow H, Lutchmansingh F, Ramsewak S. (2020) 1223-P: Diabetes in Pregnancy in the Caribbean: A Systems Enablement Approach to Universal Access, Screening, and Treatment. *Diabetes 69*(Supplement 1):1223-P. DOI: 10.2337/db20-1223-P

Weight-reducing surgery for women planning pregnancy: where are we now?

Teelucksingh S, Gonzales L, **Teelucksingh S.** (2020) DOI: 10.1016/B978-0-12-817921-5.00031-X. In book: *Obesity and Obstetrics* (pp.307-315)

#### Department of Clinical Surgical Sciences

Jugmohansingh G, Sharma V, Ramnarine D & **Juman S.** (2020) Pott’s Puffy Tumour with intracranial extension in a Minimally Symptomatic Adolescent. *European Journal of Surgery Case Reports* doi:10.47496/nl.EJSCR.2020.01.02

Felix C, Russell JO, **Juman S**, Medford S. (2019) Cervical scar satisfaction post conventional thyroidectomy. *Gland Surg.* 2019 Dec;8(6):723-728. doi: 10.21037/gs.2019.11.17. PMID: 32042680; PMCID: PMC6989920. SJR (2019) 0.7. H15

Arrozarena Fundora R, **Juman S**, Felix C & Clarke J. Bezold (2019) Abscess in a patient with Juvenile Rheumatoid Arthritis (2019) *Carib. Med. J* 2019: Vol. 81 No. 2: Pg 20-21 Electronic ISSN: 2664-5599 Print ISSN 0374-7042

Spence D, Dyer R, Andall-Brereton G, Barton M, Stanway S, Argentieri MA, Bray F, **Cawich S**, Edwards-Bennett S, Fosker C, Gabriel O. (2019) Cancer control in the Caribbean island countries and territories: some progress but the journey continues. *The Lancet Oncology.* 2019 Sep 1;20(9):e503-21. ISSN1470-2045, [https://doi.org/10.1016/S1470-2045\(19\)30512-1](https://doi.org/10.1016/S1470-2045(19)30512-1). (<http://www.sciencedirect.com/science/article/pii/S1470204519305121>). SJR (2019) 15.65 Q1. H305

**Cawich SO**, Gardner MT, Barrow M, Barrow S, Thomas D, Ragoonanan V, Mahabir A, Ali R, Naraynsingh V. (2020) Inferior Hepatic Fissures: Anatomic Variants in Trinidad and Tobago. *Cureus*. 2020 May;12(5).

**Singh Y, Cawich SO**, Mohammed S, Kuruville T, Naraynsingh V. (2020) Totally Laparoscopic Whipple's Operation: Initial Report from the Caribbean. *Cureus*. Mar;12(3).

Eyob B, Boeck MA, FaSiOen P, **Cawich S**, Kluger MD. (2019) Ensuring safe surgical care across resource settings via surgical outcomes data & quality improvement initiatives. *International Journal of Surgery*. 2019 Dec 1; 72:27-32. SJR 1.14 Q1. H53. Impact Factor 3.357

**Ramdass MJ**, Spence R, **Harnarayan P**. (2020) Outcomes associated with femoral vein segmental oversew/ligation in penetrating trauma. *Journal of Emergencies, Trauma, and Shock*. Jul 1;13(3):231. ISSN 097400, 0974519X. SJR (2019) 0.38 Q2. H 25

Islam S, Chackan S, Bheem V, Lum T, **Harnarayan P**, Naraynsingh V. (2020) Epidemiology of Neuroendocrine Tumors in an Eastern Caribbean nation-A Retrospective study *Sylvan Journal (European)*.164(4). April, 2020. H-index-10, SJR-0.19, Quartile-Q3 [Q2], Impact Factor: 0.311 [0.625], Citations-0

Islam S, Bheem V, Maughn A, **Harnarayan P, Dan D**, Naraynsingh V.(2019) Surgical glove use for specimen removal in laparoscopy, the cheapest available: a prospective study. *Tropical Doctor* Sept 2019. 50 (1), 94-99. H-index-32, SJR-0.23, Quartile-Q4 [Q3], Impact factor-0.522, Citations-0

Parker M, **Ramdass MJ, Cawich S**, Oen PF, Rosin D. (2019) A historical perspective on the introduction of laparoscopic basic surgical training in the Caribbean and factors that contribute to sustainability of such training. *International Journal of Surgery*. 2019 Dec 1;72:6-12. ISSN 17439191, 17439159. SJR(2019) 1.14 Q1. H53 . Impact Factor 3.357

Arra A, Bascombe N, Landreth-Smith B, Bartholomew M, **Dan D**. (2020) Choledochal cyst mimicker—When small bowel length matters. *International Journal of Surgery Case Reports*. 2020 Feb 29. ISSN 22102612. <https://doi.org/10.1016/j.ijscr.2020.02.061>. (<http://www.sciencedirect.com/science/article/pii/S2210261220301358>) SJR (2019) 0.23 Q3. H17

**Singh K**, Gocool N. (2020) A Comparison of Three Methods of Height Estimation and Their Impact on Low Tidal Volume Ventilation in a Mixed Ethnicity Intensive Care Unit: A Real-World Experience. *Cureus*. 2020 Jul;12(7). doi: [10.7759/cureus.9221](https://doi.org/10.7759/cureus.9221)):e9221. doi: 10.7759/cureus.9221. PMID: 32821572; PMCID: PMC7430537.

**Singh K**, Sang AC, Singh K. (2020) Fatal Autochthonous Hepatitis E Induced Acute on Chronic Liver Failure Presenting with Multiorgan Failure in a Non-endemic Country: Brief Review of Intensive Care Unit Management. *Cureus*. Mar;12(3):e7490. Doi:10.7759/cureus.7490. PMID:32257729; PMCID: PMC7117613

**Ventour D**, O'Rourke R. (2020) Trainee Doctors' Perception of the Adequacy of Support during their Intensive Care Attachment-a Phenomenological Study. *Health Science Journal*. 2020;14(6):1-5. DOI:10.36648/1791-809X.14.6.752

**Cawich SO**, FaSiOen P, Singh Y, Francis W, Mohanty SK, Naraynsingh V, Dapri G. (2019) Single incision laparoscopic surgery from a Caribbean perspective. *International Journal of Surgery*. 2019 Dec 1;72:13-8. SJR (2019) 1.14 Q1. H53. Impact Factor 3.357

**Singh Y**, Hosein A, Mohammed S, Kuruville T, Naraynsingh V. (2020) Minimally invasive oesophagectomy: The first case report of a thoracoscopic oesophagectomy done in the Caribbean. *International Journal of Surgery Case Reports*. 2020 Jan 1;76:497-500. ISSN 2210-2612.<https://doi.org/10.1016/j.ijscr.2020.10.055>. <http://www.sciencedirect.com/science/article/pii/S2210261220309330>) SJR (2019) 0.23 Q3. H17

**Singh Y**, Mohammed S, Hosein A, Ramoutar K, Naraynsingh V. (2020) A Giant Gallstone: The Largest Gallstone Removed Laparoscopically in the World. *Cureus*. May 2;12(5):e7933. doi: 10.7759/cureus.7933. PMID: 32494539; PMCID: PMC7265749.

Griffith SP, **Cawich SO, Mencia M**, Naraynsingh V, (2019) Pearce NW. Laparoscopic Liver Resection by Distance Mentoring - Trinidad to Barbados: A Report. *Cureus*. 2019 Sep 28;11(9):e5796. doi: 10.7759/cureus.5796. PMID: 31728243; PMCID: PMC6827859.

**Mencia MM**, Goalan R, Bua AA. (2020) Two-Stage Arthrodesis after an Infected Total Knee Replacement Using a Coupled Nail and Dual-Plate Construct: A Third-World Solution and Review of Options. *Case Reports in Orthopedics*. 2020 Feb 10;2020.

**Mencia MM.** (2020) Can outpatient total hip arthroplasty be safely performed in the Caribbean? A case report. *Tropical Doctor*. 2020 May 25:0049475520923489. SJR (2019) 0.23 Q4. H 32. Impact Factor 0.523

**Mencia M, Cawich SO,** Bronte-Tinkew J. (2019) A rare case of *Staphylococcus caprae*-infected total hip arthroplasty: a report and literature review. *Current Medicine Research and Practice*. 2019 Nov 1;9(6):238-42. SJR (2019) 0 No Quartile assigned. H 1

**Mencia MM,** Goalan R, Skeete R. (2020) Atraumatic dissociation of a modular shoulder hemiarthroplasty: a case report and literature review. *JSES International*. 2020 Jun;4(2):400.

Partap A, **Seepaul T,** Raghunanan R. (2020) Flexor Pollicis Tendon Rupture After Volar Plating of Distal Radius Fracture. *Journal of Orthopaedics and Sports Medicine*. 2020;2:122-8. DOI: 10.26502/josm.511500027

**Persaud S,** Chin W. (2019) Minimally invasive urology—Pearls, pitfalls and experience in the Caribbean. *International Journal of Surgery*. 2019 Dec 1;7(2): 23-6. SJR (2019) 1.14 Q1. H53. Impact Factor 3.357

**Persaud S,** Goetz L. (2020) Prostate cancer in Trinidad and Tobago: A response to “The epidemiology, histopathology and screening prospective of prostate cancer in Trinidad”. *Onkologia i Radioterapia*. 2020; 14 (3): 12-13. SJR (2019) 0.1 Q4. H2

**Persaud S,** Douglas L, Aiken W, Morrison B, Goetz L. (2020) Home grown: the development and structure of urological training in the Caribbean. *Trop Doct*. 2020 Apr; 50(2):169-172. doi: 10.1177/0049475519894171. Epub 2019 Dec 16. PMID: 31842708. SJR (2019) 0.23 Q4. H32. Impact Factor 0.523

Naraynsingh V, **Harnanan D, Maharaj R,** Naraynsingh R. (2020) COVID-19 in the West Indies: Trinidad and Tobago Experience. *J Lumbini Med Coll* [Internet]. 27May2020 [cited 21Jan.2021];8(1):126-7. Available from: <https://jlmc.edu.np/index.php/JLMC/article/view/347>

#### Department of Pre-Clinical Sciences

Mishraa N., J. Nga, J. L. Rakeman, M. J. Perry, D. A. Centurioni, A. B. Dean, A. Price, R. Thakkara, A. Garcia Angus, P. Williamson, E. Delwart, **C. Carrington, N. Sahadeo,** X. Che, T. Briese, R. Tokarz, W. I. Lipkin. (2019) One-step pentaplex real-time polymerase chain reaction assay for detection of zika, dengue, chikungunya, West Nile viruses and a human housekeeping gene. *Journal of Clinical Virology*, 120, 44 – 50, 2019. doi: 10.1016/j.jcv.2019.08.011.

**Sa B, N. Ojeh, M. A. A. Majumder, P. Nunes, S. Williams, S. R. Rao, F. F. Youssef.** (2019) The Relationship Between Self-Esteem, Emotional Intelligence, and Empathy Among Students From Six Health Professional Programs. *Teaching and Learning in Medicine*. 2019 Oct-Dec;31(5):536-543. doi: 10.1080/10401334.2019.1607741. Epub 2019 May 10. PMID: 31075996

Webb EM, S. R. Azar, S. L. Haller, R. M. Langsjoen, C. E. **Cuthbert, A. T. Ramjag,** H. Luo, K. Plante, T. Wang, G. Simmons, **C. V. F. Carrington,** S. C. Weaver, S. L. Rossi, A. J. Auguste. (2019) Effects of Chikungunya immunity on Mayaro virus disease and epidemic potential. *Scientific Reports* 2019. Dec 31;9(1):20399. doi: 10.1038/s41598-019-56551-3

**Seetahal JFR,** L. Greenberg, P. S. Satheshkumar, M. J. Sanchez-Vazquez, **G. Legall, S. Singh, V. Ramkissoon,** T. Schountz, V. Munster, C. A. L. **Oura, C. V. F. Carrington.** (2020) The Serological Prevalence of Rabies Virus-Neutralizing Antibodies in the Bat Population on the Caribbean Island of Trinidad. *Viruses*. 2020 Feb 5;12(2):178. doi: 10.3390/v12020178. [PMID: 32033370].

Schulz JE, S. N. Seifert, J. T. Thompson, V. Avanzato, S. L. Sterling, L. Yan, M. C. Letko, M. J. Matson, R. J. Fischer, A. Tremereau-Bravard, **J. F. R. Seetahal, V. Ramkissoon, J. Foster, T. Goldstein,** S. J. Anthony, J. H. Epstein, E. D. Laing, C. C. Broder, **C. V. F. Carrington,** T. Schountz, V. J. Munster. (2020) Serological Evidence for Henipa-like and Filo-like Viruses in Trinidad Bats. *Journal of Infectious Disease*. 2020 Feb 8;jiz648. doi: 10.1093/infdis/jiz648. Online ahead of print. [PMID: 32034942]

Ramroach S., A. Joshi, **M. John.** (2020) Optimisation of cancer classification by machine learning generates an enriched list of candidate drug targets and biomarkers. *Molecular Omics*. 2020 Apr 1;16(2):113-125. doi: 10.1039/c9mo00198k. Epub 2020 Feb 25. PMID: 32095794

**Brown Jordan A.**, A. Fusaro, L. Blake, A. Milani, G. Zamperin, G. Brown, **C. V. F. Carrington**, I. Monne, **C. A. L. Oura**. (2020) Characterization of novel, pathogenic field strains of infectious bronchitis virus (IBV) in poultry in Trinidad and Tobago. *Transbound Emerg Dis*. 2020 May 21. doi: 10.1111/tbed.13637. Online ahead of print. PMID: 32438523.

**Bethelmy, A.** (2020) Confidentiality and Disclosure during the COVID-19 pandemic. *Caribbean Medical Journal*. 2020 DOI: 10.48107/CMJ.2020.12.001

**Nayak, B.S., V. Rodrigues, A. V. C. Rao** (2020) Evaluation of hypoglycemic and hepatoprotective activity of *Moringa oleifera* and *Morinda citrifolia* leaf extracts in diabetic rats; a comparative study. *Ann Res Antioxid*. 5: e02

**Nayak, B.S.**, V. Sridevi, **P.K. Sahu**, N. Subbaramaiah, L. Telang, P. Goudappala, C.H Kariappa, A. Sharma, M. Sagari, A. S. Nayak (2020) *Journal of Advances in Medical Education & Professionalism* 9: 18-23.

Saleh, I., **B. S. Nayak** (2020) Pattern and Prevalence of Dyslipidemia and other cardiovascular risk factors among the various ethnic groups of Trinidad and Tobago. *Journal of disease and global health* 10(1): 28-37.

**Sahu, P.K., B.S Nayak, V. Rodrigues, S. Umakanthan.** (2020) Prevalence of Psychological Distress among Undergraduate Medical Students: A Cross-Sectional Study. *International Journal of Applied and Basic Medical Research*. 10 (4): 270-275.

**Nayak, B.S.**, O. Chaudhary. (2020) Are Countries with Lockdown, and Social Distancing Implementation Showing a Decline in COVID-19 Cases. *JCDR*.

Lakshmikantha, N., **B.S. Nayak**, Kashinkunti, M, S. Mukherjee. (2020) Education in Communicating Methods - An Effective Tool for Improving Interpersonal Relationships Between Health Care Professionals and Patients. *World Journal of Medical Education and Research*. 22(1):8-14.

**Nayak, B.S.**, N. Ojar, S. John, S. Swann, J. Thom, B. Thomas, D. Townsend, S. Trotman (2020) Significance of Serum Protein Electrophoresis in the Detection of Multiple Myeloma: A Diagnostic Interpretation of Patients with Varied Immunoglobulins. *International Journal of Preventive Medicine* 11:

#### Department of Para-Clinical Sciences

**Clement Y**, Singh S, Motilal S, Maharaj R, Nunez-Smith M (2020) A protocol for the study of polymorphisms and response to metformin in Type-2 diabetic patients in Trinidad. *Ethnicity and Disease* 30(Suppl 1): 211.216.

**Clement Y**, Jankie S, Pooransingh S, Ignacio D, Reid AE, Sampson-Francis S, Giddings S, Watson H. (2020) A literature review of drugs for the treatment of COVID-19, *Caribbean Medical Journal* 82 (Issue 2).

**Umakanthan S**, Sahu P. (2020) Origin, Transmission, Diagnosis and Management of Coronavirus Disease 2019 (COVID-19), *British Medical Journal (BMJ) - postgradmedj*-96, 753-758

Sahu P, Nayak BS, Rodrigues V, **Umakanthan S**. (2020) Prevalence of psychological distress among undergraduate medical students: A cross-sectional study. *International Journal of Applied and Basic Medical Research* 10 (4), 270

Milne JADM, Sookar N, **Umakanthan S**. (2020) Primary Osteosarcoma of the Breast in a Patient Treated Previously for Invasive Ductal Carcinoma: An Unusual Presentation of a Very Rare Primary Breast Malignancy. *Case reports in surgery*, 1594127.

**Umakanthan S**, Chattu VK, Kalloo S. (2019) Global epidemiology, risk factors, and histological types of ovarian cancers in Trinidad. *Journal of Family Medicine and Primary Care* 8,1058-64.

**Umakanthan S**, Mohammed W. (2020) Angiomatous meningioma: A rare case report. *International Journal of Clinical Case Reports and Reviews*, 2(2).10.31579/ijccr.2020/008.

Abhishek SB, Bammigatti C, **Umakanthan S**. (2020) The Emergence of COVID-19 in India: A Loco-Regional, Community Perspective and Its Management. *World Journal of Research and Review* 11(2), 36-40

Gangappa SB, Abhishek SB, **Umakanthan S**. (2020) Current aspects in the management of COVID. *World Journal of Advanced Research and Reviews* 08(01), 086-092

**Umakanthan S**, Bukelo MM, Bissoon D. (2019) The epidemiology, histopathology and screening prospective of prostate cancer in Trinidad. *Onkologia i Radioterapia*, 13 (3):52-57.

**Edwards J**, Hinds A, Lyons N, Edwards J, Quammie S, Figueroa JP (2019). A Chart Review Study of Sexually Transmitted Infections Among Persons Living with HIV Attending an STI Clinic in Trinidad. *J Int Assoc Provid AIDS Care*. Jan-Dec;18:2325958219888463. doi: 10.1177/2325958219888463.

**Edwards RJ**, Hinds A, Lyons N, Figueroa JP (2019). Prevalence and risk factors for sexually transmitted infections among people living with HIV attending a sexually transmitted infection clinic in Trinidad. *Int J STD AIDS*. Oct;30(12):1201-1206. doi: 10.1177/0956462419863536.

Montane Jaime, L. K., Akpaka, P. E., Vuma, S., & **Justiz-Vaillant, A. A.** (2019). A healthy patient with positive mantoux test but negative quantiferon Gold assay and no evidence of risk factors - to treat or not to treat? *IDCases*, 18, e00658. <https://doi.org/10.1016/j.idcr.2019.e00658>

Elliott, C. and **Justiz Vaillant, A.** (2020). Antimicrobials and Enterobacterial Repetitive Intergenic Consensus (ERIC) Polymerase Chain Reaction (PCR) Patterns of Nosocomial *Serratia Marcescens* Isolates: A One Year Prospective Study (June 2013-May 2014) in a Rural Hospital in the Republic of Trinidad and Tobago. *Progress in Chemical and Biochemical Research*, pp.105-120.

#### School of Dentistry

**Balkaran, R.L.**, S.S. Teelucksingh, **R.S. Naidu**, K.E. Lutchmansingh, L.A. Morris, V. Tripathi, S. Teelucksingh. (2020) The Use of the Slipping Slipper Sign to Explore the Connection between the Feet and the Mouth in Patients with Diabetes Mellitus. *Puerto Rico Health Sciences Journal* 39 (2).

**Naidu, R.S.**, J.H. Nunn. (2020) Oral Health Knowledge, Attitudes and Behaviour of Parents and Caregivers of Preschool Children: Implications for Oral Health Promotion. *Oral Health and Preventative Dentistry* 18(2): 245-252. Doi:10.3290/j.ohpd.a43357

Abreu-Placeres, N., P. Grau-Grullon, **R. S. Naidu**, F. Garcia-Godoy, J.T. Newton, K.R. Ekstrand, N. Pitts, L.M. Lopez del Valle, L. Feliz-Matos, Y. Rivera, R. F. González, A.B. Santosh, E. Morou-Bermudez, S. Jácome-Liévano, S. Martignon. (2020) Cariology consensus for undergraduates at dental schools in the Caribbean region. *European Journal of Dental Education* <https://doi.org/10.1111/eje.12651>

**Naidu, R.S.** (2019) Children's oral health in the Caribbean: A public health problem. *Caribbean Medical Journal* ISSN:2664-5599

**Ramroop, R., A. Kowlessar**, V. Ramcharitar-Maharaj, L. Morris, **R.S. Naidu.** (2019) Knowledge, attitudes and behaviour towards preventive oral care in early childhood among paediatricians in Trinidad and Tobago: findings of a national survey. *International Dental Journal* 69(1): 67-76 <https://doi.org/10.1111/idj.12408>

Percival, P., J. Edwards, S. Barclay, B. Sa, M.A. Majumder. (2019) Early Childhood Caries in 3 to 5-Year-Old Children in Trinidad and Tobago. *Dentistry Journal* 7(1): 16. <https://doi.org/10.3390/dj7010016>

Chang, A., S. Bamashmous, R. Darveau, S. Rajapakse. (2020) An Ayurvedic herbal extract inhibits oral epithelial cell IL-8 responses to host and bacterial agonists. *BMC Complementary Medicine and Therapies* 20:62 <https://doi.org/10.1186/s12906-020-2850-8>

**Raman, V., S. Ramlogan**, J. Sweet and D. Sweet. (2020) Application of Rapid Entire Body Assessment (REBA) in assessing chairside ergonomic risk of dental students. *British dental Journal*.

**Ramlogan, S., V. Raman**, K. Abraham and K. Pierre. (2019) Self-reported stress, coping ability, mental status, and periodontal diseases among police recruits. *Clinical and Experimental Dental Research* 6(1):117-123.

**Trudee, H., A. Kowlessar, A. Ali**, and D. Bearn. (2020) Prevalence and Occlusal Risk Factors for Fractured Incisors among 11–12-Year-Old Children in the Trinidad and Tobago Population. *Dentistry Journal* 6;8(1):25. Doi: 10.3390/dj8010025

**Trudee, H., A. Kowlessar, A. Ali**, and D. Bearn. (2020) Cross-Sectional survey to ascertain the prevalence of Molar Incisor Hypo-mineralization in the Trinidad and Tobago population. *American Journal of Biomedical Science & Research* 7(3).ISSN: 2642-1747DOI: 10.34297/AJBSR.2020.07.001141.

**Kowlessar, A., R. S. Naidu, V. Ramroop**, J. Nurse, K. Dookie, C. Bodkyn and S. Lalchandani. (2019) Oral health among children attending an oncology clinic in Trinidad. *Clinical and Experimental Dental Research* 5(6):665-669. Doi: 10.1002/cre2.232.

Davis, K., R. Yuk Low and **R.N. Rafeek**. (2019) A Conservative Approach to Treatment of Dental Erosion: Case Report. *Open Journal of Stomatology* 9:241-248. <https://doi.org/10.4236/ojst.2019.911025>

**Marchan, S.M.**, L.L. Lynch, K. Bascombe, X. Carty, **W.A. Smith, R.N. Rafeek**. (2020) Colour stability of gingiva-coloured based restorative materials: An in-vitro study. *General Dentistry* 58(5): 61-65.

**Rafeek, R.N., V. Ramroop, R. Balkaran, A. Kowlessar, A. Bissoon**, C. Royer, R. Yuk Low. (2020) The Perceived Oral Health Status, Practices, Knowledge and Periodontal Status of Pregnant Women in a Maternity Hospital in Trinidad. *Scientific Dental Journal* 4(11):74-83. (International Scientific Indexing 0.812)

**Rafeek, R.N., R.S. Naidu**, T. Peters, G. Paul, V. Tripathi. (2020) Prevalence and Factors Associated with Dentine Hypersensitivity among Adult Patients Attending a University Dental Clinic in Trinidad, West Indies. A cross-sectional study. *Oral Health and Preventive Dentistry* 18(1): 1077-1085.

**Marchan, S.M.**, K. Bascombe, T. Hector, **W.A. Smith** and T.G. Ramnanasingh. (2020) The long term effect of flavored sparkling water on human tooth enamel determined by gravimetric analysis: a preliminary evaluation. *Brazilian Dental Science* 23(1):1-7.

#### School of Pharmacy

Samuel VP, Gupta G, **Dahiya R**, Jain DA, Mishra A, Dua K. (2019) Current Update on Preclinical and Clinical Studies of Resveratrol, a Naturally Occurring Phenolic Compound. *Crit Rev Eukaryot Gene Expr.* 2019;29(6):529-537doi: 10.1615/CritRevEukaryotGeneExpr.2019027836. (Impact Factor = 2.156; PubMed indexed)

Altamish M, Samuel VP, **Dahiya R**, Singh Y, Deb PK, Bakshi HA, Tambuwala MM, Chellappan DK, Collet T, Dua K, Gupta G. (2020) Molecular signaling of G-protein-coupled receptor in chronic heart failure and associated complications. *Drug Dev Res.* 2020 Feb;81(1):23-31. doi: 10.1002/ddr.21627. (Impact Factor = 1.902; PubMed indexed; Wiley)

Gupta G, **Dahiya R**, Singh Y, Mishra A, Verma A, Gothwal SK, Aljabali AAA, Dureja H, Prasher P, Negi P, Kapoor DN, Goyal R, Tambuwala MM, Chellappan DK, Dua K. (2020) Monotherapy of RAAS blockers and mobilization of aldosterone: A mechanistic perspective study in kidney disease. *Chem Biol Interact.* 2020 Feb 1;317:108975. doi: 10.1016/j.cbi.2020.108975. (Impact Factor = 3.723; PubMed indexed, Elsevier)

**Dahiya R**, Dahiya S, Fuloria NK, Kumar S, Mourya R, Chennupati SV, Jankie S, Gautam H, Singh S, Karan SK, Maharaj S, Fuloria S, Shrivastava J, Agarwal A, Singh S, Kishor A, Jadon G, Sharma A. (2020) Natural Bioactive Thiazole-Based Peptides from Marine Resources: Structural and Pharmacological Aspects. *Mar Drugs.* Jun 24;18(6):329. doi: 10.3390/md18060329. (Impact Factor = 4.073; PubMed indexed)

Altamish M, **Dahiya R**, Singh AK, Mishra A, Aljabali AAA, Satija S, Mehta M, Dureja H, Prasher P, Negi P, Kapoor DN, Goyal R, Tambuwala MM, Chellappan DK, Dua K, Gupta G. (2020) Role of the Serine/Threonine Kinase 11 (STK11) or Liver Kinase B1 (LKB1) Gene in Peutz-Jeghers Syndrome. *Crit Rev Eukaryot Gene Expr.* 2020;30(3):245-252. doi: 10.1615/CritRevEukaryotGeneExpr.2020033451. (Impact Factor = 2.156; PubMed indexed)

**Maharaj S**, Brahim A, Brown H, Budraj D, Caesar V, Calder A, Carr D, Castillo D, Cedeno K, Janodia MD. (2020) Identifying dispensing errors in pharmacies in a medical science school in Trinidad and Tobago. *Journal of Pharmaceutical Policy and Practice.*

**Maharaj S**, Balroop AD, Ali A, Baksh N, Beckles A, Dwarika N, Seetaram N, Extavour RM, Janodia M. (2020) Bachelor of pharmacy graduates' perceptions of the pharmacy administration curriculum in Trinidad and Tobago. *Currents in Pharmacy Teaching and Learning.* 2020 May 1; 12(5):558-63.

**Maharaj S**, Seemungal T, McKee M. (2019) A perfect storm in the Caribbean requires a concerted response. *The Lancet.* Oct 19; 394(10207):1409.

Puja Awasthi, Bhoomendra A. Bhongade, Gurdial Singh, Malleshappa N. Noolvi, **Andanappa K. Gadad** (2020). Synthesis of optically active aminobenzothiazoles. *SynOpen*, 4, 23-32.

Bhoomendra A. Bhongade, Nikhil D. Amnerkar and **Andanappa K. Gadad** (2020) 3D-QSAR Studies on 4, 5-Dihydro-1H-pyrazolo [4, 3-h] Quinazolines as Plk-1, CDK2/A and Aur-A Serine/Threonine Kinase Inhibitors, *Letters in Drug Design & Discovery*, 17, 388-395.

**Andanappa K. Gadad**, Stephanie Mohammed, Venkatesan Sundaram, Shivananda B Nayak, Ashmeed R. Mohammed, Terry G. Ramnanansingh (2019). Identification of calcium, sodium, magnesium and chloride ion levels in hypertensive and non-hypertensive Trinidadians. *International Journal of Biochemistry and Molecular Biology*, 10(3),17-22 (www.ijbmb.org)

Dahiya R, Dahiya S, Fuloria NK, Kumar S, Mourya R, Chennupati SV, Jankie S, Gautam H **Singh S**, Karan SK, Maharaj S, Fuloria S, Shrivastava J, Agarwal A, Singh S, Kishor A, Jadon, G, Sharma A. (2020) Natural Bioactive Thiazole-Based Peptides from Marine Resources: Structural and Pharmacological Aspects. *Mar. Drugs*, 18, 329

Clement Y, **Singh S**, Motilal S, Maharaj R and Nunez-Smith M. (2020) Protocol for the Study of Polymorphisms and Response to Metformin in Patients with Type 2 Diabetes in Trinidad. *Ethnicity & Disease* 2020; 30(1): 211-216

Seetahal JFR, Greenberg L, Satheshkumar PS, Sanchez-Vazquez MJ, Legall G, **Singh S**, Ramkissoon V, Schountz T, Munster V, Oura CAL and Carrington CVF. (2020) The Serological Prevalence of Rabies Virus-Neutralizing Antibodies in the Bat Population on the Caribbean Island of Trinidad. *Viruses* 2020; 12: 178

**Gupta, M.M.**; Jankie, S.; Pancholi, S.S.; Talukdar, D.; Sahu, P.K.; Sa, B. (2020) Asynchronous Environment Assessment: A Pertinent Option for Medical and Allied Health Profession Education During the COVID-19 Pandemic. *Education. Sciences*. 2020, 10, 352.

Iqbal M K, Chaudhuri A, Iqbal A, Saleem S, **Gupta M M**, Ahuja A, Ali J, Baboota S. (2020) Targeted Delivery of Natural Bioactives and Lipid-nanocargos against Signaling Pathways Involved in Skin Cancer. *Current Medicinal Chemistry*.

Mittal S, Iqbal M K, Iqbal B, **Gupta M M**, Ali J, Baboota S. (2020) A pervasive scientific overview on mangiferin in the prevention and treatment of various diseases with preclinical and clinical updates. *Journal of Complementary and Integrative Medicine*.

**Gupta M M**, Khooban A, Ali Ahamad, Ramlogan O, Talukdar D. (2020) Comparative quality control study of different brands of Diclofenac sodium tablets available in local and government pharmacies by in-vitro testing. *Cureus*. 2020 12(11): e11348. doi:10.7759/cureus.11348

**Gupta MM**, Gupta IK, Baboota S, Gupta M. (2019) Formulation development and evaluation of orally disintegrating tablet of taste masked azithromycin. *Latin American Journal of Pharmacy*. 2019: 38: 1478-84.

Dahiya R, Dahiya S, Fuloria NK, Kumar S, Mourya R, Chennupati SV, **Jankie S**, Gautam H, Singh S, Karan SK, Maharaj S, Fuloria S, Shrivastava J, Agarwal A, Singh S, Kishor A, Jadon G, Sharma A. (2020) Natural Bioactive Thiazole-Based Peptides from Marine Resources: Structural and Pharmacological Aspects. *Marine Drugs*. June 2020; 18(6):329

Clement Y, **Jankie S**, Pooransingh S, Ignacio D, Reid AE, Sampson-Francis S, Giddings S, Watson H. (2020) A literature review of drugs for the treatment of COVID-19. *Caribbean Medical Journal*. May; 82(1).

#### School of Nursing

**Ocho, O.N.**, B. Pieper, J. Pulcini, E. Wheeler. (2020) Nursing Leadership in a Pandemic: Lessons Learned From COVID-19 – An Opinion. *World Council of Enterostomal Therapists Journal. WCET® Journal* 2020;40 (3):43-46.

**Ocho, O.N.**, E. Wheeler, C. Sheppard, L. Caesar-Greasley, J. Rigby, G. Tomblin Murphy. (2020) Nurses' preparation for transitioning into positions of leadership—A Caribbean perspective. *J Nurs Manag*. 2020; 28:1356–1363.

**Donkor, N.**, K. Farrell, O. Ocho, L. Caesar, C. Sheppard, L. Andrews, S. Modeste, P. Otieno, S. Acquah. (2020) Correlates of obesity indices and cardiovascular disease risk factors among Trinidadian nurses. *International Journal of Africa Nursing Sciences*. 2020. Volume 12, 100194

**Extavour, R.M.**, O. Ocho, G. Allison. (2019) Nursing Students' Attitudes Towards an Adaptive Learning Technology in a Pharmacology Course. *Ubiquitous Learning: An International Journal*. 2019. 12(4):25-35.

*School of Veterinary Medicine*

Gibbons I., **V. Sundaram, A. Adogwa, A. Odekunle** (2020). Cytoarchitecture of the superior olivary complex of three neotropical species of bats (*Noctilio leporinus*, *Phyllostomus hastatus*, and *Carollia perspicillata*) with different foraging behavior. *Brazilian Journal of Biology* 80(1):180-186.

**Tardieu L, V.Sundaram, A. Adogwa, G.W.** (2020). Anatomy and histology of the gastrointestinal tract of the neo-tropical opossum (*Didelphis marsupialis insularis*, Allen 1902). *Acta Zoologica* 101 (4): 384-391.

**Gadad A, S. Mohammed, V.Sundaram, S.Nayak, A .Mohammed, T. Narayansingh.** (2019). Identification of Calcium, Sodium, Magnesium, and Chloride ion levels in Hypertensive and Non-Hypertensive Trinidadians. *International Journal of Biochemistry and Molecular Biology* 10(3):17-22.

**Sundaram V, P.Dharani, R.Gnanadevi. R.Kavya.** (2019) Studies on clinical anatomy of the maxillofacial and mandibular regions of the Madras Red Sheep (*Ovis aries*) in India. *Folia morphologica* 78(2):389-93.

Paulina R, T. Brown-Joseph, C. Tennakoon, J.Flannery, **C.A.L. Oura, C. Batten.** (2019) Detection of a novel reassortant epizootic hemorrhagic disease virus serotype 6 in cattle in Trinidad, West Indies, containing nine RNA segments derived from exotic EHDV strains with an Australian origin. *Infection, Genetics, and Evolution*, 74.

Bishop, R.P., D.O.Odongo, P. R. Spooner, S.P. Morzaria, **C.A.L. Oura, R.A. Skilton.** (2020) Multilocus genotyping of *Theileria Parva* isolates associated with a live vaccination trial in Kenya provides evidence for the transmission of immunizing parasites into local tick and cattle populations. *Transboundary and Emerging Diseases* 67(S1):88-98,

Seethahal, J.F.R., L.Greenberg, P.S.Satheshkumar, M. J. Sanchez-Vazquez, G.Legall, S. Singh, V.Ramkissoo, T.Schountz, V.Munster, **C. A. L. Oura, C.V. F. Carrington.** (2020) The Serological Prevalence of Rabies Virus-Neutralizing Antibodies in the Bat Population on the Caribbean Island of Trinidad. *Viruses* 12, 178.

**Brown J.A., A.Fusaro, L.Blake, A. Milani, G.Zamperin. G . Brown C.V. F. Carrington I. Monne C.A.L. Oura.** (2020) Characterization of a novel, pathogenic field strains of infectious bronchitis virus (IBV) in poultry in Trinidad and Tobago. *Transboundary and Emerging Diseases*. 67: 2775-2788.

Suraj R. A, R. Rambarran, K.Ali, D. Harbajan, **R. Charles, C. Sant, K. Georges, S. Suepaul.** (2020) A comparison of the efficacy of two commercial acaricides (fipronil and amitraz) with *Azadirachta indica* (neem) on the brown dog tick (*Rhipicephalus sanguineus*) from canines in Trinidad. *Transboundary and emerging diseases* 67:142-8.

**Charles R, A. Basu, B. Sanford, A. King-Cenac, S. Melville-Edwin, P. Pow-Brown, C. Sant, K. Georges.** (2020) Survey of ticks of domestic dogs and cattle in three Caribbean islands. *Transboundary and Emerging Diseases* 67:129-34.

**R Suepaul, S Rajh, K Frontera-Acevedo, I Pargass, S Suepaul.** (2019) A review of neoplastic and non-neoplastic canine skin tumors in Trinidad from 2010-2015. 2019. *Brazilian Journal of Veterinary Pathology* 12 (2), 41-47.

Lall, K.R, **Jones K.R, Garcia G.W.** (2020) Natural Habitat, Housing, and Restraint of Six Selected Neotropical Animals in Trinidad and Tobago with the Potential for Domestication. *Scientifica*.

**Jones, K. R, Lall, K. R, Garcia, G.W.** (2020) Dystocia in a Captive Reared Agouti (*Dasyprocta leporina*) in Trinidad and Tobago, West Indies. *Veterinary Sciences* 7(1):30.

**Jones, K.R, Lall, K.R, Garcia G.W.** (2019) Endoparasites of Selected Native Non-Domesticated Mammals in the Neotropics (New World Tropics). *Veterinary Sciences* 6(4):87.

**Jones, K.R, Lall, K.R, Garcia, G.W.** (2019) Hematology and Serum Biochemistry in the Agouti (*Dasyprocta* spp.): A Neotropical Rodent with the Potential for Domestication. *Concepts of Dairy and Veterinary Sciences* 3(1), 263-265

**Jones, K.R., Garcia, G.W.** (2019) Understanding blood and serum values of the agouti (*Dasyprocta* spp.): A rodent of the Neotropics with the potential to be domesticated. *Tropical Agriculture* 96, 117-126.

**Mohamed, R.** (2020) The labial and zygomatic salivary glands in mixed breed dogs in Trinidad: anatomical location, histological features, and histochemical characteristics. *World's Veterinary Journal* 10 (2): 23-30.

**Mohamed, R.** and K.Mazher. (2020) Gross and histological observations on the lungs of domestic pigeon (*Columba livia* domestic). *Research in: Agricultural & Veterinary Sciences* 4 (2): 47-54.

**Mohamed, R** and Mazher K. (2020) Histomorphological studies on the ileum, caecum and ascending colon in mixed breed dogs in Trinidad. *Research in agricultural & Veterinary Sciences* 2020; 4(2):71-79.

**Mohamed R.** (2020)The attitude of veterinary students to cadaveric dissection in teaching and learning veterinary anatomy in the Caribbean. *International Research in Education.* 8 (1): 139-144.

**Mohamed. R.** (2020) A case report of anatomical variation in the left kidney of a Pit Bulldog in Trinidad. *Journal of Veterinary Medical Research.*27 (1):18-22.

**Mohamed R, Georges K., Rajh S, Suepaul R.** A case report of lobar agenesis in the lung of a sheep and extra lobation in the lungs of dogs in Trinidad. *Journal of Veterinary Medical Research* 27 (1): 1-4.

**Mohamed R.** (2019) Anatomical and radiographic study on the skull and mandible of the African Lion (*Panthera Leo*). *Journal of Morphological Sciences.*36 (3): 174-181.

**Mohamed R.** (2019) Gross anatomical study on the skull and mandible of the Wild Boar (*Sus Scrofa*) in the Caribbean. *Academia Anatomica International* 5 (2): 46-51.

Hylton A, D. M. Fitzpatrick, **R. Suepaul**, A. P. Dobson, **R. A. Charles**, J.K. Peterson. (2020) Preliminary Characterization of Triatomine Bug Blood Meals on the Island of Trinidad Reveals Opportunistic Feeding Behavior on Both Human and Animal Hosts. *Tropical Medicine and Infectious Disease*5; 166.

**Jones, K. R,** K.R, Lall, **R. Suepaul**, G.W.Garcia. (2020) Mammary Diseases in a Captive Reared Agouti (*Dasyprocta leporina*) in Trinidad. *Veterinary Sciences* 7 (3), 137.

Paharsingh I, **R. Suepaul**, L.Gyan, A.Hosein, **I. Pargass.** (2020) Disseminated Mycobacterium avium subsp. hominissuis infection and ascites in an FIV-positive cat. *Veterinary Clinical Pathology Journal* 49 (3); 465-469.

**Phillips, A.C.N., R. Suepaul**, A.Ali, A.Ramcharan, R.Ramnarine, R.Sookdeo R. (2020) A pilot study into the prevalence of presumptive *Cryptobia iubilans* infections in Discus fish in Trinidad. *Journal of Parasitology*,106(4) 506–512

**R. Suepaul, K. Frontera-Acevedo**, L.A. Gyan, C. Ramdoo, I.K. Ali, S. Roy, J. Gary. (2020) Disseminated *Acanthamoeba sp.* infection in a dog in Trinidad and Tobago. *Journal of the American Veterinary Medical Association*256 (7), 775-778.

**Kumar N, K. Mohan, K. Georges, F. Dziva, A. Adesiyun.** (2019) Prevalence, serovars, and antimicrobial resistance of *Salmonella* spp. in caecal samples of chickens slaughtered in pluck shops in Trinidad. *Journal of Food Protection*, 82(9):1560-67.

**Sieuchand S, R. A. Charles**, J. Caruth, A. Basu, G. von Samson-Himmelstjerna, **Georges K.** (2020) A field study on the occurrence of gastrointestinal nematodes in sheep over the wet and dry seasons in two West Indian Islands. *Transboundary and Emerging Diseases* 67(2): 193-200.

**Charles R A,** B. Sanford, A. King-Cenac, S. Melville-Edwin, P. Pow-Brown, C. Sant. 2019. **Georges K.** (2020). Survey of ticks of domestic dogs and cattle in three Caribbean islands. *Transboundary and Emerging Diseases* 67(2): 129-134.

**Basu A K, R. A. Charles.** (2019) Larvae of *Cephalopina titilator* (Clark, 1816 (Diptera: Oestridae) causing nasopharyngeal myiasis of camels: an overview. *CAB Reviews*, 14: 1-9.

Brown, E, N.O'Brien, **K. Georges, S. Suepaul**,(2020) Physical characteristics and antimicrobial properties of *Apis mellifera*, *Frieseomelitta nigra*, and *Melipona favosa* bee honey from apiaries in Trinidad and Tobago. *BMC Complement Medicine and Therapeutics* 20(1):85.

**Suepaul, R.B, K. Frontera-Acevedo**, L.A. Gyan, C.Ramdoo, I.K.Ali, S. Roy.(2020) Pathology in Practice. *Journal of the American Veterinary Medical Association* 56(7):775–8.

Topalcengiz Z, S.Jeamsripong, PM Spanninger, **A K Persad**, F Wang, RLBuchanan, J LeJeune, KE Kniel, MT Jay-Russell, MD Danyluk (2020) Survival of *Salmonella* in various wild animal feces that may contaminate produce. *Journal of food protection*. Apr;83(4):651-60.

Topalcengiz Z, S.Jeamsripong, PM Spanninger, **A K Persad**, F Wang, RLBuchanan, J LeJeune, KE Kniel, MT Jay-Russell, MD Danyluk (2020) Survival of Shiga Toxin-Producing *Escherichia coli* (STEC) in Various Wild Animal Feces that May Contaminate Produce STEC survival in wild animal feces. *Journal of Food Protection*. Apr 16.

Liew W Q, **T N Ganesh** and E Aklilu. (2020) Comparison of bacterial count of different surgical hand scrubbing techniques using chlorhexidine gluconate. *Indian J. Vet. Surg.* 41(1): 31-34

Kaneshwary K, S. Ganabadi and **T.N. Ganesh**. (2020): Prevalence of Demodicosis in dogs and its associated risk factors in a small animal hospital in Penang Malaysia. *J. Vet. Malaysia*, 32 (2): 19 - 22

**Phillips Savage ACN**, R Suepaul, SA Smith, A Ali, N Ramcharan, S Ramnarine, R Sookdeo. (2020) Cryptobia iubilans infections in Discus fish in Trinidad and Tobago. *Journal of Parasitology*; 106(4): 506–512. doi: 10.1645/18-98.

Sahu PK, **ACN Phillips Savage**, B Sa. (2020) Exploring Students' Perceptions of the Educational Environment in a Caribbean Veterinary School: A Cross-Sectional Study. *Journal of Veterinary Medical Education*; 47(6): 668-677. doi: 10.3138/jvme.2018-0008.

M Cazabon-Mannette. (2020) Sea Turtle Conservation: Tackling 'Floating Syndrome' - A Caribbean Perspective. Living World, *Journal of the Trinidad and Tobago Field Naturalists' Club* 2020; 59-71.

*Caribbean Centre for Health Systems Research and Development*  
Hunte S, Pierre K, St Rose R, Simeon DT (2020) Health Systems' Resilience: COVID-19 Response in Trinidad and Tobago. *The American Journal of Tropical Medicine and Hygiene* 2020 Jun 9. doi: 10.4269/ajtmh.20-0561.

## Journal Abstracts

### Department of Clinical Surgical Sciences

**Persaud S**, Goetz L, Morrison B, Aiken W, Douglas L. (2020) FR01-20 Home Grown: The Development and Structure of Urological Training in the Caribbean. *J Urol*. 2020. 203 (Supp4): e291.

Maharaj A, **Persaud S**, Goetz L. (2019) Brachytherapy for prostate cancer in Trinidad – a single surgeon series. *BJU Int*. 2019. 124 (Supp 2): 4

Sirjuesingh D, **Persaud S**, Hosein I, Persaud S, Ramsoobhag K. (2019) Clinicopathological profile of renal cancer in a Caribbean Hospital: Pilot Study. *BJU Int*. 2019. 124 (Supp 2): 5

Goetz L, **Persaud S**, Persaud M. (2019) Is Trimix sustainable? *BJU Int*.. 124 (Supp 2): 10

**Persaud S**, Morrison B, McCammon, Sadho K, Gosine C. (2019) Extent of urological exposure during medical school – a survey of graduates of the University of the West Indies, Trinidad and Tobago. *BJU Int*. 2019. 124 (Supp 2): 7

Augustus M, Beharry A, **Quan Soon C**. (2019) Congenital Pseudoarthrosis in a Patient with Neurofibromatosis Type 1: Disappearing Ulna. (Abstract). *Journal of the Caribbean College of Surgeons*; 2019; Volume 3.

### Department of Clinical Medical Sciences

Clement Y, Jankie S, Pooransingh S, Ignacio D, Reid A, Sampson-Francis S, **Giddings S**, Watson H. (2020) A literature review of drugs for the treatment of COVID-19. *Caribbean Medical Journal*. 2020 May; 82(2) (Epub ahead of print).

Nagassar R, Robinson E, Vedula V, Vastrad S, Singh A, Lochan A, Baird D, Manjunath M, Mangaroo R, **Giddings S**, Seecharan S, Sookraj D, Partapsingh V, Bolastig E, Elias V, Reveiz L, Santesso N. (2020) Recommendations for antibiotic prescriptions for upper respiratory symptoms in children in Trinidad and Tobago: GRADE-ADOLEPMENT APPROACH. *Caribbean Medical Journal*. May; 82(2) (Epub ahead of print).

Seecheran R, Narayansingh R, **Giddings S**, Rampaul M, Furlonge K, Abdool K, Bhagwandass N, Seecheran N. (2019) Atrial Arrhythmias in a Patient Presenting With Coronavirus Disease-2019 (COVID-19) Infection. *J Investig Med High Impact Case Rep*. 2020;8:2324709620925571. doi:10.1177/2324709620925571

Reyes AJ, Ramcharan K, **Giddings S**, Aboh S. (2019) Facial disfigurement from Kaposi's sarcoma in a woman living with HIV/AIDS in the HAART era. *BMJ Case Reports* CP 2019;12:e232871

Reyes AJ, Ramcharan K, Perot S, **Giddings SL**, Rampersad F, Gobin R. (2019) Subacute Sclerosing Panencephalitis Causing Rapidly Progressive Dementia and Myoclonic Jerks in a Sexagenarian Woman. Tremor Other *Hyperkinet Mov* (NY). Aug 27;9. Doi: 10.7916/tohm.v0.680.

## Books & Book Chapters

### Department of Para-Clinical Sciences

Baboolal N, **Davis GK**. (2020) Ageing and a Review of Dementia Research in Trinidad and Tobago in connecting the dots: work. life balance. Ageing. Editors: Patricia Mohammed and Cheryl Ann Boodram Ian Randle publishers.

### Department of Pre-Clinical Sciences

**Nayak, B.S.** Handbook of Biochemistry and Nutrition for Allied and Nursing students, 4<sup>th</sup> Edition, Jaypee Medical Publishers Ltd. New Delhi, India

### School of Pharmacy

Dahiya S, **Dahiya R**. (2019) Chapter 11. Recent Nanotechnological Advancements in Delivery of Peptide and Protein Macromolecules. In: Rauta PR, Mohanta YK, Nayak D. (eds.). *Nanotechnology in Biology and Medicine: Research Advancements and Future Perspectives*. CRC Press, Taylor & Francis Group: Boca Raton, FL, United States, 2019; 143-57. [eBook ISBN: 9780429259333, October 2019]

Dahiya S, **Dahiya R**. (2019) Chapter 11. Delivery Strategies and Formulation Approaches of Anticancer Nutraceuticals. In: Gupta SV, Pathak YV. (eds.). *Advances in Nutraceutical Applications in Cancer - Recent Research Trends and Clinical Applications*. CRC Press, Taylor & Francis Group: Boca Raton, FL, United States, 2019; 239-67. [eBook ISBN: 9780429489129, November 2019]

### School of Veterinary Medicine

**Oura C.A.L.** (2020). African Swine Fever. In *Merck Veterinary Manual*. Ed. Susan E.A and Michael A. 11<sup>th</sup> edition, Wiley, ISBN: 9780911910612.

**Oura. C.A.L** (2020). Academic and Institutional 'One Health' Research Capacity Building. In *One Health: The Theory and Practice of Integrated Health Approaches*, Eds. Zinsstag, J., Schelling E., Crump, L., Whittaker, M., Tanner, M., and Stephen, C. 2nd edition. CAB International. ISBN-13: 978-1780643410.

Lans C, **Sant C, Georges K**. (2020). Ethno remedies Used for Horses in British Columbia and Trinidad and Tobago. In *Ethnoveterinary Medicine*. Eds.McGaw, Lyndy J. Abdalla, Muna Ali. Springer Verlag, SBN 978-3-030-32270-0

## Conference Presentations

### Department of Pre-Clinical Sciences

#### Carrington CVF

*SARS-COV-2 survival in the environment.*

The Caribbean Centre for Health Systems Research and Development Virtual Symposium : The impact of COVID-19 on Health Systems.

The University of the West Indies, St. Augustine, Trinidad and Tobago, May 3, 2020.

#### Carrington CVF.

*Viruses on the Wing.*

Robin Weiss 80<sup>th</sup> Birthday Symposium, Wilkins Gustave Tuck Lecture Theatre, University College London, London, UK, February 20, 2020.

#### Sahadeo N, Ramjag A, Carrington CVF

*Viruses associated with acute fevers in Trinidad.*

CADDE Genomic Epidemiology Workshop, Universidade de Sao Paulo Instituto de Medicina Tropical, Sao Paulo, Brazil, December 2<sup>nd</sup> – 6<sup>th</sup> 2019.

#### C. V. F. Carrington

*The West Indies: a popular destination for emerging viruses.*

17th Annual Ecology and Evolution of Infectious Disease (EEID) meeting, Princeton University, NJ, USA, June 2019.

### Department of Para-Clinical Sciences

Ming Hon AM, Mitcham A, Mohammed A, Mohammed A, Mohammed I, Mohammed R, Mohammed S, Mohammed S, **Clement Y**.

*Knowledge, Attitudes & Practices Regarding Marijuana Use Among Cancer Patients in Trinidad.*

3rd Annual NWRHA Research Day. November 2019, Trinidad.

#### N Lyons N, J Edwards.

*Using differentiated models of care to maintain gains in ART retention during the COVID-19 pandemic: Lessons from a large treatment facility in Trinidad and Tobago.*

23rd International AIDS Conference (*AIDS 2020: Virtual*). Virtual Poster Exhibition July 04, 2020

*School of Pharmacy*

Hunte S, **Maharaj S**, Ivey M, Sutherland M, Naidu R, St. Bernard G, Headley N, Simeon D, *An Assessment of the Preparedness of Primary Health Care Facilities in Trinidad and Tobago for COVID-19: Preliminary Findings*  
National Health Research Conference  
Virtually, November 2020

**Maharaj S,**

*Over Health Impact of COVID-19 on the Caribbean*  
COVID-19 in the Caribbean: Successes, Challenges, Opportunities Virtual Symposium, University of Miami  
November 2020

Hunte S, **Maharaj S**, Ivey M, Sutherland M, Naidu R, St. Bernard G, Headley N, Simeon D, *An Assessment of the Preparedness of Primary Health Care Facilities in Trinidad and Tobago for COVID-19: Preliminary Findings*  
Virtual Symposium of The UWI St. Augustine COVID-19 Research Group  
September 2020

**Maharaj S,**

*Building a Planetary Health Regional Hub*  
Planetary Health Annual Meeting, Pre-Conference Satellite Event, Stanford University  
September 4th, 2019

**Conference Papers & Proceedings**

*Department of Clinical Medical Sciences*

**N. Baboolal.**

*The National Prevalence Study of Dementia in a country with high levels of cardiovascular risk factors: Are we prepared for the tsunami.*  
Presented at Biennial Neurology Conference Trinidad and Tobago. 2019.

Petricca K, Boateng R, Tang B, Denburg A, Alexis C, **Bodkyn C**, Browne-Farmer C, McLean-Salmon S, SinQuee-Brown C, Reece-Mills M.  
*Health systems determinants of childhood cancer drug access: A comparative mixed-methods study of four Caribbean countries.*  
52nd Congress of the International Society of Paediatric Oncology, SIOP 2020  
Virtual conference

Tang B, **Bodkyn C**, Gupta S, Denburg A.  
*Access to WHO essential medicines for childhood cancer care in Trinidad and Tobago: A health system analysis of barriers and enablers.*  
51st Congress of the International Society of Paediatric Oncology,  
2019, Lyon, France.

*Department of Clinical Surgical Sciences*

**Quan Soon, C.**

*Juvenile Hallux Valgus: To wait or operate. A 20-year retrospective review at the Princess Elizabeth Centre in Trinidad and Tobago.*  
Podium Presentation at The Caribbean Association of Orthopaedic Surgeons' 14th Annual Conference,  
October 2019

Bidaisee S, **Mencia, M.**, Hoford R, Young Pong C.  
*The Combined Hip Procedure (CHP) : A case report.*  
Society of Surgeons National Ground Round 2019  
Ali A, Bidaisee S, Beharry A, Mencia M.  
*Transient Osteoporosis of the Hip in Pregnancy: A case report.*  
Society of Surgeons National Ground Round 2019

**Mencia, M.**

*Outpatient arthroplasty in the Caribbean: Is the time now?*  
Caribbean Association of Orthopaedic Surgeons Annual Meeting  
Oct 4-6, 2019 Hyatt Regency Hotel Trinidad

**Mencia, M.**

*One-stage exchange arthroplasty for peri-prosthetic hip joint infection.*  
Caribbean Association of Orthopaedic Surgeons Annual Meeting  
Oct 4-6, 2019 Hyatt Regency Hotel Trinidad

S. Bidaisee, **Mencia, M.**

*Same day cancellation of elective orthopaedic surgery at the Port of Spain General Hospital* Caribbean Association of Orthopaedic Surgeons Annual Meeting  
Oct 4-6, 2019 Hyatt Regency Hotel Trinidad

Lewis S, Rauseo C, **Mencia, M.**

*FEAR: A fall epidemiological analysis and risk factor assessment.*  
Elderly symposium of the 4th Caribbean Conference,  
Oct 24, 2019 Magdalene Grand Beach & Golf Resort, Tobago

## Webinars and Virtual Conferences

Augustus M, **Beharry, A, Quan Soon, CH.**

*The Disappearing Ulna: Congenital Pseudarthrosis in a Patient with Neurofibromatosis Type 1.*

The Caribbean Association of Orthopaedic Surgeons' 14<sup>th</sup> Annual Conference,  
October 2019

Lousaing D, **Beharry, A,** Skeete R, Franklyn K.

*Total Contact Casting: A Forgotten Art: A Case Report.*

The Caribbean Association of Orthopaedic Surgeons' 14<sup>th</sup> Annual Conference,  
October 2019

**Mencia M,** Bidaisee S.

*Out-of-hours Operating in Orthopaedics at Port of Spain General Hospital: Is it Safe?*

The Caribbean Association of Orthopaedic Surgeons' 14<sup>th</sup> Annual Conference,  
October 2019

Augustus M, Goalan R, **Quan Soon, CH.**

*Isolated Unilateral Cleft Foot Associated With Urogenital and Abdominal Wall Malformations: A Case Report.*

The Caribbean Association of Orthopaedic Surgeons' 14<sup>th</sup> Annual Conference,  
October 2019

Bidaisee S, Ali A, Seepaul S, Kewley C, Pedro P, **Mencia M**

*Same day cancellation of elective orthopaedic surgery at the Port of Spain General Hospital: An observational study*

NWRHA Research Day: Innovation in Healthcare 2019  
Government Campus Plaza Auditorium  
Nov 29, 2019

**Mencia, M.M.**

*Outpatient Arthroplasty in the Caribbean: Is the time now?*

NWRHA Research Day: Innovation in Healthcare 2019  
Government Campus Plaza Auditorium  
Nov 29, 2019

**Mencia, M.M.**

*One-stage exchange arthroplasty for peri-prosthetic hip joint infection*

NWRHA Research Day: Innovation in Healthcare 2019  
Government Campus Plaza Auditorium  
Nov 29, 2019

**Mencia M.M,** Hoford R, Young Pong C.

*The Combined Hip Procedure (CHP) : A case report and literature review*

NWRHA Research Day: Innovation in Healthcare 2019  
Government Campus Plaza Auditorium  
Nov 29, 2019

Durga-Lyons S, **Brady B.M.**

*A review of hysterectomies performed for recurrent postmenopausal bleeding of undetermined cause over a four-year period at a major hospital in Trinidad.*

NWRHA Research Day: Innovation in Healthcare 2019  
Government Campus Plaza Auditorium  
Nov 29, 2019

Durga-Lyons S, Ramdass J, Harbajan A., **Brady B.M.**

*Case Report: An Abdominal Pregnancy.*

NWRHA Research Day: Innovation in Healthcare 2019  
Government Campus Plaza Auditorium  
Nov 29, 2019

## School of Veterinary Medicine

**C. Sant, V. Kisson, M.A. Driscoll, F. Mohammed, A. Bally, A. K. Persad, K. Georges, R. Suepaul, I. Pargass, R. Charles, L.**

Gyan, V. Lashley, D. Kangaloo, M.J

*A case report of Trypanosoma vivax in a sheep in Trinidad, West Indies*

BSP Trypanosomiasis & Leishmaniasis Seminar  
Granada, Spain March 2020

**C. Sant, K.Vernon, S.Khan, C.Hanna, B.Clarke, L.Gyan, R. Charles, K. Georges**

*Angiostrongylus cantonensis and the giant African Snail – threat or not?*

31st Caribbean Veterinary Medical Association Conference,  
Port of Spain, Trinidad, November 2019.

**C. Oura**

*Rolling out One Health across the Caribbean region from the bottom up*

Global Health Summit, AVMA annual convention  
Washington DC, USA, August 2019.

**C. Oura**

*African Swine Fever – Out of Africa and Coming Your Way. Why is This Virus so Difficult to Control?*

Global Health Summit, AVMA annual convention  
Washington DC, USA, August 2019.

**C. Oura**

*Agricultural and Livestock perspectives: enhancing the One Health approach.*

Caribbean Planetary Health Conference,  
UWI, St Augustine, Trinidad and Tobago, January 2020

**C. Oura**

*African swine fever – why we should get ourselves prepared in the Caribbean.*

African Swine Fever preparedness online regional (CaribVET) conference,  
Port of Spain, Trinidad, March 2020

**C. Oura**

*African swine fever – how do we recognize it in the field? African swine fever Preparedness.*

Online regional (CaribVET) conference,  
Port of Spain, Trinidad, March 2020

**C. Oura**

*COVID-19 – What you need to know?*

CaribVET online Symposium entitled “COVID-19 essential Information for Vets”.  
Port of Spain, Trinidad, March 2020

**C. Oura**

*Is wildlife a public health problem?*

UWI online COVID-19 Symposium (UWI TV),  
St. Augustine, Trinidad March 2020

**C. Oura**

*Roadmap towards an African Swine Fever Operational / Preparedness plan,*

CaribVET Annual Symposium and Meeting,  
St. Augustine, Trinidad May 2020.

**C. Oura**

*What is the potential for future zoonoses from wild animals in Trinidad and Tobago?*

COVID-19 Symposium,  
St. Augustine, Trinidad, June 2020.

**C. Oura**

*Update of SARS-CoV-2 – Transmission, Control, and Prevention.*

Virtual Symposium: Navigating the return to dental practice: A new normal?

St. Augustine, Trinidad, June 2020.

**C. Oura**

*COVID-19 – the importance of following a One Health approach.*

Virtual Symposium: Animal lovers and COVID-19 – what do you need to know?

St. Augustine, Trinidad July 2020.

**I. Pargass**

*Cholangiocarcinoma in a Doe –*

31st Caribbean Veterinary Medical Association Conference,  
Port of Spain, Trinidad November 2019

**L. Benjamin**

*3D Printing of Anatomical Models for Veterinary Education.*

Canada-Caribbean Research Symposium

Mona, Jamaica, February 2020.

Pradel J, Gongora V, Lepoureau Frias M T, Abreu Percado, Zamora P, **C.Oura** , A.Vokaty , C.Lazarus, A.Delgado ,E. Albina,

**R.A.Charles, K.Georges, J.Seetahal**, P.Bedford, M.Trotman , B.Sanford , S.Tortosa La Osa , P.Morales, G.Peters

*Contributions of the Caribbean Animal Health Network (CaribVET) to the improvement of animal health cooperation and disease surveillance and control capacities in the Caribbean.*

Caribbean Science and Innovation Meeting,  
Le Gosier, Guadeloupe, October 2019.

**A. Sookraj G.Brown S. Rajh, L Gyan, K. Frontera Acevedo**

*A case of Inclusion Body Disease in a Boa Constrictor from Trinidad and Tobago.*

31st Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad. November 2019.

**K. Frontera-Acevedo, V Kisson, M Diptee**

*Case Report: Meibomian Carcinoma of the Bovine Eyelid.*

31st Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad. November 2019

**V. Kisson, S. Rajh, M. Diptee, K. Frontera-Acevedo**

*Case Report: Odontogenic Tumour of the oropharynx of a ram.*

31st Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad. November 2019

**S. Rajh, BM, Manohar, K.Frontera-Acevedo, C. Oura, S. Suepaul, C. Unakal, K. Georges, R. Mohammed , L.Gyan , R. Suepaul**

*A study of pulmonary lesions identified in sheep and goat carcasses in Trinidad and Tobago in 2018.*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad. November 2019

**K.Frontera-Acevedo, L.Gyan, R.Suepaul**

*A review of the cause of death and mode of injury of suspected animal abuse cases in Trinidad and Tobago, 2008-2015.*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad. November 2019

**K. Frontera-Acevedo, C. Phillips**

*Identification of Myxozoa Parasite In The Connective Tissue Of A Cascadura Fish (Hoplosternum Littorale).*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad. November 2019

**R. Suepaul, S.Rajh, K.Frontera-Acevedo, I.Pargass,  
S.Suepaul**

*A review of neoplastic and non-neoplastic skin tumours in dogs in Trinidad from 2010-2015.*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad. November 2019

**S. Rajh, K.Frontera-Acevedo, S.Suepaul , B.Manohar,  
I.Pargass, AVC Rao, R.Suepaul**

*A study of the histological classification and grading of canine malignant mammary tumors in Trinidad and Tobago.*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad. November 2019

**A. Jayasooriya, M. Hulme, K. Georges, and V. Sundaram.**

*Comparative anatomy and histology of pectoralis muscle of nec-tarivorous birds with different flight capabilities: hummingbirds (Trochilidae) and bananaquit (Coereba flaviola).*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**V. Sundaram, T. Mohammed, S. Rampersad, and G.  
Williams.**

*Atresia ani type II (imperforate anus) with multiple defects in an adult dog.*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**N. Zyuzikov, A. Frederick, S. Mohammed, and V.Sundaram.**

*Mechanisms of tumour Treating Fields therapy.*

16<sup>th</sup> International Congress of Radiation Research (ICCR 2019).  
Manchester, United Kingdom, August 2019.

**D Khan, Persad A.K.**

*Pig production practices and constraints faced by small producers in Trinidad.*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**A. Boodram., Sam C., Walcott E., Hutchinson L., Yusuf A.,  
Suepaul S., Persad A.K.,**

*Frequency of faecal contamination of lettuce sold in Trinidad and antimicrobial resistance of recovered Escherichia coli isolates.*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain Trinidad and Tobago November 2019

**X. Chapman X, Marajh R, Imam S, Green S, Yusuf A, Persad  
A.K.**

*Bacterial contamination of cellular phones at a veterinary school and veterinary teaching hospital*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**N. Mahabir, A. Nanan, A.K. Persad, M. Diptee, M. Driscoll, M.  
J. Morris.**

*Surgical repair of atresia ani and rectovaginal fistula in a 3-Month-old crossbred piglet.*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**A. Nanan, N. Mahabir, A.K. Persad, M. Diptee, M. Driscoll, M.  
J. Morris.**

*A Case Report of A Bladder Marsupialization to correct Obstructive Urolithiasis in a 3 Month old Boer Goat*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**A. Nanan, N. Mahabir, A.K. Persad, M. Diptee, M. Driscoll, M.  
J. Morris.**

*A case report of a hybrid external fixator for fracture repair in a 3-month-old boer goat (Capra hircus)*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**T. Auguste, Thomas S, Williams G, Legall C, Singh O**

*Holes in the Mouth: A Case of Secondary Cleft Palate*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**J Thomas, Auguste T**

*Was it the Maggots or the Drugs? – A Case of TVT and Oral Papillomas in a Dog*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**J. White, Garvey AX, Ramlal S, Brown G.**

*Investigating catastrophic musculoskeletal injury in Caribbean Thoroughbreds: Jamaica (June 2018- September 2019).*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**J. White, O'Neill A, Brailey D, Beman G, Richardson T.**

*Case series: Carpal slab fracture repair under arthroscopic guidance in Thoroughbred racehorses.*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**J. White, Beman G, Brailey D, Richardson T, Ali C, Martin P.**

*Case report: Surgical management of preputial melanoma in a Warmblood gelding.*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019.

**J. White, Brailey D, Beman G, O'Neill A, Richardson T.**

*Case series: Condylar fracture repair of the third metacarpal bone in racing Thoroughbreds in the Caribbean.*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**J. White, Richardson T, Brailey D, Neckchuddy S, Suepaul R.**

*Prospective study investigating catastrophic musculoskeletal injuries and sudden death of Thoroughbred racehorses in Trinidad (December 2018 to September 2019).*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**J. White, Pierre RJ, Garvey A, Ali C, Brown G.**

*Wiring techniques in a horse and a tapir: Sharing more than a guttural pouch.*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**J. White**

*Equine Surgery: New Horizons in the Caribbean*

31<sup>st</sup> Caribbean Veterinary Medical Association Conference  
Port of Spain, Trinidad and Tobago, November 2019

**Other Publications**

*Department of Para-Clinical Sciences*

**Technical report**

**Clement Y, Ignacio D, Jankie S, Reid AE, Giddings S, Pooransingh S, Watson H, Sampson-Francis S.** A review of the evidence for the use of drugs for the management of COVID-19. Submitted to Ministry of Health, Government of the Republic of Trinidad and Tobago, March 2020.

*Department of Pre-Clinical Sciences*

**PhD and MPhil Theses**

**Sahadeo NSD** (2019). Molecular epidemiology and evolution of arboviruses associated with acute fevers in Trinidad and comparison of clinical and laboratory features at presentation. *PhD Thesis*. The University of the West Indies, St. Augustine.

**Terry Ramnansingh** (2020) To investigate the association of VDR gene polymorphism with inflammatory markers in type 2 diabetes (T2DM). *PhD Thesis*. The University of the West Indies, St. Augustine

**Citations**

**Carrington, CVF.** Honorary degree citation for Pelham Goddard. St. Augustine Campus Graduation, October 2019

**Carrington, CVF.** Honorary degree citation for Harold Ramkissoon. St. Augustine Campus Graduation, October 2019

**Carrington, CVF.** Honorary degree citation for Ewart Williams. St. Augustine Campus Graduation, October 2019

**Carrington, CVF.** Citation for Adesh Ramsubhag. Vice-Chancellor's Awards for Excellence, Cavehill Campus, October 2019.

**Carrington, CVF.** Citation for Annmarie Bissessar. Vice-Chancellor's Awards for Excellence, Cavehill Campus, October 2019.

## Faculty of Science & Technology

### Journal Publications

#### Department of Chemistry

Schulze-Makuch, D., S. Haque, **D. Beckles**, P. Schmitt-Kopplin, M. Harir, B. Schneider, C. Stumpp and D. Wagner. (2020) A chemical and microbial characterisation of selected mud volcanoes in Trinidad reveals pathogens introduced by surface water and rainwater. *Science of the Total Environment*. 707: 136087. <https://doi.org/10.1016/j.scitotenv.2019.136087>.

Collimore, W.A., **G.-A., Bent**. (2020) A newly modified QuEChERS method for the analysis of organochlorine and organophosphate pesticide residues in select fruits and vegetables. *Environmental Monitoring and Assessment* 192 (2), 1 – 10.

Clarke, C. E.; **F. K., Mohammed, A., Hamid, G.-A., Bent**, (2020) Quantification and health risk assessment of heavy metals in residual floor dust at an indoor firing range: A case study in Trinidad, W.I. *International Journal of Environmental Health Research*. DOI: [10.1080/09603123.2020.1793917](https://doi.org/10.1080/09603123.2020.1793917)

Subratti, A.; **Lalgee, J. L.; Jalsa, N. K.** (2020) Robust, Efficient, and Economical Magnetic Stirrer: A Device Based on Pulsed Width Modulation, Built Using Mainly Recycled Parts. *Journal of Chemical Education*, 97, 305-307.

Boodram, Shivani; Roy, Soumyabrata; **Singh, Nadia; Fairman, Richard A.**; Peter, Sebastian C.; Rambaran, Varma H.; Investigations into an Intramolecular Proton Transfer and Solvent Dependent Acid-Base Equilibria in 2,6-Pyridinediacetic Acid, *ChemistrySelect*, (2019), 4, 14, 4301-4307.

Kumar, A.; Kurbah, S. D.; Syiemlieh, I.; Dhanpat, S.A.; Borthakur, R.; Lal R. A. (2020) Synthesis, Characterization, Reactivity and Catalytic Studies of Heterobimetallic Vanadium(V) Complexes Containing Hydrazone Ligands. *Inorganica Chimica Acta*, 515, 120068 (Elsevier) (Impact factor: 2.433). [Citations: ] <https://doi.org/10.1016/j.ica.2020.120068>

Asthana, M.; Syiemlieh, I.; Kumar, A.; Lal, R. A. (2020) Direct oxidation of alcohols catalyzed by heterometallic complex [CuNi(bz)<sub>3</sub>(bpy)<sub>2</sub>]ClO<sub>4</sub> to aldehydes and ketones mediated by hydrogen peroxide as a terminal oxidant. *Inorganica Chimica Acta*, 502, 119286. (Elsevier) (Impact factor: 2.433).[Citations: 1] <https://doi.org/10.1016/j.ica.2019.119286>

R Borthakur, A Kumar, AK De, RA Lal (2019) Synthesis, characterization and electrochemical properties of copper (II) complexes derived from succinoyldihydrazine Schiff base ligands. *Arabian Journal of Chemistry* 12 (8), 2192-2205. (Elsevier) (Impact factor: 4.762).[Citations: 3] <https://doi.org/10.1016/j.arabjc.2014.12.040>

Meagan Smith & **Faisal K. Mohammed** (2020) Heavy metal intake and health risk implications from consumption of dried pulses in Trinidad and Tobago, W.I, *Food Additives & Contaminants: Part B*, 13:3, 207-214, DOI: 10.1080/19393210.2020.1762759

**Mohammed, T.**, Dial, D., Maharaj, D., Smith, C., Persad, N., Mohammed, S., & Mohammed, A. (2020) Heavy metals in children toys and baby items commonly sold in Trinidad and Tobago. *Journal of Environmental Chemistry and Ecotoxicology*, 12(1), 59-64.

**Mohammed, T;** Williams, K., Mohammed, E., Maharaj, D., Mohammed, A., (2020) Total and Estimated Inorganic Arsenic Levels in Imported and Local Chicken Sold in Trinidad and Tobago. *Journal of food protection* 83 (4), 710-714.

#### Department of Computing & Information Technology

**Khan K.** and **W. Goodridge**, S-MDP (2019) Streaming With Markov Decision Processes, in *IEEE Transactions on Multimedia*, vol. 21, no. 8, pp. 2012-2025, Aug. 2019. DOI: 10.1109/TMM.2019.2892304.

**Khan K.** and **W. Goodridge** (2020) Reinforcement Learning in DASH, *International Journal of Intelligent Systems and Applications*, 11, no. 5: 4386-4392, Mar. 2020.

**Khan K.** and E. Ramsahai, (2020) Categorizing 2019-n-CoV Twitter Hashtag Data by Clustering. *The International Journal of Artificial Intelligence & Applications* (IJAIA), vol. 11, no. 4, pp. 41-52, July 2020.

**Khan K.** and A. Sahai, (2020) Tabu Ant Colony Optimisation for School Timetable Scheduling Problem. *International Journal of Engineering Research and Applications*, vol. 10, no. 5, pp. 01-09, May 2020.

**Khan K.** and E. Ramsahai,(2020) 2019-nCoV tweets to aid worldwide emergency response. *International Journal of Innovative Science Engineering and Technology* (IJSET), vol. 7, no. 7, pp. 1-13, 2020.

Zhuang, N., Qi, G.J., **T.D. Kieu**, Hua, K.A., (2019) Rethinking the Combined and Individual Orders of Derivative of States for Differential Recurrent Neural Networks: Deep Differential Recurrent Neural Networks. *ACM Transactions on Multimedia Computing Communications and Applications (TOMM)*, Vol. 15, No. 3, Sep. 2019, pp. 83:1-83:21. (SCI, IF: 3.275).

Manohar, K. and **T.D. Kieu**, (2019) A Centroid Based Vector Quantization Reversible Data Hiding Technique. *Multimedia Tools and Applications*, Vol. 78, No. 18, Sep. 2019, pp. 25273-25298. (SCI, IF: 2.313).

Ramroach, S. and **P. Hosein**, (2019) A Smart Shuffle Approach to Playlist Shuffling with User Defined Constraints. *International Journal of Music Science, Technology and Art*, Volume 2, Issue 2. Sept, 2019.

#### Department of Life Sciences

Marley, G.S., **Deacon, A.E.**, Phillip, D.A.T. and Lawrence, A.J. (2020) Effects of a no-take reserve on mangrove fish assemblages: incorporating seascape connectivity. *Marine Ecology Progress Series* 649: 141-153

Marley, G. S., **Deacon, A. E.**, Phillip, D. A., & Lawrence, A. J. (2020). Mangrove or mudflat: Prioritising fish habitat for conservation in a turbid tropical estuary. *Estuarine, Coastal and Shelf Science*, 106788

**Deacon, A.E.**, Ghosh, S.K., Bhat, A. and Magurran, A.E. (2019) Predatory behaviour of female guppies (*Poecilia reticulata*) in a mosquito control context: the importance of social and habitat factors. *Aquatic Invasions* 14(3): 478–489

Magellan, K., Alexander, M., **Deacon, A.** and Wong, A. (2019) Behaviour and Aquatic Invasions in the 21st Century: Progress, Trends and Future Research. *Aquatic Invasions* 14(3): 412–416

Dookie, M., Ali, O., **Ramsubhag, A., Jayaraman, J.** (2020). Flowering gene regulation in tomato plants treated with brown seaweed extracts. *Scientia Horticulturae*, DOI:10.1016/j.scienta.2020.109715. (Elsevier).

Ramkissoon, A., Seepersaud, M., Maxwell, A., **Jayaraman, J. and Ramsubhag, A.** (2020). Isolation and Antibacterial Activity of Indole Alkaloids from *Pseudomonas aeruginosa* UW1-1. *Molecules* 25, 3744; doi:10.3390/molecules25163744 (MDPI).

Ali, R., **Mohammed, A., Jayaraman, J.**, Nandram, N., Feng, R.S., Lezcano, R.D., Seeramsingh, R., Daniel, B., Lovin, D.D., Severson, D.W. and **Ramsubhag, A.**, (2019). Changing patterns in the distribution of the Mayaro virus vector *Haemagogus* species in Trinidad, West Indies. *Acta tropica* 199, DOI: 10.1016/j.actatropica.2019.105108. (Elsevier).

Ronell SH Bridgemohan, Dave S Bachoon, Yingfan Wang, Puran Bridgemohan, Christine Mutiti, **Adesh Ramsubhag.** (2019) Identifying the primary sources of fecal contamination along the beaches and rivers of Trinidad. *Journal of Water and Health* 18 (2), 229-238.

S Ramoutar, **A Mohammed, A Ramsubhag.** (2019) Laboratory-scale bioremediation potential of single and consortia fungal isolates from two natural hydrocarbon seepages in Trinidad, West Indies. *Bioremediation Journal* 23 (3), 131-141.

Akilah T Stewart, Vrijesh Tripathi, **Azad Mohammed**, Catherine Seepersad, Adrian Cashman, Dave D Chadee, **Adesh Ramsubhag.** (2019) A waterborne disease index (wbdi) for rural communities in the Caribbean. *American journal of tropical medicine and hygiene* 101, 374-375.

Villafana, R. T., and **S. N. Rampersad.** (2020) Signatures of TRI5, TRI8 and TRI11 protein sequences of *Fusarium incarnatum-equiseti* species complex (FIESC) indicate differential trichothecene analogue production. *Toxins* 12 386. Impact factor: 3.895

**Rampersad, S. N.** (2020) Pathogenomics and management of *Fusarium* diseases in plants. *Pathogens* 9 340. Impact factor: 3.018

Villafana, R. T., and **S. N. Rampersad.** (2020) Three-locus sequence identification and differential tebuconazole sensitivity suggest novel *Fusarium equiseti* haplotype from Trinidad. *Pathogens* 9 175. Impact factor: 3.018

Villafana, R. T., and **S. N. Rampersad.** (2020) Diversity, structure and synteny of the cutinase gene of *Colletotrichum* species. *Ecology and Evolution* 10 1425-1443. Impact factor: 2.34

Villafana, R. T., A. C. Ramdass, and **S. N. Rampersad.** (2020) TRI genotyping and chemotyping: a balance of power. *Toxins* 12: 64. Impact factor: 3.895

Ramdass, A. C., R. T. Villafana, and **S. N. Rampersad**. (2019) Comparative sequence analysis of TRI1 of Fusarium. *Toxins* 11 689. Impact factor: 3.895

Villafana, R. T., A. C. Rampersad, and **S. N. Rampersad**. (2019) Development of a new methodology for the detection of Colletotrichum truncatum and Fusarium sp. in bell pepper seed. *Phytoparasitica* 47 543-555. Impact factor: 1.137

Khalil Ali, Pathmanathan Umaharan, Richard Brathwaite, **Winston Elibox**. (2019) Evaluation of yield and other agronomic traits in pepper (Capsicum chinense Jacq.) under open-field conditions in the humid tropics. *Tropical Agriculture* 96(95): 15-26.

Sarah Evelyn, **Aidan D Farrell, Winston Elibox**, Kathryn De Abreu, Pathmanathan Umaharan. (2020) The impact of light on vase life in (Anthurium andraeanum Hort.) cut flowers. *Postharvest Biology and Technology*, 159. Article 110984.

JJ Cruz-Motta, P Miloslavich, E Guerra-Castro, A Hernández-Agreda, C. Herrera, F. Barros, S. A. Navarrete, R. D. Sepúlveda, T. M. Glasby, G. Bigatti, M. Cardenas-Calle, P. B. M. Carneiro, A. Carranza, A. A. V. Flores, P. Gil-Kodaka, **J. Gobin**, J. Gutiérrez, E. Klein, M. Krull, J.F. Lazarus, E. Londoño-Cruz, T. Lotufo, E.C. Macaya, C. Mora, E. Mora, G. Palomo, M. Parragué, F. Pellizzari, R. Retamales, R. M. Rocha, L. Romero. (2020) Latitudinal patterns of species diversity on South American rocky shores: Local processes lead to contrasting trends in regional and local species diversity. *Journal of Biogeography* 47 (9), 1966-1979 <https://doi.org/10.1111/jbi.13869>

L Ali, E Grey, D Singh, **A Mohammed**, V Tripathi, **J Gobin, I Ramnarine**. (2020) An evaluation of the public's Knowledge, Attitudes and Practices (KAP) in Trinidad and Tobago regarding sharks and shark consumption. *Plos one* 15 (6), e0234499; <https://doi.org/10.1371/journal.pone.0234499>

#### Department of Mathematics & Statistics

P. Sreenivasulu., **S.R. Gunakala**, T, Poornima, N. Bhaskar Reddy, **V.M. Job**. (2020) Aligned Magnetic Field and Navier Slip Effects on Free Convective Radiative Flow of Nanofluids with Imbedded Carbon Nanotubes: A Lie Group Analysis. *SN Applied Sciences* 2: 1283. (Springer Publisher- ISSN 2523-3963, Impact Factor = 0, Citations=2)

**Tyrone Dass, S. R. Gunakala, D.M.G. Comissiong**. (2020) The Combined Effect of Couple Stresses Variable viscosity and Velocity-Slip on the Lubrication of Finite Journal Bearing. *Ain Shams Engineering Journal*, Volume 11, Issue 2, June 2020, Pages 501-518. (Elsevier Publisher ISSN 2090-4479, Impact Factor = 1.949, Citations=1).

Sookoo, M. B., **S. R. Gunakala**. (2020) Fixed Point Theorem for Multivalued Quasi-Contraction Maps in a V-Fuzzy Metric Space. *Abstract and applied Analysis*, Volume 4 (4), Volume 2020, Article ID 2609316, 7 pages. (Hindawi Publishers ISSN: 1085-3375, Journal Impact Factor = 0; Citations = 0)

**Job V. M., V.M., S. R. Gunakala**. (2019) Unsteady Pulsatile Hydromagnetic Counter-Current Flows of Cu-Water and CuO-Water Nanofluids through Two Elastic Coaxial Pipes with Porous Blocks. *International Journal of Applied and Computational Mathematics* 5(1).

Vijayalakshmi, P., **S. R. Gunakala**, I.L. Animasaun, R. Sivaraj. (2019) Chemical Reaction and Non-uniform heat Source / sink Effects on Casson Fluid Flow over a Vertical Cone and Flat Plate Saturated with Porous Medium. *Applied Mathematics and Scientific Computing*. (Springer Publisher- ISBN 978-3-030-01122-2, Impact Factor = 0, Citations=2).

Poornima T., P. Sreenivasulu, N.B. Reddy, **S.R. Gunakala**. (2019) The Effects of Homo-/Heterogeneous Chemical Reaction on Williamson MHD Stagnation Point Slip Flow: A Numerical Study. *Applied Mathematics and Scientific Computing*, 2019 (Springer Publisher- ISBN 978-3-030-01122-2, Impact Factor = 0, Citations=1)

Talukdar D., M. Tripathi, **V. Tripathi**, S. Teelucksingh. (2020) Prevalence and associated factors of undiagnosed hypertension among women aged 15-49 years in India: An Analysis of National Family Health Survey-4 data. *Journal of Human Hypertension*. <https://doi.org/10.1038/s41371-020-0384-7>. [IF-2019: 2.26 & Citations – 0] PMID: 32704029

Balkaran R.L., S.S. Teelucksingh, R.S. Naidu, K.E. Lutchmansingh, L.A. Morris, **V. Tripathi**, Teelucksingh S. (2020) The use of the slipping slipper sign to explore the connection between the foot and the mouth in patients with diabetes mellitus. *Puerto Rico Health Sciences Journal* 32(2): 216-221. [IF-2018: 0.40 & Citations – 0] PMID: 32663921

Ali L., E. Grey, D. Singh, A. Mohammed, **V. Tripathi**, J. Gobin, I. Ramnarine (2020). An evaluation of the public's Knowledge, Attitudes and Practices (KAP) in Trinidad and Tobago regarding sharks and shark consumption, *PLoS One* 15(6): e0234499. <https://doi.org/10.1371/journal.pone.0234499> [IF-2019: 2.74 & Citations – 0] PMID: 32516322

**Sonron E., V. Tripathi**, S. Hariharan. (2020) The impact of sociodemographic and socioeconomic factors on the burden of cataract in small island developing states (SIDs) in the Caribbean from 1990 to 2016. Cataract burden in Caribbean small island developing states. *Ophthalmic Epidemiologic* 27(2): 132–140. [doi.org/10.1080/09286586.2019.1700534](https://doi.org/10.1080/09286586.2019.1700534) [IF-2019: 1.50 & Citations – 0] PMID: 31818167.

Van Lunenburg J.T.J., **V. Tripathi**, V.S.H Chan, V.K.H. Lee, E.Y. Lee, V. Vardhanabhuti, K.W.H. Chiu (2019) Sequence and Observer Variability in Gadoteric Acid-Enhanced MRI Lesion Measurements in Hepatocellular Carcinoma. *Academic Radiology* <https://doi.org/10.1016/j.acra.2019.05.021> (on line) [IF – 2019: 2.45 & Citations – 2] PMID:31326308.

Ramsahai E., **V. Tripathi** and M. John. (2019) Cancer driver genes: A guilty by resemblance doctrine. *PeerJ* 7:e6979: pages 1-20. DOI: 10.7717/peerj.6979.

Ali N., S. Alli, A. Ali, A. Ali, C. Ali, J. Abraham, I. Abdool, **A. Antoine, I. Dialsingh**, R. Parasram, S. Pooransingh. (2020) Antibiotic Resistance in Trinidad: a population-based survey of adults. *Caribbean Medical Journal*.

Mohammed R., **A. Mohammed**, L. Addison, **I. Dialsingh**, K. K. Sant and G. W. Garcia. (2020) Comparing Post-Partum Growth by Body Weight between sex and litter size of Agouti (*Dasyprocta leporina*) offspring from birth to 365 days old. *Current Research in Agricultural Sciences*. 6(2):121-134.

#### Department of Physics

Beharry, S.L., Gabriels, D., Lobo, D., **Clarke, R.** (2019) A 35-year meteorological drought analysis in the Caribbean Region: case study of the small island state of Trinidad and Tobago. *SN Appl. Sci.* 1, 1256 <https://doi.org/10.1007/s42452-019-1296-4>

Mohan, S., **Clarke, R.M.** & **Chadee, X.T.** (2020) Variations in extreme temperature and precipitation for a Caribbean island: Barbados (1969–2017). *Theor Appl Climatol* 140, 1277–1290 <https://doi.org/10.1007/s00704-020-03157-9>

Mc Shine, Nkese D.; **Clarke, Ricardo M.**; Gualdi, Silvio; Navarra, Antonio; **Chadee, Xsitaz T.** 2019. Influences of the Atlantic and Pacific Oceans on Rainy Season Precipitation for the Southernmost Caribbean Small Island State, Trinidad. *Atmosphere* 10, no. 11: 707. <https://doi.org/10.3390/atmos10110707>

Kumar, S., A. K. Sharma, M. K. Sohal, **D. P. Sharma**, A. K. Debnath, D. K. Aswal, A. Mahajan (2020). Room temperature highly sensitive chlorine sensor based on reduced graphene oxide anchored with substituted copper phthalocyanine. *Sensors and Actuators B: Chemical*, Elsevier, Vol. 327, <https://doi.org/10.1016/j.snb.2020.128925>.

**Sharma, D. P.**, G. R. Basdeo, K. Ganga, M. Howard, N. Corbie and M. Baptiste (2019) Optimization of Microbial Fuel Cell for Energy Generation. *International Journal of Emerging Technologies and Innovative Research*, Vol. 6, No. 5, Pp. 963-976.

**Haque, S.**, Albada, N., & Rollocks, S. (2020) Cultural variances in significant life events: A focus on the English-Speaking Caribbean. *Human Arenas*, 1-20. Springer.

Dey, L. with **Haque, S.** (2020) Spitzer Observations of the Predicted Eddington Flare from Blazar OJ 287. *The Astrophysical Journal Letters*, 894(1), L1.

Pannekens, M., with **Haque, S.** (2020) Densely populated water droplets in heavy oil seeps. *Applied and environmental microbiology* 86,11,1-12.

Schulze-Makuch, D., **Haque, S.**, Beckles, D., Schmitt-Kopplin, P., Harir, M., Schneider, B., & Wagner, D. (2020) A chemical and microbial characterization of selected mud volcanoes in Trinidad reveals pathogens introduced by surface water and rain water. *Science of The Total Environment*, 707, 136087.

Rajkumar, B., & **Haque, S.** (2020). A Fractal Analysis of Magnetograms Within Active Regions. *Solar Physics*, 295(2), 10.

#### Books & Book Chapters

##### Department of Chemistry

**Mohammed, T.**, Mohammed, A., Alemu, J., White, S., Gobin, J., (2018). Chapter 28, Trinidad and Tobago. In C. Shephard (Eds), *World Seas: An Environmental Evaluation*, 2nd Edition Volume I: Europe, The Americas and West Africa. Elsevier Press

**R. Taylor** (2021) *Solution Processed Solar Cells: Materials and Device Engineering*, IOP Publishing; 2021.

## Department of Computing & Information Technology

S. Sooklal and **P. Hosein**, (2020) A Benefit Optimization approach to the Evaluation of Classification Algorithms in *Artificial Intelligence and Applied Mathematics in Engineering Problems*, Springer International, vol. 43, No. 1. Jan, 2020.

A. Singh and **P. Hosein**, (2020) On the Prediction of Possibly Forgotten Shopping Basket Items" in *Artificial Intelligence and Applied Mathematics in Engineering Problems*, Springer International, vol. 43, No. 1. Jan, 2020.

## Conference Presentations

### Department of Chemistry

Shobha A. Dhanpat, and **A. Kumar**.

*Rhenium (I) supramolecular rectangles for ion-sensing applications*

ACS Fall 2019 National Meeting & Exposition, San Diego, CA, USA, August 25 – 29, 2019

**Saraswatie Sankar, Vernetta Lewis, Riaz Hosein, Faisal Mohammed, Terry Mohammed, Azad Mohammed, Hayden Sinanan**, Botanical identification and chemical profiling of honey in Trinidad and Tobago, W.I., 10th Caribbean Beekeepers VIRTUAL Congress, 25 November - 28 November.

### Department of Life Sciences

**Deacon, A.E.**

*Escaping the aquarium: How a little fish from Trinidad has conquered the world.*

8th International Conference of Poeciliid Biologists, UNAM, Mexico City, September. (2019)

**Jayaraman J.**, Ali O., Dookie M., **Ramsubhag A.**,

*Bioefficacy of algal extracts as bioelicitors in horticultural crops.* Caribbean Science and Innovation Meeting, October 19-22, 2019, Universite des Antilles, Guadeloupe.

**Haraksingh, R.R.**

*Discovery of rare and novel variants associated with breast cancer in Trinidadian families using whole exome sequencing.*

American Society of Human Genetics Annual Meeting October 2019, Houston, U.S.A.

**Haraksingh, R.R.**

*Beyond BRCA: Discovery of Novel Genetic Variants Associated with Breast Cancer in Trinidadian Families.*

African Caribbean Cancer Consortium 12th Anniversary Meeting, October 13th 2019 Kingston, Jamaica.

**Haraksingh, R. R.**

*African Caribbean Cancer Consortium Cancer Genomics Workshop African Caribbean Cancer Consortium 12th Anniversary Meeting,* October 13th 2019 Kingston, Jamaica.

**Jayaraman J.**, Ali O., Dookie M., **Ramsubhag A.**,

*Bioefficacy of algal extracts as bioelicitors in horticultural crops.* Caribbean Science and Innovation Meeting, October 19-22, 2019, Universite des Antilles, Guadeloupe.

## Conference Papers & Proceedings

### Department of Chemistry

**R.Taylor**

The National Synchrotron Light Source II (NSLS-II) and Center for Functional Nanomaterials (CFN) Users' Meeting online from May 18 - 20, 2020. (Online)

**R.Taylor**

Commonwealth Chemistry Poster Symposium, 25 – 27 August, 2020; poster reviewer. (Online)

### Department of Computing & Information Technology

N. Chamansingh, **P. Hosein**,

*Using Topic Modelling to Correlate a Research Institution's Outputs with its Goals*

Future of Information and Communications Conference (FICC) 2020, San Francisco, USA. Mar, 2020.

**S. Ramoudith, P. Hosein**,

*A Trust Framework for the Collection of Reliable Crowd-Sourced Data*

Future of Information and Communications Conference (FICC) 2020, San Francisco, USA. Mar, 2020.

**P. Hosein, V. Job** and **A. Sankar-Ramkarran**,

*On the Sizing of Security Personnel Staff while accounting for Overtime Pay*

Advances in Optimization and Decision Science for Society, Services and Enterprises (AIRO Springer Series). Feb, 2020.

S. Ramneek, **P. Hosein**, S. Pack, K. Singh

*QoS-Based Zero-Rating of Cellular Applications*

The 34th International Conference on Information Networking, Barcelona, Spain. Jan, 2020.

D. Ramsook, **P. Hosein** and **A. Pooransingh**,  
*Intrusion Detection and Avoidance for a Heterogeneous Cluster of Web Sites*  
6th International Conference on Internet Science,  
Perpignan, France. Dec, 2019.

G. Rique, **P. Hosein** and **V. Arjoon**,  
*Analysis of Herd Behavior in Stock Prices using Machine Learning*  
6th International Conference on Internet Science,  
Perpignan, France. Dec, 2019.

S. Ramneek, **P. Hosein** and S. Jung,  
*A Network Neutral alternative to Free Basics*  
6th International Conference on Internet Science,  
Perpignan, France. Dec, 2019.

**P. Hosein** and **S. Ramoudith**,  
*A Metric for the Fair Comparison of ISPs*  
6th International Conference on Internet Science,  
Perpignan, France. Dec, 2019.

**P. Hosein**, **S. Ramoudith** and **K. Mallalieu**,  
*On Internet Resilience in Small Island States*  
6th International Conference on Internet Science,  
Perpignan, France. Dec, 2019.

S. Ramneek, S.-J. Cha; S. Hyub Jeon; Y. Jeong Jeong; J. Mee Kim;  
S. Jung; S. Pack; **P. Hosein** *Multi-access Edge Computing in 5G  
Network Slicing: Opportunities and Challenges*  
International Conference on Information and Communication  
Technology Convergence (ICTC). Oct, 2019.

**P. Hosein**, **I. Rahaman**, K. Nichols and K. Maharaj,  
*Recommendations for Long-Term Profit Optimization*  
The 1st Workshop on the Impact of Recommender Systems  
with ACM RecSys 2019, Copenhagen, Denmark. Sept, 2019.

**N. Seegobin**,  
International Training Workshop on Big Data for Developing  
Countries,  
The University of the West Indies, St. Augustine, 23 - 27 Sept,  
2019.

#### *Department of Mathematics & Statistics*

**V. M. Job**, **S. R. Gunakala**, P.V.S.N. Murthy, and R. Panneer  
Selvam.

*Numerical Study of MHD Convective Nanofluid Flows within a  
Corrugated Trapezoidal Enclosure*  
International Conference on Emerging Trends in Engineering  
and Technology,  
The University of the West Indies, St. Augustine, Trinidad and  
Tobago, 2020.

P. Sreenivasulu, **S. R. Gunakala**, T. Poornima, N. Bhaskar Reddy,  
and **V. M. Job**  
*Combined Effects of Inclined Magnetic Field and Navier Slip  
on Free Convective and Radiative Flow of Nanofluids with  
Imbedded Carbon Nanotubes: A Lie Group Analysis* International  
Conference on Emerging Trends in Engineering and  
Technology,  
The University of the West Indies, St. Augustine, Trinidad and  
Tobago, 2020.

J. Balkissoon, **S. R. Gunakala**, and **V. M. Job**.  
*Unsteady MHD Poiseuille Flow through a Porous Channel under  
an Oscillating Pressure Gradient and Uniform Suction and  
Injection*  
International Conference on Emerging Trends in Engineering  
and Technology  
The University of the West Indies, St. Augustine, Trinidad and  
Tobago, 2020.

**J. Veronique**, **S. R. Gunakala**, and **V. M. Job** .  
*Unsteady Hydromagnetic Couette Flow under an Oscillating  
Pressure Gradient and Uniform Suction and Injection*  
International Conference on Emerging Trends in Engineering  
and Technology,  
The University of the West Indies, St. Augustine, Trinidad and  
Tobago, 2020.

**T. Dass**, **S R. Gunakala**, **D.M.G. Comissiong**.  
*The Combined Effect of Magnetic Fluids with Couple Stresses*  
International Conference on Emerging Trends in Engineering  
and Technology,  
The University of the West Indies, St. Augustine, Trinidad and  
Tobago, 2020.

**Sankar, S R. Gunakala, D.M.G. Comissiong ,**

*Convective Heat Transfer on Stenosed Blood Flow Through Permeable Microcirculation in the Presence of a Magnetic Field.* International Conference on Emerging Trends in Engineering and Technology, The University of the West Indies, St. Augustine, Trinidad and Tobago, 2020.

*Department of Physics*

D. Ramganase, R. Ramoutar, J. M. Intosh-Abdool, A. Bleasdel, J. Rooplal, and **D. P. Sharma**

*Microbial Fuel Cell- An Alternative Energy Source for Trinidad and Tobago.*

The International Conference on Emerging Trends in Engineering & Technology (IConETech-2020), The UWI, St. Augustine Campus, Trinidad and Tobago, June 1-5, Pp. 36-43. <https://doi.org/10.47412/YDQV9793>.

**Haque, S.**

*Destination: Caribbean – sun, sand and... skies*  
IAU Symposia -IAUS 358: Astronomy for Equity, Diversity and Inclusion — a roadmap to action within the framework of the IAU 100th Anniversary  
13 Nov 2019 Japan.

**Other Publications**

*Department of Chemistry*

*Journalism/Public Commentary*

Lannate in ginger – A wake up call. – Contributors: Collimore, W. A. & **G.-A. Bent**. Trinidad and Tobago, Newsday. June 27, 2020. Available at: <https://newsday.co.tt/2020/06/27/lannate-in-ginger-a-wake-up-call/>.

*Other Output/Manual*

Cox, L., **D.M. Beckles**. (2019) POPs are All Around Us: Primary School Teachers' Instruction Manual. Prepared for the Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean Region, Trinidad and Tobago (BCRC Caribbean).

**Beckles, D.M.,** L. Cox. (2019) POPs are All Around Us: Secondary School Teachers' Instruction Manual. Prepared for the Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean Region, Trinidad and Tobago (BCRC Caribbean).

*Department of Life Sciences*

*Edited - Journal Issue*

Magellan, K., **Deacon, A.E.**, Alexander, M. and M. Wong (2019) Editors, Special Issue of Aquatic Invasions: 'Behaviour and Aquatic Invasions'.

## Faculty of Social Sciences

**Journal Publications**

*Department of Behavioural Sciences*

**Chadee, D.**, S. Ali, A. Burke. (2019) Effects of punishment, social norms, and peer pressure on delinquency: Spare the rod and spoil the child? *Journal of Social and Personal Relationships*, 0265407518798137.

**Chadee, D.**, D. Williams, R. Bachew. (2019) Victims' emotional distress and preventive measures usage: Influence of crime severity, risk perception, and fear. *Journal of Community & Applied Social Psychology*.

Cobb-Roberts, D., **T. Esnard**. (2019) Troubling Systemic Structures of Power within Academe: The Stories, Voices, and Choices of African American Female Academics. *Research on Women in Education*, 5(1), 41-47.

**Descartes, C.**, P. Maharaj, M. Quammie, M. Ramesar, H. Mills, H. Pulwarty. (2019) It's never one type: The co-occurrence of child abuse and neglect among children and adolescents in Trinidad. *Journal of Child and Adolescent Trauma*. Springer. DOI: 10.1007/s40653-019-00293-x.

**Esnard, T.** (2019) Towards Matricentric Feminism in the Caribbean: Inroads and Opportunities. *Journal of Mothering Initiative (JMI)*, Volume 10 (1 & 2): 257-272.

**Huggins, C.**, G. Hinkson, K. Charles. (2020) "He was a Good Boy": The Caribbean Black Mothers' Experience of Coping and Grief with the Homicide of their Sons in Trinidad. *Journal of Black Studies*. Sage Publications. doi.10.1177/0021934720915441.

**Huggins, C.**, A. Modeste-James, J. Rouse. (2020) Primary care physicians' identifying abuse of older adults in the small island state of Trinidad and Tobago. *The Journal of Adult Protection*. 22, 6, 253-268. DOI 10.1108/JAP-07-2020-0020.

**Huggins, C., T., G. Hinkson.** (2020) Signs of Traumatic Grief, Lack of Justice, Magnitude of Loss, and Signs of Resilience Following the Homicidal Loss of Their Adult Child Among Caribbean Black Mothers. *OMEGA-Journal of Death and Dying*, 0030222820921013.

Surette, R., D. **Chadee.** (2019) Copycat crime among non-incarcerated adults. *Current Issues in Criminal Justice*. <https://doi.org/10.1080/10345329.2019.1640058>

**Wallace, W. C.** (2019) An Analysis of Civilian Oversight of Police Agencies in Small Island Developing States: Evidence from three Caribbean Countries. *Journal of Behavioral and Social Sciences*, 6, 231-245

#### Department of Economics

**Deonanan, R., B. Ramkissoon, D. Ramkissoon, R. Hosein.** (2019) Disentangling the relationship between remittances and financial development: evidence from Jamaica. *International Review of Applied Economics*, DOI: 10.1080/02692171.2019.1685954 (Taylor & Francis).

#### Department of Management Studies

**Balwant, P.T., R. Singh,** D. Maillard. (2019) Predicting organizational embeddedness in Trinidad's government ministries: The role of personality and perceived organizational support. *Journal of Business Paradigms*, 4 (2), 22-45. <http://journal.par.hr/archives/category/10-vol-4-no-2> (DOAJ, ROAD, and ERIH PLUS)

**Balwant, P. T., O. Jueanville, S. Ramdeo.** (2019) "I've had enough!" Mental health as a mechanism in the relationship between sexual harassment and organizational commitment. *Work*, 1–13. <https://doi.org/10.3233/WOR-193006>.

**Balwant, P. T., R. Mohammed, R. Singh** (2019) Transformational leadership and employee engagement in Trinidad's service sector: The role of job resources. *International Journal of Emerging Markets*, 15(4), 691–715. <https://doi.org/10.1108/IJOEM-01-2019-0026>

**Balwant, P. T.** (2019) 'Keeping it real' authentic instructor-leadership, student engagement and performance, and leader distance. *International Journal of Leadership in Education*, 1–27. <https://doi.org/10.1080/13603124.2019.1657593>

**Balwant, P. T., K. Birdi, U. Stephan.** (2019) The dimensionality and measurement of destructive instructor-leadership. *International Journal of Leadership in Education*, 1–23. <https://doi.org/10.1080/13603124.2018.1543803>

**Pacheco, B., R. Jaipaul-O'Garro.** (2020) Reconceptualizing Determinants of Consumer Attitudes toward Social Commerce Sites, *Journal of Internet Commerce* v19 (2) 192-211

**Rambocas, M., S. Arjoon.** (2019) "Brand Equity in Caribbean Financial Services: The Moderating Role of Service Providers". *International Journal of Bank Marketing*, 38(3): 642-670

**Ramdeo, S., R. Singh.** (2019) "Abusive Supervision, Co-worker Abuse and Work Outcomes: Procedural Justice as a Mediator". Emerald Publishing Group, *Evidence-based HRM: A global forum for empirical scholarship*, DOI: 10.1108/EBHRM-09-2018-0060

**Singh, R.** (2019) "I want to leave, but I have nowhere to go: An Examination of how Reluctant Stayers respond to Abusive Supervision". *International Journal of Organizational Analysis*, Emerald Publishing Group, DOI 10.1108/IJOA-05-2019-1778

**Singh, R.** (2019) "Work Engagement as a Moderator on the Embeddedness- Deviance Relationship". *International Journal of Organizational Analysis*, Emerald Publishing Group, <https://doi.org/10.1108/IJOA-08-2018-1512>.

**Singh, R.** (2019) "Organisational embeddedness as a moderator on the organisational support, trust and workplace deviance relationships". Emerald Publishing Group, *Evidence-based HRM: A global forum for empirical scholarship*, 8(1): 1-17.

**Singh, R., N. Ramgulam, R. Lewis, S. Ramdeo.** (2019) "An Investigation into Caribbean Hotel Employees' Personality, Work Engagement, Job Satisfaction & Turnover Intentions". *Journal of Eastern Caribbean Studies*, 44 (1): 23-48.

**Wilson, S.** (2020) "Recycle versus Buy' Scenarios in Manufacturing Strategy Decisions: An Empirical Study", *International Journal of Services and Operations Management*, Vol.36, No.4, pp. 455-479.

**Wilson, S.** (2020) "Building Manufacturing Competitiveness Through Policy– A System Dynamics Approach". *Journal of Fashion Marketing and Management*, Vol.24, No.2, pp.277-302.

**Wilson, S.,** C. Maharaj, R. Maharaj. (2020) "Formalising the National Innovation System in a Developing Country". *West Indian Journal of Engineering*, Vol. 42, No.2, pp. 4-16

**Wilson, S.** (2020) "An Experiential Approach to Teaching Structural Decision Areas in Operations Strategy – The TANGOS Exercise" *INFORMS Transactions on Education*, Vol. 20, No.2, pp. 113 – 123

### Books & Book Chapters

#### *Department of Behavioural Sciences*

**Boodram, C.A.S.** (2019) *Social Work Research and Social Justice: The Use of Learning Circles and Participatory Action Research with Men Deported to Trinidad and Tobago*. Cambridge Scholars Publishers.

**Esnard, T.** (2019) Epistemic folkways, social enterprise and rural development in the Caribbean: A case Study of a social bricoleur. In *Managing Sustainable Innovations*. Ed. Vanessa Ratten, Marcela Ramirez-Passillas and Hans Lundberg. 29-44. NY: Springer.

**Mohammed, P., C.A. S. Boodram.** (2020) Eds. *Connecting the Dots: Work. Life. Balance. Ageing*. Ian Randle Publishers: Jamaica.

Kostic, A., **D. Chadee.** (2020) Reading Faces: Ability to Recognise True and False Emotion. In *Social Intelligence and Nonverbal Communication*. Ed. Robert Sternberg. New York: Springer.

**Rampersad, A.,** M. Sarthak (2020). *Globalisation of Cricket*. In *Routledge Handbook of Global Sports*. Ed. J. Nauright and S. Zipp. New York: Routledge.

**Rampersad, A.** N. Chapman. (2020) *Caribbean Sociology Made Simple: A Study Guide for CAPE Sociology Units 1 & 2*. Trinidad: Caribbean Educational Publishers.

**Wallace, W. C.** (2019) Access to Public Transportation for Older Adults. In *Encyclopedia of Gerontology and Population Aging*, Ed. D. Gu and M. Dupre. pp. 1-5. Springer, Cham.

**Wallace, W. C.** (2019) Advocacy Organizations for Older Adults. In *Encyclopedia of Gerontology and Population Aging*. Eds. D. Gu and M. Dupre. pp. 1-5. Springer, Cham.

**Wallace, W. C.** (2019) Conflict and Conflict Resolution. In *The Palgrave Encyclopedia of Global Security Studies*. Eds. S. Romaniuk, M. Thapa and P. Marton. pp. 1-4. Palgrave Macmillan, Cham.

**Wallace, W. C.** (2019) Global Security. In *The Palgrave Encyclopedia of Global Security Studies*. Eds. S. Romaniuk, M. Thapa and P. Marton pp. 1-4. Palgrave Macmillan, Cham.

**Wallace, W. C.** (2019). Mediation. In *The Palgrave Encyclopedia of Global Security Studies*. Eds. S. Romaniuk, M. Thapa and P. Marton. pp. 1-7. Palgrave Macmillan, Cham.

#### *Department of Economics*

**Mohammed, A.,** B. Idris, G. Saridakis, V. Benson. (2019) Information and communication technologies: a curse or blessing for SMEs? In *Emerging Cyber Threats and Cognitive Vulnerabilities*. Ed. V. Benson and J. McAlaney. Elsevier/ Academic Press, San Diego, CA., pages 163-174.

Marquez, P, **A. La Foucade, K. Theodore, S. Gabriel, E. Scott, C. Laptiste, C. Metivier, E. Boodoo, V. Beharry, D. Conrad, K. Gittens Baynes.** (2019) *Tobacco Taxation and Impact of Policy Reforms: Trinidad and Tobago*. 2018. Washington D.C.: The World Bank. (88 pages 881 downloads from World Bank website as at November 19, 2019).

#### *Department of Management Studies*

Akhter S., **B. Pacheco.** (2020) *Strategic Marketing Management 4<sup>th</sup> Ed.*, Textbook Media Press, St. Paul Minnesota, USA.

**Arjoon, V.,** G. Rique, P. Hosein. (2019) Analysis of Herd Behaviour in Stock Prices using Machine Learning. In *International Conference on Internet Science* (pp. 326-331). Springer, Cham.

**Arjoon, V., C. Bhatnagar, P. Ramlakhan.** (2019) The Diversified Economy: Possibilities from Modern Portfolio Management. In *A. Bissessar, ed., Development, Political, and Economic Difficulties in the Caribbean*, 1st ed. Palgrave Macmillan, pp.13-36.

**Pacheco B.,** M. Pacheco (2020) "Digitalization of the Orange Economy as a Driver of Sustainable Development". In *Annual Report on Global Islands 2019*. Ed. James Randall, Island Studies Press, 155 – 180.

**Singh, R., S. Ramdeo.** (2020) *Leading Organizational Development and Change: Principles and Contextual Perspectives*, Palgrave Macmillan

**Singh, R., S. Ramdeo.** (2020) "The Management of Whistleblowing". In *Encyclopaedia of Criminal Activities and Dark Web*. Chapter 20, pp. 304-317.

#### *Department of Political Science*

Basdeo, M. (2019) The Diversification of Committee Systems in Parliaments of Small States: A Study of Trinidad and Tobago and Dominica. In *Development, Political, and Economic Difficulties in the Caribbean*. Ed. **Ann Marie Bissessar**. Palgrave Macmillan, London: pp 160-174.

**Tudoroiu, T.** (2020) *The Myth of China's No Strings Attached Development Assistance: A Caribbean Case Study*, Lanham, MD: Lexington Books.

#### **Conference Presentations**

##### *Department of Behavioural Sciences*

#### **C. Descartes**

*What Society Needs to Know?*

The Catholic Commission for Social Justice. Marijuana and cannabinoids: Health, research and regulatory considerations (Virtual Symposium)  
June 2020

#### **T. Esnard**

*Strengthening Structures and Practices of Migrant Farm Work: A case for Critical and Public Agendas.*

Canada-Caribbean Institute, Invited speaker for forum on: "Issues facing seasonal workers in Canada during the COVID-19 Pandemic,  
April 2020

#### **T. Esnard**

*When the girls are finished I will write the Canadian government to say thank you: A story of Intra-Household Dynamics, Seasonal Migration and Social Mobility*

Keynote address for the inaugural meeting of the Canada-Caribbean Research Symposium  
UWI Mona Campus, Kingston, Jamaica, February 2020

#### **S. Gomes**

*Centering Caribbean Ethnography: Prospects for Decolonizing Anthropology from the Periphery* Poster.

American Anthropological Association/Canadian Anthropology Society Annual Meeting. Vancouver, Canada, November 2019

#### **S. Gomes** and E. Elahie

*The Nonchalance of Structural Disadvantage: Trinidad and Tobago and COVID-19.*

*Observatório do CEMI* Blog, Centro de Estudos de Migrações Internacionais, State University of Campinas, Brazil, June 2020

#### **R. Seepersad**

*Drug use and criminal behaviour among inmates.*

The Catholic Commission for Social Justice Symposium: Marijuana and cannabinoids: Health, research and regulatory considerations.  
June 2020

##### *Department of Economics*

#### **R. Brizan-St. Martin, A. LaFoucade, M. Attzs, R. McLean and D. Bethelmie**

*Contextualizing Affordability in Healthcare: An Analysis of Island Dependents (Carriacou and Petit Martinique) of Multi-Island Micro States in the Caribbean*

Conference on the Economy  
Department of Economics, UWI St. Augustine, Trinidad,  
October 2019

##### *Department of Political Science*

#### **B. Ragoonath**

*The Code of Ethical Political Conduct in Trinidad and Tobago*

Telecommunications Authority of Trinidad and Tobago (TATT) and Trinidad and Tobago Publishers and Broadcasters Association (TTPBA) Seminar on Covering Elections  
Port of Spain, Trinidad, July 2020

#### **T. Tudoroiu**

*The Local Perception of China's Social Conditionality in the Caribbean*

16th Biennial Conference of the European Association of Social Anthropologists  
Lisbon, Portugal (held online), July 2020

## CENTRES & UNITS

### ANSA McAI Psychological Research Centre

#### Journal Publications

Kostic, A., **Chadee, D.** & Nedeljkovic, J. (2020). Reading Faces: Ability to recognise true and false emotions. In R. Sternberg and A. Kostic (Ed.), *Social Intelligence and Nonverbal Communication*. Palgrave-Macmillan. Forthcoming in 2021

### Centre for Health Economics (HEU)

#### Journal Publications

**La Foucade A**, Davis G, Baboolal N, **Bethelmie D**, **Laptiste C**, **Ali-Sisbane H**, et al. (2020). The socio-economic determinants of multimorbidity among the elderly population in Trinidad and Tobago. *PLoS ONE* 15(9): e0237307. <https://doi.org/10.1371/journal.pone.0237307>

**Mc Lean R**, **K. Theodore, A.** **La Foucade, S.** **Lalta, C.** **Laptiste, R.** **Brizan-St. Martin, D.** **Conrad** and **D. Bethelmie.** (2019). Austerity, and funding cuts: Implications for sustainability of the response to the Caribbean HIV/AIDS epidemic, *Global Public Health*, 14:11, 1612-1623, DOI: 10.1080/17441692.2019.1657926

#### Conference Presentations

##### V. Beharry

*Comprehensive Costing of Health Services in Barbados: Polyclinics*  
Presentation to the Ministry of Health and Wellness  
National Insurance and Social Security Auditorium, Frank  
Walcott Building, Culloden Road, St. Michael, Barbados,  
February 20, 2020

##### V. Beharry

*The Comprehensive Costing of Health Services in Barbados: Queen Elizabeth Hospital (QEH)*  
Presentation to the Board of the QEH and Ministry of Health  
and Wellness Officials  
Board Room of the QEH, February 7, 2020

##### P. Edwards-Wescott

*The Definition and Meaning of Poverty in Trinidad*  
UNICEF/UNDP launch of Reports: The Definition and Meaning  
of Poverty and Voices of Children on Poverty in Trinidad

Hyatt Regency, Port of Spain, Trinidad, December 2019

##### P. Edwards-Wescott

*Economic Impact of Violence Against Women and Girls in Trinidad and Tobago*  
Workshop hosted by The Network of Non-Governmental  
Organisations of Trinidad and Tobago for the Advancement of  
Women  
San Fernando City Hall, Trinidad, August 26, 2019

##### K. Gittens-Baynes

*Bridging the Gap to 2030: The Future We Want: Youth Perspective on COVID-19: Health Impacts*  
Youth Economic Forum  
Virtual Forum, May 11, 2020

##### S. Lalta

*Connecting the Dots: Patterns of Work, Health and the Future of Social Security in the Caribbean*  
Social Security Board/UWI Open Campus Anguilla  
Distinguished Lecture Series  
CuisinArt Golf Resort and Spa Ballroom, Anguilla, 7 November  
2019

##### S. Lalta

*Health, Human Rights and Implications for Health Financing*  
Co-presenter on Panel Discussion at 13<sup>th</sup> Caribbean  
Conference on National Health Financing Initiatives, Anguilla,  
November 6—8, 2019

##### C. Laptiste

*Comprehensive Costing of Health Services in Barbados: Polyclinics*  
Presentation to the Ministry of Health and Wellness  
National Insurance and Social Security Auditorium, Frank  
Walcott Building, Culloden Road, St. Michael, Barbados,  
February 20, 2020

##### C. Laptiste

*The Comprehensive Costing of Health Services in Barbados: Queen Elizabeth Hospital (QEH)*  
Presentation to the Board of the QEH and Ministry of Health  
and Wellness Officials  
Board Room of the QEH, February 7, 2020

##### R. McLean

*Sustainability of the HIV Response in the context of Domestic Resource Mobilization and COVID-19 Considerations*  
National AIDS Programme and Partners meeting

Virtual Regional Meeting, June 16-18, 2020

### C. Metivier

*Overview of Health Financing and Financial Protection in the Caribbean*

PAHO/WHO Regional Workshop on Financial Protection: Training in Monitoring Financial Protection in Health and Policy Implications  
Washington D.C., USA, October 7-9, 2019.

#### Other Publications

##### Refereed Technical Reports

Balan D, Palacios A, Bardach A, Rodriguez B, Ciapponi A, Garcia Marti S, Perelli L, Augustovski F, **Gittens-Baynes KA, Beharry V, Gabriel S, La Foucade A, Laptiste C, Metivier C**, Vianna C, Guevara G, Pichon-Riviere A, Alcaraz A. 2019. *Fiscal policies for reducing sugar sweetened beverages consumption. Evidence for the implementation of health policies in Latin America and the Caribbean*. Institute for Clinical Effectiveness and Health Policy, Buenos Aires, Argentina. ISSN 1668-2769 (Available in: [www.iecs.org.ar/azucar](http://www.iecs.org.ar/azucar)).

Perelli L, Rodriguez B, Bardach A, Ciapponi A, Garcia Marti S, Palacios A, Balan D, Augustovski F, Vianna C, Guevara G, **Gittens-Baynes KA, Beharry V, Gabriel S, La Foucade A, Laptiste C, Metivier C**, Pichon-Riviere A, Alcaraz A. 2019. *Front-of-package labeling for reducing sugar-sweetened beverage consumption. Evidence for the implementation of health policies in Latin America and the Caribbean*. Instituto for Clinical Effectiveness and Health Policy, Buenos Aires, Argentina. ISSN 1668-2769 (Available in: [www.iecs.org.ar/bebidasazucaradas](http://www.iecs.org.ar/bebidasazucaradas))

Perelli L, Rodriguez B, Bardach A, Ciapponi A, Garcia Marti S, Palacios A, Balan D, Guevara G, **Gittens-Baynes KA, Beharry V, Gabriel S, La Foucade A, Laptiste C, Metivier C**, Vianna C, Augustovski F, Pichon-Riviere A, Alcaraz A. 2019. *Educational actions and modification of school environment to decrease sugar-sweetened beverage consumption. Evidence for the implementation of health policies in Latin America and the Caribbean*. Instituto for Clinical Effectiveness and Health Policy, Buenos Aires, Argentina. ISSN 1668-2769 (Available in: [www.iecs.org.ar/bebidasazucaradas](http://www.iecs.org.ar/bebidasazucaradas))

Perelli L, Rodriguez B, Bardach A, Ciapponi A, Garcia Marti S, Palacios A, Balan D, Vianna C, **Gittens-Baynes KA, Beharry V, Gabriel S, La Foucade A, Laptiste C, Metivier C**, Guevara G, Augustovski F, Pichon-Riviere A, Alcaraz A. 2019. *Sugar-sweetened beverages advertising, promotion, and sponsorship ban. Evidence for the implementation of health policies in Latin America and the Caribbean*. Institute for Clinical Effectiveness and Health Policy, Buenos Aires, Argentina. ISSN 1668-2769 (Available in: [www.iecs.org.ar/bebidasazucaradas](http://www.iecs.org.ar/bebidasazucaradas))

#### Institutional Publications

IMPACT: HEU Bi-Annual Bulletin. "Special Publication". *Exploring the Socioeconomic Impact of COVID-19*. June 2020. Volume 2 Issue 1. Macroeconomic Impact of COVID-19; Social Inequality Meets COVID-19; The Mental Toll of the Pandemic.

IMPACT: HEU Bi-Annual Bulletin. "Special Publication". *Exploring the Socioeconomic Impact of COVID-19*. June 2020. Volume 2 Issue 1. Special Feature: "The Caribbean Response" Interview with Dr Erica Wheeler and Jessie Schutt-Ainé (PAHO)

## Institute for Gender & Development Studies (IGDS)

#### Books & Book Chapters

**Barratt, S.** (2020) Boundless Heterogeneity: 'Callaloo' Complexity and the Measurement of Mixedness in Trinidad and Tobago. In *The Palgrave International Handbook of Mixed Racial and Ethnic Classification*. Eds. Zarine L. Rocha, Peter J. Aspinall. Palgrave Macmillian. ISBN 978-3-030-22873-6. p 163-177

**Barratt, S., Ranjitsingh, A.** (2020) *Recognizing Selves in Others: Situating Douglas*. Manoeuvrability as Shared Mixed-Race Ontology. In *The Boundaries of Mixedness: A Global Perspective*. Ed. Erica Chito Childs. Routledge.

**Nixon, S.,** (2020) Innovative Methodologies for Studying the Productivity and Well Being of Working Men and Women. In *Connecting the Dots: Work • Life • Balance • Ageing*. Edited by Patricia Mohammed and Cheryl Ann Boodram. Ian Randle Publishers. pp. 17-24.

**Nixon, S.,** Taylor R. (2020) Work Life Balance – Reflections on Health and Well Being. In *Connecting the Dots: Work • Life • Balance • Ageing*. Edited by Patricia Mohammed and Cheryl Ann Boodram. Ian Randle Publishers. pp. 41-57.

**Nixon, S.** (2019) On Being a Black Sexual Intellectual: Thoughts on Caribbean Sexual Politics and Freedom. In *Black Sexual Economies: Race and Sex in a Culture of Capital*. Eds. Adrienne D. Davis and The Black Sexual Economies Collective. University of Illinois Press. pp. 237-249.

**Nixon, S.** (2020) Reimagining Erotic Knowledge in the Queer Caribbean. Book Review of *Erotic Islands: Art and Activism in the Queer Caribbean* (2018 Duke UP). *GLQ: A Journal of Gay and Lesbian Studies*. 26.2. pp. 346-8

**Barratt, S.** (2019) Book Review. *Affilia: Journal of Women and Social Work*.

**Ukockis, G.** (2019). *Misogyny: The New Activism*. New York: Oxford University.

**Dow, -D-M.** (2019). *Mothering While Black: Boundaries and Burdens of Middle-Class Parenthood*. Oakland, CA: University of California Press. 252 pp. ISBN: 9780520300323 (paperback)

**Hosein G.** (2019) *Gender Mainstreaming in National Development Planning*. ECLAC <https://www.cepal.org/en/publications/45086-gender-mainstreaming-national-sustainable-development-planning-caribbean>

**Hosein G.** (2020) Engaging Men to End Violence Against Women and Girls in the Caribbean: Expanding the Possibility Frontier. IDB.

**Hosein G.** (2020). Post-Indentureship Caribbean Feminist Thought, Transoceanic Feminisms, and the Convergence of Asymmetries, in *Scholar and Feminist Online*, 16, 1.

## Institute of International Relations (IIR)

### Conference Presentations

#### J. Byron

*A CARICOM Perspective*

Canada's Regional Standing post-United Nations Security Council Loss

Canadian Council of the Americas Webinar

June 23, 2020

#### J. Byron

*La Crise Venezuelienne et Ses Implications Regionales*

Public Lecture

Université des Antilles, Campus Fouillole, Pointe à Pitre

Guadeloupe

January 17, 2020

#### J. Byron

*The Geopolitical and Economic Importance of the Caribbean Community to Latin America: The Gestation of a Relationship*

Segundo Congreso de Relaciones Internacionales

Escuela de Relaciones Internacionales, Universidad de Panama, Panama City

September 30 – October 4, 2019

#### J. Byron

*Pan-Caribbean Regionalism*

The Caribbean on the Edge: A Tribute to Sir Alister McIntyre IIR Symposium

University Inn and Conference Centre, The UWI, St. Augustine

September 11 – 12, 2019.

#### G. Chami

*Workshop on Proposal Writing: Securing Successful Grants*

Hosted by Institute of International Relations and Faculty of Social Sciences in collaboration with the St. Augustine Center for Innovation and Entrepreneurship

December 2 – 4, 2019.

#### G. Chami

*Social Media Mediating in Countering Violent Extremism and Terrorism*

Prioritizing Caribbean Security in the 21st Century: Preventing and Countering Violent Extremism and Terrorism

Conference hosted by the University of the Southern Caribbean (USC), US Embassy and the Indian High Commission

October 2 – 3, 2019.

**J. La Guardia**

Guest Speaker on CARICOM's role in regional cooperation at the CEAPRC, June 23, 2020.

**J. La Guardia**

*Cuba-CARICOM relationship solidarity and cooperation to face the COVID-19 Pandemic*

Presenter at the Webinar COVID 19 in the Caribbean: Exchange of Experiences, organised by CO.RE.CA June 13, 2020.

**J. La Guardia**

*Las relaciones intracaribeñas en las circunstancias actuales de América Latina: retos y oportunidades para los vínculos Cuba-CARICOM*

XXXVIII International LASA Congress, Guadalajara, May 13-16, 2020.

**J. La Guardia**

*Ciclo de Diálogos Virtuales CLACSO "Coronavirus y salud internacional Sur-Sur" on Desafíos del Caribe frente al Coronavirus:*

Puerto Rico-Haití-Cuba-Trinidad y Tobago-República Dominicana, April 14, 2020.

**A. Montoute**

*Whose Development: Caribbean Civil Society and the ACP - EU Economic Partnership Agreements*

Latin American Studies Association Virtual Conference May 13 – 16, 2020

**A. Montoute**

*The Making of the Association of Caribbean States: Expanding the Greater Caribbean and Driving Caribbean Cooperation*

ACS at Twenty-Five: In Retrospect and Prospect Association of Caribbean States in collaboration with the Institute of International Relations The University of the West Indies, St. Augustine, February 13, 2020

**A. Montoute**

*The Caribbean: A Battleground for US and Chinese Supremacy?*

XIII International Conference on Caribbean Studies. Norman Girvan Chair of Caribbean Studies University of Havana, Cuba, December 9 – 11, 2019

**K. Niles**

*Post COVID-19 opportunities for transformation in Trinidad and Tobago*

Webinar: "COVID-19 - Not just recovery but an opportunity for real change"

Movement for Social Justice 7 July 2020

**K. Niles**

*Webinar: The Post Covidian Carnival Complex*

University of Trinidad & Tobago Speaker - Post Covidian Carnival Policy 19 June 2020

**K. Niles**

*Post COVID-19 opportunities for transformation in Trinidad and Tobago*

"COVID-19 - Not just recovery but an opportunity for real change"-Movement for Social Justice 7 July 2020

**K. Niles**

*For Creatives: e-Business, Digital & Tech Opportunities in a Post-Covid-19 world*

The Internet Society: Trinidad and Tobago Chapter May 28, 2020

**K. Niles**

*The Caribbean Music Industry: The Urgent Digital Pivot*

Business of Music-Caribbean Export Development Agency Caribbean Export Development Agency May 25, 2020

**K. Niles**

*Climate Change in SIDS: Mental Health as a Component of Adaptation Policy*

University of the Southern Caribbean Research Day Conference 2020

University of the Southern Caribbean, Saint Joseph, Trinidad and Tobago March 11, 2020

## **K. Niles**

*Facilitating the Development of Inclusive Cultural Industries as a form of Climate Change Adaptation: The case of Trinidad and Tobago*

XIII Conferencia Internacional de Estudios Caribeños "15 años de la Cátedra de Estudios del Caribe"

Cátedra de Estudios del Caribe "Norman Girvan"

Universidad de La Habana in Havana, Cuba

December 12, 2019

## **K. Niles**

*Facilitating the Development of Inclusive Cultural Industries as a form of Climate Change Adaptation: The case of Trinidad and Tobago*

CARIFESTA XIV Symposia "Journey Round Myself: Crossing Borders. Strengthening Connections. Breaking Boundaries The University of the West Indies, St. Augustine Campus August 20, 2019

## **M. Pawinski**

Support and Strengthening the Strategic Threat Assessment Capacity in Trinidad and Tobago Integrated Threat Assessment Centre

National Security Council, Office of the Prime Minister

## **M. Scobie**

*Sustainable Development Goals, governance, norms, implementation pathways and Small Island Developing States*

International SDG Research Symposium- Keynote speaker Utrecht, The Netherlands, June 2020

## **M. Scobie**

*Justice and the draft provisions of the new Biodiversity of Areas Beyond National Jurisdiction (BBNJ) agreement.*

Workshop for Caribbean Diplomats on the Treaty Negotiations for the Law of the Sea Convention- Biodiversity in Areas Beyond National Jurisdiction.

Online organised by the CARICOM Secretariat, November 2019

## **M. Scobie**

*Architectures of global environmental governance inadequately protect environmental human rights- the justice gap and the Global Pact.*

Workshop on Human Rights in the Anthropocene – Towards a 'Research-Advocacy' Network Lund, Sweden, October 2019

## **M. Scobie**

*Public policy design for increased private sector engagement on climate change in Caribbean markets*

American Chamber of Trade and Commerce- Conference on Advancing the HSSE Transition October 2019

## **D. Seerattan**

*An Optimal Strategy for Financing Growth in the Caribbean The Caribbean on the Edge: Rising Above the Orthodoxy of Development Thinking - A Tribute to Sir Alister McIntyre IIR Symposium*

The University Inn and Conference Centre, Circular Road, St. Augustine.

September 11-12, 2019

## **D. Seerattan**

*The Impact of COVID 19 on Financial Stability in the Caribbean 54th Meeting of the CARICOM Central Bank Governors Meeting Teleconference*

The Bank of Guyana

June 18, 2020

## *Books - Peer-Reviewed*

**Laguardia-Martinez Jacqueline, Georgina Chami, Annita Montoute and Debbie Mohammed.** *Changing Cuba-US Relations: What Implications for CARICOM States?* Cham: Palgrave MacMillan, 2019.

## *Journals - Refereed*

Biermann, F., Betsill, M., **Scobie, M.**, Burch, S., Dryzek, J., Gordon, C., Gupta, A., et al. (2019). The Earth System Governance Project as a network organization: a critical assessment after ten years. *Current Opinion in Environmental Sustainability*, 39, 17-23. doi: <https://doi.org/10.1016/j.cosust.2019.04.004>.

Burch, S., Gupta, A., Inoue, C. Y. A., Kalfagianni, A., Persson, Å., Gerlak, A. K., **Scobie M.** Zondervan, R. (2019). New directions in earth system governance research. *Earth System Governance*, 100006. doi: <https://doi.org/10.1016/j.esg.2019.100006>. ISSN: 2589-8116. (pp. 1-18).

Campanella, Miriam L. and **Dookeran, Winston**, (2020) The COVID-19 Symmetric Shock, and Its Asymmetric Consequences. Available at SSRN: <https://ssrn.com/abstract=3616834> or <http://dx.doi.org/10.2139/ssrn.3616834>

De Santo, E., Á. Ásgeirsdóttir, A. Barros-Platiau, F. Biermann, J. Dryzek, L. Gonçalves, R. Kim, E. Mendenhall, R. Mitchell, and **M. Scobie** (2019). Protecting biodiversity in areas beyond national jurisdiction: An earth system governance perspective. *Earth System Governance*. <https://doi.org/10.1016/j.esg.2019.100029>. (pp1-7).

**Dookeran, W.** and **Preeya Mohan**. (2019) Small States Diplomacy and Global Competitiveness. *Small States & Territories*, Vol. 2, No. 1, May

Hinds Kristina and **Annita Montoute**, (2019) Introduction, Special Issue of the *Journal of Eastern Caribbean Studies: Demystifying Civil Society*, vol. 44, no. 3, December. pp. 1 – 8.

**Montoute, A., Mohammed, D.**, and J. Francis. (2019) Prospects and Challenges for Civil Society and Climate Change Engagement in the Caribbean: The Case of Trinidad and Tobago, *Caribbean Studies, Institute of Caribbean Studies*, vol 47, no. 2, pp. 81 – 109.

**Montoute Annita** and Georgina Chami, 2020. Introduction, Special Issue of the *Caribbean Journal of International Relations and Diplomacy: The Legacy of Kofi Annan, Global Statesman, Diplomat and Peacemaker Extraordinaire*, vol 5, no. 2, pp. 1- 30. <https://journals.sta.uwi.edu/iir/index.asp> .

**Montoute Annita**, (2019) Civil Society Responses to Trade Liberalisation: The Case of the Banana Industry in St. Lucia, *Journal of Eastern Caribbean Studies* vol. 44, no. 3, December, pp. 78-114

Shah, Kalim U., Sashwat Roy, Wei-Ming Chen, **Keron Niles**, and Dinesh Surroop. (2020) Application of an Institutional Assessment and Design (IAD)-Enhanced Integrated Regional Energy Policy and Planning (IREPP) Framework to Island States. *Sustainability* 12, no. 7 2765. <https://doi.org/10.3390/su12072765>.

**Niles, Keron**, and Winston Moore. (2019) Accounting for Environmental Assets as Sovereign Wealth Funds. *Journal of Sustainable Finance & Investment*, 1–20. <https://doi.org/10.1080/20430795.2019.1681618>.

**Scobie, M.** (2020) International aid, trade and investment and access and allocation. *International Environmental Agreements: Politics, Law and Economics*, 20(2), 239-254. doi:10.1007/s10784-020-09480-w.

#### *Chapters in Edited Collections*

Betsill, M. M., T. M. Benney, A. K. Gerlak, C. Brown, S. Chan, O. Enechi, R. B. Mitchell, I. Möller, J. J. Patterson, **M. Scobie**, S. van der Hel and O. E. Widerberg (2020). Introduction: *Agency in Earth System Governance*. *Agency in Earth System Governance*. A. K. Gerlak, M. M. Betsill and T. M. Benney. Cambridge, Cambridge University Press: 3-24. ISBN 9781108484053

Biermann, F., Kim, R. E., Abbott, K. W., Hollway, J., Mitchell, R. B., & **Scobie, M.** (2020). Taking Stock and Moving Forward. In F. Biermann, & R. E. Kim (Eds.), *Architectures of Earth System Governance: Institutional Complexity and Structural Transformation* (pp. 299-321). Cambridge: Cambridge University Press. doi: DOI: 10.1017/9781108784641.014.

Brown, C. and **M. Scobie** (2020). *Accountability in the Governance of Global Change*. *Agency in Earth System Governance*. A. K. Gerlak, M. M. Betsill and T. M. Benney. Cambridge, Cambridge University Press: 155-167. ISBN 9781108484053

Gerlak, A. K., M. M. Betsill, J. J. Patterson, S. Chan, T. M. Benney, M.-C. Brisbois, T. R. Eimer and **M. Scobie** (2020). *Conclusion: Policy Implications of ESG–Agency Research and Reflections on the Road Ahead*. *Agency in Earth System Governance*. A. K. Gerlak, M. M. Betsill and T. M. Benney. Cambridge, Cambridge University Press: 183-197. ISBN 9781108484053

**Johnson, E.J. and Georgina Chami**. (2019) Effects of Child Abuse and Neglect on Children in Trinidad. In *Social Work: Promoting the Dignity and Worth of People*, edited by Dr. Emmanuel Janagan Johnson (England, UK: Cambridge Scholars Publishing.

**Laguardia Martinez, Jacqueline**. (2019) “Cuba: A Caribbean SIDS Reinventing Itself” in *Development, Political, and Economic Difficulties in the Caribbean*, ed. Bissessar, A (New York: Palgrave Macmillan, Chami, 2019), 215-233.

**Niles, Keron**. (2019) The possible impact of BREXIT on Caribbean European cultural relations. In Giada Calvano ed. *The challenges of cultural relations between the European Union and Latin America and the Caribbean*, Edicions de la Universitat de Barcelona. 2019. ISBN: 978-84-938519-4-1 pp. 163 - 184

**Scobie, M.**, T. M. Benney, C. Brown and O. E. Widerberg (2020) *Conceptualizing Agency and Agents in Earth System Governance. Agency in Earth System Governance.* A. K. Gerlak, M. M. Betsill and T. M. Benney. Cambridge, Cambridge University Press: 25-37. ISBN 9781108484053

**Scobie, M.**, M. M. Betsill and H. Park (2020) *Agency in a Multiscalar World. Agency in Earth System Governance.* A. K. Gerlak, M. M. Betsill and T. M. Benney. Cambridge, Cambridge University Press: 108-119. ISBN 9781108484053

**Scobie, M.** (2019) *Dealing with climate change on small islands: Towards effective and sustainable adaptation.* C. Klöck and M. Fink. Göttingen, Universitätsverlag Göttingen: 101-122. ISBN 978-3-86395-435-2

**Seerattan D.** (2019) Caribbean Single Market and Economy (CSME). In: Palgrave Macmillan (eds) *The New Palgrave Dictionary of Economics.* Palgrave Macmillan, London. 2019.

#### Encyclopaedic Entries

**Byron, J.** *Updated political and economic reviews for Guadeloupe, French Guyane, Martinique in Europa Regional Surveys of the World: South America, Central America, and the Caribbean.* London: Routledge, 2019.

#### Non-Refereed Publications

**Bardouille, N.** (2020) August 24. The Coronavirus (COVID-19) and the Caribbean: Economic, Governance and Political Contexts, SRC Working Paper, Shridath Ramphal Centre, UWI Cave Hill.

**Montoute A.** (2020) Whose Development: Caribbean Civil Society and the ACP-EU Economic Partnership Agreements. Presentation, Latin American Studies Association, May 13–16. Virtual Conference (18 pages).

## Seismic Research Centre (SRC)

### Book Chapters

Salazar, Walter., **Mannette, Garth., Reddock, Kafele., Ash, Clevon.** (2019) Estimation of Shear Wave Velocity Profiles Employing Genetic Algorithms and the Diffuse Field Approach on Microtremors Array: Implications on Liquefaction Hazard at Port of Spain, Trinidad. Book Chapter 4 Page 293. *Natural Hazards - Risk, Exposure, Response, and Resilience.*

### Conference Proceedings

Johnson, A., Hickey, J., Williamson, B.J., **Pascal, K.** *Using GPS and EDM to investigate the shallow magmatic system at Soufrière Hills Volcano.* Project: Improving the Understanding of Magmatic Systems with Multidisciplinary Numerical Deformation Models. Conference: VMSG 2020. January 2020.

**Smith, Patrick J.**, Bean, Chris.

*RETREAT - a REal-time TREmor Analysis Tool.* Geophysical Research Abstracts, volume 22, pages EGU2020–16164. (European Geosciences Union, General Assembly), May 2020.

**Smith, P. J.**, Bean, C. J.

*Advances in Volcanic Tremor as a pre-eruptive monitoring tool. In Automatic detection, identification and classification of volcanic signals.*

ESC Working Group on seismic phenomena associated with volcanic activity, annual meeting Garachico, Tenerife, Spain, 27 September-3 October, 2019.

**Joseph, Erouscilla.**, Frey, Holli M., Manon, Matthew R.

*Recent temporal changes in the geochemistry of hydrothermal fluids of Dominica, Lesser Antilles.*

Volatiles in the Lesser Antilles (VoiLA) Workshop, 23-27 September 2019, UWI, St. Augustine.

**Christopher, Thomas E.**, Mourné, Severine., Tamburello, Giancarlo., Bonifacie, Magali., Vincent, Robert., **Joseph, Erouscilla P.**, Venugopal, Swetha., Tivonne, Howe., Oswen, Carty.

*Plume chemistry for eight Lesser Antilles volcanoes obtained during the 2018-2019 Multi-Gas campaign.*

Volatiles in the Lesser Antilles (VoiLA) Workshop, 23-27 September 2019, UWI, St. Augustine.

Bonifacie, M., Bardoux, G., Robert, V., Moretti, R., Moune, S., Agrinier, P., Dessert, C., Komorowski, J.C., Legendre, Y., **Joseph, E.**, Christopher, T.  
*Chlorine isotopic composition of thermal springs along the Lesser Antilles arc and fumaroles from La Soufrière de Guadeloupe.*  
 Volatiles in the Lesser Antilles (VoiLA) Workshop,  
 23-27 September 2019, UWI, St. Augustine.

Elenora van Rijsingen, Éric Calais, Romain Jolivet, Jean-Bernard de Chabaliér, **Richard Robertson, Graham Ryan**  
*Kinematics of the Lesser Antilles Subduction Zone*  
 VOILA Conference, University of the West Indies St. Augustine,  
 Trinidad and Tobago, W.I.,  
 23 -27 September 2019.

**Racine Basant, Graham Ryan**, Oshaine Blake, Jared Peacock,  
 Bridget Lynne  
*Understanding the petrophysical properties of Montserrat's  
 geothermal reservoir (poster)*  
 VOILA Conference,  
 University of the West Indies St. Augustine, Trinidad and  
 Tobago, W.I., 23 -27 September 2019.

Machel Higgins, Peter C La Femina, John C Weber, Halldor  
 Geirsson, **Graham Alexander Ryan**  
*South-eastern Caribbean-South America Plate Boundary  
 Deformation from Geodesy: Strain Partitioning and Fault  
 Behaviour,*  
 AGU Fall Meeting,  
 San Francisco, California, USA, 9-13 December 2019.

Elenora van Rijsingen, Eric Calais, Romain Jolivet, Jean-Bernard  
 de Chabaliér, **Richard EA Robertson, Graham Alexander  
 Ryan**  
*Inferring Interseismic Coupling along the Lesser Antilles Arc: a  
 Bayesian Approach*  
 AGU Fall Meeting,  
 San Francisco, California, USA, 9-13 December 2019.

Elenora van Rijsingen, Eric Calais, Romain Jolivet, Jean-Bernard  
 de Chabaliér, Jorge Jara, Steeve Symithe, **Richard Robertson,  
 Graham Ryan**  
*Seismogenic behaviour in the Lesser Antilles: Insights from  
 geodetic observations,*  
 22nd EGU General Assembly, online, 4 – 8 May 2020.

#### Journal Manuscripts

**Smith, P.J.**, Bean, C.J. (2020) RETREAT: A REal-Time TREmor  
 Analysis Tool for Seismic Arrays, With Applications for  
 Volcano Monitoring. *Frontiers in Earth Science*. doi:10.3389/  
 feart.2020.586955

Tucker, Maurice. E., Carey, Steven N., Stephen, R., Sparks, J.,  
**Stinton, Adam.**, Leng, Melanie., Robinson, Laura., Li, Toao,  
 Lewis, Jamie., Cotton, Laura. (2020) Carbonate crusts around  
 volcanic islands: Composition, origin and their significance  
 in slope stability. *Marine Geology* Volume 429, [https://doi.  
 org/10.1016/j.margeo.2020.106320](https://doi.org/10.1016/j.margeo.2020.106320)

Rijsingen, E. van., Calais, E., Jolivet, R., de Chabaliér, J. B., Jara,  
 J., Symithe, S., **Robertson, R., Ryan, G.A.** (2020). Inferring  
 Interseismic Coupling along the Lesser Antilles Arc: a Bayesian  
 approach. *Journal of Geophysical Research: Solid Earth*. DOI:  
 10.31223/osf.io/kn7hq

Thompson, Glenn., Power, John A., Braunmiller, Jochen.,  
 Lockhart, Andrew B., **Lynch, Lloyd.**, McCausland, Wendy.,  
 Rowe, Charlotte A., Shea, Thomas., White, Randall A., Breithaupt,  
 Charles I. (2020) Capturing, Preserving, and Digitizing Legacy  
 Seismic Data from the Montserrat Volcano Observatory  
 Analog Seismic Network, July 1995–December 2004.  
*Seismological Research Letters* 91 (4): 2127–2140. [https://doi.  
 org/10.1785/0220200012](https://doi.org/10.1785/0220200012).

**Papadopoulos, Ilias., Reddock, Kafele., Manzano,  
 Jevan., Latchman, Joan L.** (2020) The Trinidad and Tobago  
 Microzonation Project: Port of Spain. *Geophys. Journal  
 International*. Doi: 10.1093/gji/ggaa275.

Davy, Richard., Collier, J. S., Henstock, Timothy J., Rietbrock,  
 Andreas., Goes, S., Blundy, J., Harmon, Nicholas., Rychert,  
 Catherine., Macpherson, Colin G., van Hunen, Jeroen., Kendall,  
 Mike., Wilkinson, Jamie J., Tait, Stephen., Davidson, J., Wilson,  
 Marjorie., Cooper, George F., Maunder, Ben., Bie, Lidong., Hicks,  
 Stephen P., Allen, R., Chichester, Ben., **Robertson, Richard  
 E. A., Latchman, Joan.**, Krueger, Frank. (2020) Wide-angle  
 seismic imaging of two modes of crustal accretion in mature  
 Atlantic Ocean crust. *Journal of Geophysical Research: Solid  
 Earth*. DOI: 10.1029/2019JB019100

Webb, T.L. Wadge, G. **Pascal, K.** (2019) Mapping water vapour  
 variability over a mountainous tropical island using InSAR and  
 an atmospheric model for geodetic observations. *Remote  
 Sensing of Environment* 237.

Morales-Simfors, Nury., Bundschuh, Jochen., Herath, Indika., Inguaggiato, Claudio., Caselli, Alberto T., Tapia, Joseline., Choquehuayta, Fredy Erlington Apaza., Armienta, María Aurora., Ormachea, Mauricio., **Joseph, Erouscilla P.**, López, Dina L. (2019) Arsenic in Latin America: A critical overview on the geochemistry of arsenic originating from geothermal features and volcanic emissions for solving its environmental consequences. *Science of the Total Environment*. <https://doi.org/10.1016/j.scitotenv.2019.135564>.

Bie, Lidong., Rietbrock, Andreas., Hicks, Stephen., Allen, Robert., Blundy, Jon., Clouard, Valerie., Collier, Jenny., Davidson, Jon., Garth, Thomas., Goes, Saskia., Harmon, Nick., Henstock, Tim., van Hunen, Jeroen., Kendall, Mike., Krüger, Frank., **Lynch, Lloyd.**, Macpherson, Colin., **Robertson, Richard.**, Rychert, Kate., Tait, Stephen., Wilkinson, Jamie., Wilson, Marjorie. (2019) Along-Arc Heterogeneity in Local Seismicity across the Lesser Antilles Subduction Zone from a Dense Ocean-Bottom Seismometer Network. *Seismological Research Letters* Volume XX, Number XX – 2019. DOI: 10.1785/0220190147.

Careya, S., Sparks, R.S.J., Tuckerb, M.E., Lib, T., Robinson, L., Wattc, S.F.L. Gee, M., Hastiec, A., Barfodd, D.N., **Stinton, A.**, Leng, M., Raineaultg, N., Ballard, R.D. (2019): The polygenetic Kahouanne Seamounts in the northern Lesser Antilles island arc: Evidence for large-scale volcanic island subsidence. *Marine Geology*.

Rott, Stefanie, Scheu, Bettina, Montanaro, Cristian, Mayer, Klaus, **Joseph, Erouscilla P.**, Dingwell, Donald B. (2019): Hydrothermal eruptions at unstable crater lakes: Insights from the Boiling Lake, Dominica, Lesser Antilles. *Journal of Volcanology and Geothermal Research*, Vol. 381, pp. 101-118, <https://doi.org/10.1016/j.jvolgeores.2019.05.020>.

Barclay, Jenni., Few, Roger., Armijos, M. Teresa., Phillips, Jeremy C., Pyle, David M., Hicks, Anna., Brown, Sarah, K., **Robertson, Richard E. A.** (2019) Livelihoods, Wellbeing and the Risk to Life During Volcanic Eruptions. *Frontiers in Earth Science* 7: 205. DOI:10.3389/feart.2019.00205.

## Technical Reports

**Latchman, Joan L., Papadopoulos, Ilias., Reddock, Kafele., Manzano, Jevan., George, Cory., Kanhai, Jason D., Ryan, Graham., Johnson, Monique., Lynch, Lloyd L., Robertson, Richard E.A., Edwards, Stacey., Ash, Clevon., Nath, Nisha., Juman, Ian.** (2020). 2018/08/21 Magnitude 6.9 West of Port of Spain Earthquake. Report on the 2018/08/21 Earthquake: Characteristics and Impact. Prepared for the Government of Trinidad and Tobago. The University of the West Indies Seismic Research Centre. SRC Open File Report 20180821\_Magnitude 6.9\_Earthquake\_EQ1.

**Joan L. Latchman** - 2019/08/25 – 2020/07/31  
Weekly Dominica Scientific Advisories 45-97  
201812\_Dca\_45-201812\_Dca\_97.

**I. Papadopoulos, J. L. Latchman, R. Robertson, L. Lynch, K. Reddock, C. Ash, J. Manzano, C. Sobion, J. Seemungal**  
Trinidad and Tobago Microzonation Project Monthly Reports  
August 2019-July 2020

**I. Papadopoulos, J. L. Latchman, R. Robertson, L. Lynch, K. Reddock and J. Manzano.** Quarterly Trinidad and Tobago Microzonation Project Progress Reports -25-29 2019

James, D., **Miller, V.** (2020) Lahar Hazard Assessment for the Soufriere Hills Volcano, Montserrat. Open File Report OFR 20-02.

**Miller, V.** and Calder, (2020): Site Specific Risk Assessment for the Upper Belham Valley of the Soufrière Hills Volcano, Montserrat July 2020 for Government of Montserrat: Open File Report OFR 20-03, pp. 16, Montserrat Volcano Observatory, Flemmings, Montserrat, W.I.

**Miller, V.** and Calder, (2020): Site Specific Risk Assessment for Fort Ghaut, Plymouth of the Soufrière Hills Volcano, Montserrat July 2020 for Government of Montserrat: Open File Report OFR 20-04, pp. 17, Montserrat Volcano Observatory, Flemmings, Montserrat, W.I.

*Press Releases and Non-refereed Articles*

**Karen Pascal:** April 2020 Interview for Télé Star magazine, France, 'TEMOIGNAGE. Karen Pascal: "Le risque zéro n'existe pas"' (1 page)

**Karen Pascal** and Thomas Christopher: Feb 2020 Interview and assistance with production of a TV documentary, 'Des volcans et des hommes' (26 mn, in production for ARTE channel, France)

**Karen Pascal** 02nd Nov 2019 Interview on the radio programme 'The Cultural Show' (ZJB public radio, 120 mn), regarding the 'Disaster Passed' project and the 'Mountain Aglow' exhibit.

**Karen Pascal:** Oct 2019 Scientific advice for the production of a TV documentary, 'Lost places' (in post-production for ZDF channel, Germany)

MVO Talks for July 2021: In commemoration of the start of the eruption on 18 July 1995. The MVO hosted and delivered a series of talks, interviews and panel discussions entitled MVO talks from 13 -17 July (available online through ZJB and the Government Information Unit)

*Meetings & Workshops*

MVO seismologist Roderick Stewart visited MTA (General Directorate of Mineral Research and Exploration) in Ankara, Turkey for five weeks in September and October 2019. He was assisting MTA scientists to set up seismic monitoring of the Erciyes Dag volcano. This was a follow-up to a bilateral UK-Turkey project to build capacity in volcanology in Turkey.

**Sir Arthur Lewis Institute of Social & Economic Studies (SALISES)****Journal Publications**

**Ghany, Hamid.** (2020) Correcting Arend Lijphart's Hybrid VI: the case of Guyana. *The Journal of Legislative Studies*, Vol. 26, Issue 2, pp. 314-327.

**Mohan, Preeya.** (2019) Nascent Entrepreneurs in Caribbean Small Island Developing States: Opportunity versus Necessity. *Journal of Developmental Entrepreneurship* 24(4).

**Mohan, Preeya**, Nekeisha Spencer and Eric Strobl. (2019) Natural Hazard-Induced Disasters and Production Efficiency: Moving Closer to or Further from the Frontier? *International Journal of Disaster Risk Science* 10(2): 166-178.

Dookeran, Winston and **Mohan, Preeya.** (2019) Small State Diplomacy and Global Competitiveness. *Small States and Territories* 2(1).

4. Brei, Michael, **Mohan, Preeya** and Strobl, Eric. (2019) The impact of natural disasters on the banking sector: Evidence from hurricane strikes in the Caribbean. *The Quarterly Review of Economics and Finance* 72(C): 232-239.

**Mohan, Preeya.** (2020) Human capital and technical efficiency: a Stochastic Frontier Analysis of Caribbean firms. *Journal of Education and Work* 33(2): 143-153.

**Parey, Bephyer.** (2020) Accommodations for the inclusion of children with disabilities in regular schools in Trinidad: A mixed methods approach. *International Journal of Inclusive Education*. doi: 10.1080/13603116.2019.1701719.

**Parey, Bephyer.** (2020) Using Sen's capability approach to assess wellbeing among working-age persons with disabilities in Trinidad. *Social Indicators Research* 151, 1129-1148

*Book Chapters*

**Ghany, Hamid.** (2020) Constitutional Design in the Commonwealth Caribbean. In *The Oxford Handbook of Caribbean Constitutions* by Richard Albert, Derek O'Brien and Sshauna Wheatle (Eds.) (Oxford and New York: Oxford University Press 2020, Ch. 2, pp. 47-78).



UWI  
ST. AUGUSTINE  
CAMPUS