

07/08

faculty report



**The University of the West Indies
St. Augustine Campus**

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The West Indies
St. Augustine
Campus**

04	engineering
18	humanities & education
28	medical sciences
46	science & agriculture
70	social sciences
85	centres & units
109	publications and conferences

faculty of engineering





ten students graduated with research degrees: **five mphils and five phds.** overall, **41** of our graduates achieved **first class honours.** the department of mechanical & manufacturing engineering graduated the **highest number** of students.

dean, faculty of engineering **Professor Brian Copeland**

The Faculty decided to address particular aspects of the general UWI strategic plan, such as Curriculum and Pedagogical Reform (CPR) at both undergraduate and postgraduate levels; improving support systems within the Faculty; and creating effective Research and Innovation (R&I) processes.

Success however, depends on our ability to overcome existing challenges such as staff retention, upgrade of both the physical and human resource, particularly technical staff. These are discussed more fully in our section on Strategy Appraisal.

The Faculty has prepared a comprehensive proposal related to the Research and Innovation (R&I), pillar of the Strategic Plan. The proposal recognises that meaningful advances in R&I at UWI will not occur unless the region develops a functional innovation system that includes all major stakeholders and a regional strategy that coordinates the activities of all major actors. The region needs to re-adjust its priorities and develop systems and approaches that encourage innovation leading to wealth creation.



Students

Enrolment (On and Off Campus)

Total:	2377
Undergraduate Degrees:	1432
Higher Degrees & Diplomas:	918

Undergraduate

For the academic year 2007/2008 the undergraduate intake for all programmes in the Faculty was 390 students, 11% less than the previous year. The BSc programme in Mechanical Engineering with a minor in Biosystems experienced a 100% increase in enrolment, while there was a 20% increase in Electrical & Computer Engineering, a 61% increase in the Civil with Environmental Engineering programme and a 34% decrease in Civil Engineering.

Intake in this second year of new BSc programme in Land Management (Valuation) in the Department of Surveying and Land Information saw an increase of 71% over the last period.

Postgraduate

The Faculty attracted 256 new students into its taught postgraduate Diploma/Masters programmes, 11% less than the previous academic year which had an enrolment of 284.

New postgraduate enrolment in MPhil and PhD programmes of the Faculty, while still low, increased by 128% to 16 students in 2007/2008. Research student enrolment will remain low given the very good employment opportunities for lower level degree graduates in Trinidad and Tobago and the region for Engineers, Surveyors and Petroleum Geoscientists and the traditional lack of regional employment opportunities that fully utilise the skills of PhD and MPhil graduates.

Graduation

Total:	494
Undergraduate Degrees:	373
Higher Degrees & Diplomas:	121

The Department of Mechanical & Manufacturing Engineering graduated the highest number of students totaling 103, 5% less than the previous year. Overall, 41 of our graduates achieved First Class Honours.

At the postgraduate level, in 2007/2008, 130 students graduated from our taught postgraduate programmes, a 76% increase over the year over which had a figure of 74 students. Ten students graduated with research degrees: five MPhils and five PhDs.

The following is the list of the PhD awardees and the titles of their respective theses:

PhD Electrical & Computer Engineering

- Ronald Earle De Four - *'Vector Analysis, Control and Modelling of Brushless DC Motors and Permanent Magnets Synchronous Motors Operated in Brushless DC Mode'*

PhD Food Science and Technology

- Rosalie Lystra Holder - *'Processing Potential of Peppers of the Capsicum Genus (Capsicum annum L.)'*

PhD Food Science and Technology

- Darin Ashram Sukha - *'The Influence of Processing Location, Growing Environment and Pollen Donor on the Flavour and Quality of Selected Cocoa (Theobroma cacao L.) Genotypes'*

PhD Mechanical Engineering

- Nadine Sangster - *'Development of a Methodology for Complex Plant Control Using Fuzzy Logic'*

PhD Mechanical & Manufacturing Engineering

- Terrence Lalla - 'Development of a Behaviour Based Quality Management System for SMEs in Trinidad'

In the previous year, there were 2 MPhil and 2 PhD graduates.

Honours & Awards

The Faculty's Annual Prizes and Awards Ceremony was held on October 16, 2007, where the outstanding graduates and students of the Faculty were recognised. The feature address was given by Mrs. Christine Kangaloo, Minister of Science, Technology and Tertiary Education. At this ceremony 41 outstanding students were placed on the Dean's Honour Roll.

Staff

Honours & Awards

Professor Brian Copeland was awarded the Chaconia Gold Medal of the Order of the Trinity by the Government of Trinidad & Tobago.

Dr. Winston Lewis received a Lifetime Achievement Award from the World Congress of Arts, Sciences and Communications.

Professor W.A. Mellowes received a Career of Excellence Award from the Association of Professional Engineers of Trinidad & Tobago (APETT) at their 48th Annual Banquet & Awards Ceremony in April, 2008. **Professor Mellowes** was also granted Joint US Patent with Dr. Michelle Hamilton and Mr. Garth Dawkins for Xanthum Gum Production from sugar cane juices (March 2008).

Dr. Jacob Opadeyi was elected **President, Commonwealth Association of Surveying and Land Economy.**

Dr. Michael Sutherland was appointed Chair-Elect, Commission 4, International Federation of Surveyors.

Dr. Gail Baccus-Taylor, Professor Brian Copeland, Professor Stephan Gift, Dr. Kim Mallalieu, Dr. Winston Lewis, and Dr. Michelle Mycoo were featured among the University's 60 leading academics in the special UWI 60th Anniversary publication - 60 under 60.

P. Frederick, G.S.H. Baccus-Taylor and J.O. Akingbala (2008) *Best Paper/Invaluable Contribution in the 'Nutrition Session'* for the paper entitled 'Studies on Pomerac (Syzygium malaccense) and its Dried Candied Slices' which Dr. Baccus-Taylor presented at the International Symposium 'Underutilised Plants for food, Nutrition, Income and Sustainable Development', held March 3-7, 2008 in Arusha, Tanzania.

Promotions

The following members of staff were appointed as Deputy Deans for the 2007/2008 academic year:

Professor Chandrabhan Sharma - Undergraduate Student Affairs

Professor Clément Imbert
Physical Facilities & Administrative,
Technical and Service Staff

Professor Edwin Ekwue
Distance Education & Outreach and Research
& Postgraduate Student Affairs

Appointments

Dr. Richelle Adams
Electrical & Computer Engineering

Professor Bonnie Tyler
Chemical Engineering

Dr. Dexter Davis
Surveying & Land Information

Dr. William Wilson
Visiting Senior Lecturer in Structural Engineering

Dr. Rupert Williams
Lecturer in Structural Engineering

Retirements & Resignations

Dr. E.T.R. Dean

Civil & Environmental Engineering

Dr. Joanna Ibrahim

Civil & Environmental Engineering

Dr. Keith Miller

Surveying & Land Information

Dr. Carmen Riverol

Chemical Engineering

Mr. Keith Sirju

Civil & Environmental Engineering

Programmes

The Department of Mechanical & Manufacturing Engineering joined the Department of Civil & Environmental Engineering in actively participating in and significantly contributing to the establishment of MSc programmes in Guyana, by introducing the MSc in Engineering Management with an intake of 20 students.

In 2007/2008 the Faculty graduated its first cohort of students, 11 in total, from its Guyana programmes, as follows:

- MSc Project Management, ten students (four with Distinction)
- MSc Construction Management, one student (with Distinction)

International Accreditation and Quality Assurance

Chemical Engineering

Programmes in the Department were reviewed by the Quality Assurance Unit in October 2007. The Department was also subject to an accreditation visit by the Institution of Chemical Engineers (IChemE) of the UK in February 2008. All programmes were accredited for a three-year period up to, and inclusive of, student intake year 2010.

Civil & Environmental Engineering

The UWI Quality Assurance Unit carried out a review of the Department in March 2007 and made a number of significant recommendations. As a result, the Department introduced two new courses, CVNG 1007 Introduction to Geotechnical Engineering and CVNG 1008 Building Services Engineering, and restructured its Level 2 course in Soil Mechanics. The two new courses replaced courses in Construction Techniques and Engineering Thermodynamics respectively.

The Department's MSc Programmes in Civil Engineering and Civil with Environmental Engineering have been accredited by the Joint Board of Moderators (JBM) for the 2008-2010 student intake.

Mechanical & Manufacturing Engineering

The following MSc Programmes in the Department of Mechanical & Manufacturing Engineering have been accredited by the Institution of Mechanical Engineers for the 2007-2010 student intake:

- Manufacturing Engineering
- Production Engineering and Management
- Engineering Management
- Production Management

Research

The following lists the research and development activities conducted in the various departments.

Chemical Engineering:

Research in progress in the Department of Chemical Engineering for the period 2007/2008 includes:

General:

- Ligno-fibrous products from bagasse.
- Control systems analysis and design, failure prediction in heat exchangers, process optimisation, polymer recycling.

Food Production Processes:

- Formulation, preparation and evaluation of a variety of condiments, e.g. Tomato Choka, soft cheeses, pumpkin purees and relishes and pepper products.

Food Characterisation/Utilisation:

- Analysis and characterisation of regional produce and food products (e.g. Topi Tambo tubers, sweet potato, cassava, coconut water, local plant materials, plant pigments, Mozzarella cheese from buffalo and cow's milk) for food and industrial applications.

- Energy and Water utilisation & conservation practices at a local distillery

Food Safety:

- Shelf-life evaluation of convenience food; detection, quantification and treatment of bacteria in foods, microorganisms and fermentation time during cocoa fermentation.

Chemical & Process Engineering:

- Supercritical Fluid Extractions; protein recovery from indigenous sources, SODIS methodology for water and waste-water treatment, production of bio-degradable plastics, polymer recycling studies.

Petroleum Engineering:

- Feasibility of transporting stranded natural gas around the Caribbean using gas hydrates (GtS);
- Natural gas from sub-sea hydrates;
- Desalination of sea water by freezing, particularly gas hydrates;
- Heterogeneity effects (permeability and wettability) on reservoir flow and displacement;
- Vapour extraction via horizontal wells, downhold heating, foamy oil, heavy oil cleanup, asphaltine production problems;

- Environment considerations, Gas Condensate entrapment within porous media during production;
- Sanding;
- Sustainability issues;
- Natural Gas Hydrates as a potential future source of gas for Trinidad and Tobago;
- Thin oil rims.

Petroleum Geoscience:

- Origin and evolution of fractures in Toco; implications of the fractures for petroleum prospectivity.
- 2 billion year old continental breakup in eastern India.
- Closure of the north Singhbhum sea and continental collision in eastern India.
- Foraminifera and Ostracoda of the continental shelf off SE Trinidad.
- Interitdal foraminifera in the Caroni Swamp.
- Sedimentation of the Carolina Sands.

Civil & Environmental Engineering

- *River Mechanics*: Estimation of scour depth at bridge piers and sediment transport.
- *Eco-hydraulics*: Estimation of in-stream flow requirement for local rivers.
- *Earthquake Engineering*: Formulation of local design codes for seismic resistance.
- *Intelligent Traffic Management Systems*: Use of ICT for traffic management.
- *Slope Stability*: Use of geo-textiles and vegetable fibres for preventing landslides.
- *Shoreline Erosion*: Design criteria for shoreline erosion control structures.

Electrical & Computer Engineering Major Projects Completed

- *Building Local Capacity for ICT Policy and Regulation*: A Needs Assessment and Gap Analysis for Africa, the Caribbean and the Pacific. Completed jointly with researchers from RIA, LIRNEasia and DIRSI. This research will guide the next generation of regional capacity building in the area of telecommunications regulation and policy.

- *Completion of the first phase of the G-Pan sub-project*, with the pans are being used in the National Steel Symphony Orchestra and are positioned to positively impact on the pan industry by virtue of improved quality, clarity and extensive range.
- *An Acoustic Study of the Steelpan*: A study to map the three-dimensional sound field of steelpans using acoustic holography methods. The study revealed new information on the sound radiation patterns on the sound radiation patterns of tenor and bass steelpans and also on the propagation of sound across and around these instruments. The study has implications for the recording, performance and acoustic design of the instruments.

Research in Progress

- *Mobile technologies for social development*. This multidisciplinary research is action-oriented and explores the many aspects of mobile-facilitated technological intervention for poverty alleviation, which include policy, regulatory, economic, ergonomic and technological; and comprise analytical, empirical and implementation activities.

- *2nd phase of G-Pan sub-project*, with full implementation of the G-soprano, which would have a positive impact on the pan industry as a whole by virtue of improved quality, clarity and extensive range.
- *Completion of the Percussive Harmonic Instrument (PHI)*, an electronic version of the acoustic pan to a fully functional instrument, which can generate musical sounds of any desired timbre using the physical motions of the traditional pannist.
- *Hardware Acceleration techniques for VoIP Applications*: Improvement of VoIP Quality of Service; Hardware Accelerators for SIP Servers.
- *Industrial Process Control Studio*: Framework for Efficient Deployment of PLC in Industrial Control.
- *Reconfigurable Embedded Computing*: Efficient Use of FPGA Technology in Embedded Computing.
- *Scilab Based Compiler for System-on-chip Applications*: Software Tool for Signal Processing and Communication Applications Design Using Custom processors and FPGAs.

- *Design of an Application Specific Parallel Architecture for Multimedia Applications.*
- *Design and Development of a Multipurpose Robotic Arm Using Novel Actuators.*
- *Applications of linear integrated circuits, the results of which will be applicable in a wide range of systems in measurement and instrumentation, controls and communications.*
- *The nature of the Magnetic Force, which will provide explanations for a range of phenomena in chemistry and may lead to an improved explanation for superconductivity.*
- *Biological effects of cell tower radiation on those living close to cell towers in Trinidad & Tobago.*
- *Development and commercialisation of a data collection system.*
- *Preparation of a textbook on Electronics Circuit Design.*

Mechanical & Manufacturing Engineering

Agricultural Engineering:

- Thermal Conductivity of Trinidadian Soils.
- Assessment of Electrical Conductivity of Trinidadian Soils.
- Test of the Eco Tech Tutor.

Industrial Engineering:

- Work Study and Ergonomics;
- Quality Management Systems for Trinidad and Tobago.
- HSE Radiation Management Model for the Workplace.
- Strategy Formulation and Performance Measurement in Manufacturing Enterprises.
- Science, Technology and Innovation in the Republic of Trinidad and Tobago.

Manufacturing:

- Rapid prototyping paradigms for virtual manufacturing systems.
- Computer-Aided Design and Drafting of Machine Elements – Using AutoCAD with AutoLisp; Modeling.
- Scheduling and Analysis of Flexible Manufacturing Systems and Cellular Manufacturing Systems.
- Virtual Learning (e-learning) to aid distance education in engineering;
- Disaster Management.

Department of Surveying and Land Information

Major Projects Completed

R. Al-Tahir

- ‘The Use of Geoinformatics for the Assessment of Watersheds Vulnerability to Land Degradation in Trinidad’, MSc Research by Ron Mahabir.
- ‘Developing a Geoinformatics based Methodology to Manage Natural Vegetation Habitats in Trinidad’, PhD research by A. Chinchamee (submitted for examination).

A. Mohammed

- “Physical Development along a coastal boundary: an examination of sea use and development on the Trinidad West Coast”, PhD thesis by David Neale (submitted for examination).
- Cascade effects and knock-on consequences of foreseeable chemical disasters at the Point Lisas Industrial Estate, Couva, MSc research by Arnim Drakes.

J. Opadeyi

- “Defining Agricultural Zones as a means of Protecting Agricultural Lands: A GIS Approach”. PhD research by Glynis Ford.

- “Geospatial Study of Epidemiology of Human Gastro-intestinal Parasites in Trinidad and Tobago”. An MPhil research by Rajesh Ragoo.
- “Geo-chemical Analysis of Heavy Metal Leachates and Related Parameters in the Guanapo/Caroni Watershed”. An MPhil research by Dalip Ramsingh.

B. Ramlal

- Spatial Analysis Techniques to Investigate Landscape Archaeology on the Island of St. Kitts MPhil Research Thesis by Madiha Farag-Miller (Submitted for examination).
- Land Use Change and River Ecology in the Arima Valley, Trinidad, MPhil Life Sciences Research Thesis by Shobha Sherry-Ann Maharaj (submitted for examination).
- The Development of a Location-Based Services Application on a PDA for Snodownia, UK, Sherrie-Lee Samuel, MSc. GIS thesis.
- Applying Public Participation Geographic Information Systems to Communities in the Caribbean; Case Study: Salybia, Trinidad, MSc Geoinformatics Thesis by Tricia Melville.

- Development of Benchmarking Criteria for Distributed Geographic Information Systems, MSc Geoinformatics Thesis by Tanya Gaskin.
- Early Warning and Response System For Predicting the Spread of H5N1 Avian Influenza in the Poultry Industry in Country Caroni, Trinidad Using Geographic Information System, MSc Geoinformatics Thesis by Sumatie Gosine.
- First-Order Design of Geodetic Network Using Geoinformatics MSc Geoinformatics Thesis by Andre Philip Gerard Clarke.

Research in Progress

J. Opadeyi

- “Using GIS Modelling to Develop a Dengue Fever Early Warning System for Barbados”. MPhil research by Alex S. Ifill.
- “The design of a GIS-based model for integrating qualitative and quantitative parameters in risk assessment”. MPhil research by Kerry-Ann Thompson.

R. Al-Tahir

- Multi-Technique Study of Ionospheric Irregularities at Mid-Latitudes, in collaboration with the University of Illinois at Urbana-Champaign, funded by the US

National Science Foundation.

- A Geoinformatics-based Approach to Analyzing Land Use Changes and Sustainable Development of Trinidad and Tobago, MPhil research by Terri Richardson.
- Using Geoinformatics to develop an Early Warning System to Protect Communities from Hazardous Emissions due to Industrial Activity.
- Using Geoinformatics to Evaluate Terrestrial Development’s Relationship to Coral Ecosystem Condition in Buccoo, Tobago.

A. Mohammed

- Housing policy and programmes, especially methodology to regularise informal, urban, hillside housing on both public and private lands. There are the specific components a) regularisation of Non-conforming built development and b) regularisation of informal settlements on private lands; Standards and processes for the regularisation of informal hillside development.

A. Mohammed and C. Griffith-Charles

- Containment of Squatting in Trinidad and Tobago; Regularisation of informal settlements on private lands.

C. Griffith-Charles

- Locating and Quantifying the Incidence of the Family Land Tenure System in Trinidad and Tobago. Funded by Campus Research and Publication Fund; Regularising Informal Occupants of Port of Spain: Land Tenure Component. Funded by: GORTT/Ministry of Housing/IDB; Family Land Tenure Governance and Extent in Tobago. MPhil Research by Sunil Laloo
- The Use of Geodetic Techniques to Determine Vertical Deformation of Land on the East and West Coasts of Trinidad. MPhil Research by Arleene Atwell-Martinez

B. Ramlal

- Analyzing the Success Factors of National Spatial Data Infrastructure, MPhil, Research by Vanessa Elliot; Developing a Spatial Strategy for Analysing Poverty. MPhil. Research by Harold Wall
- Developing National Spatial Data Infrastructures.
- Developing Spatial Data Standards.
- Modeling the Impact of Riverine and Ground Water Nutrient Input from Human Activities on Coastal Nutrients and Coastal Primary

Productivity: A Case Study of Buccoo Bay and Buccoo Reef Complex by Erin Mangal, funded by the Government of Trinidad and Tobago Research Fund.

- Modeling Distribution of Endemic Plant Species and their Response to Climate and Land Use Change in Trinidad Using Collection Records, Environmental Data and Geographical Information Systems MPhil Research by John Bayne
- AnEco-AgricultureProject:Towards an Integrated Management of the Northern Range.
- The History of the Railway System in Trinidad.

M. Mycoo

- Natural Hazard Risk Reduction in Small Island Developing States.
- Environmental Policy in Small Island Developing States: A Case Study of Trinidad

M. Sutherland

- Developing a Prototype Marine Cadastre for Chedabucto Bay, Nova Scotia. Funded by Coastal and Ocean Information Network for Atlantic Canada (COINAtlantic) and University of New Brunswick;
- "Crime Information and Analysis System". MSc research by Susanne Ali.

- "Business Point of Sale Reference System Using Geoinformatics". MSc research by Marissa Sookram;
- "Using Geoinformatics to integrate the information from the metering Department with the customer billing Department for the residents in Calder Hall, Tobago". MSc research by Natalie Joseph.

Infrastructure

Expansion and refurbishment works to Block 13 continued throughout 2007/2008. The building has been handed over to the Faculty. Furnishing and final organisation are expected to be completed in time for the start of Semester 2, 2008/2009.

Strategy Appraisal

The Faculty is focusing on the following aspects of the University's Strategic Plan:

- Curriculum and Pedagogical Reform (CPR) at all levels, i.e., UG as well as PG.
- Effective Research and Innovation (R&I) processes.
- Faculty Support Systems, including
- The development of well defined, efficient and effective support and enabling processes.

- Infrastructure that supports educational thrust.
- The fostering of an environment that better motivates creative thought.

The following activities have been completed:

- CPR Strategies have been comprehensively elucidated in the Departments of Civil & Environmental Engineering, Surveying and Land Information and Electrical and Computer Engineering at the undergraduate and postgraduate levels. These strategies were motivated in part by the Strategic Plan description of the UWI graduate and also by programme outline descriptions provided by the respective accreditation bodies. A critical component of these strategies is the move to reformulate the design of courses using well defined learning outcomes. Strategy execution has started in all cases. In particular:
- All undergraduate programmes in the Department of Surveying and Land Information have been comprehensively reviewed, substantially modified and approved for delivery.

- New structures for designing, supporting and delivering courses are being implemented in the BSc in Electrical and Computer Engineering following an in depth highly structured review of the curriculum.
- MSc programmes in Civil and Environmental Engineering have been overhauled and rationalised for more effective delivery. As a consequence, the MSc in Civil Engineering has been accredited by the Joint Board of Moderators.
- Undergraduate regulations have been overhauled.
- Agreement with Caribbean stakeholders to establish a Caribbean Accreditation Council for Engineering and Technology (CACET). Discussions are being held with CARICOM in this regard.

Comprehensive documentation has been prepared on the Research and Innovation (R&I) pillar of the Strategic Plan. The proposal recognises that meaningful advances in R&I at UWI will not occur unless the region develops a functional innovation system that includes all major stakeholders – Universities and other knowledge centres, Governments, Industry and Funding Agencies – and a comprehensive regional strategy that guides the orchestration of these players.

The strategy points to the need for priorities to be adjusted to incorporate approaches that foster innovation for wealth creation.

Success in these initiatives is dependent on overcoming the existing challenges that include:

- A more holistic approach is required to attract and maintain academic staff
- An upgrade of existing plant is required to provide for an environment that is more conducive to teaching, learning, research and innovation.
- Technical staff needs to be up-skilled by training in new technologies
- Strategies are required to arrest the perceived fall in intake standards
- Functions and processes are to be redefined in respect of management and administration

Outreach

West Indian Journal of Engineering

The Faculty continued to produce its flagship *West Indian Journal of Engineering* (WIJE) under the leadership of its Editor, Professor W.A. Mellowes. In the last Academic Year, Vol. 29, No. 2 was published. The journal continues to publish technical papers from local, regional and extra-regional academics.

Chemical Engineering

The Department's industrial and public sector linkages via internships, industry-associated research, part-time and guest lecturers, student prizes, and factory/field visits continue to increase, as it attempts to be more relevant to the needs of the wider society. In this regard, the Food Science and Technology Unit continues to work assiduously to maintain its linkages with industry through:

- Internships: National Flour Mills; National Cannery Ltd.
- Prizes: Pepsi Cola; Co-operative Citrus Growers Ltd; Associated Brands Ltd; Universal Foods Ltd.
- Departmental Visits (Potential Collaboration): Food & Beverage Industry Development Committee; T&T Agribusiness Association (TTABA); National Dietary Services Ltd; Ministry of Science, Technology & Tertiary Education.
- Factory Visits: Arawak Co. Ltd.
- Product Development/Analytical Services: National Flour Mills; Ministry of Agriculture, Lands & Marine Resources; TTABA; Bio-Research Lab; Bermudez Group of Companies.
- Research Collaboration: Arawak Co. Ltd; Fine Choice Meats; Holiday Snacks Ltd.

- The Petroleum Geoscience and Petroleum Engineering Units continue to actively collaborate with the Energy Sector.

Linkages were forged with Chemical Engineering Departments at the University of Minnesota, University of Utah and Washington University. During the review period Mr. Jeffrey Smith visited these Universities and met with Faculty members within each Department with areas of mutual interest in research and teaching. Areas of particular interest were Reaction Engineering, Computer Aided Engineering and Polymer Recycling.

Civil & Environmental Engineering

The Department established research links with the University of Florida and McGill University, and continued relationships with the Association of Professional Engineers of Trinidad and Tobago (APETT), the Board of Engineering of Trinidad and Tobago (BOETT), the Environmental Management Agency (EMA), Trinidad and Tobago Bureau of Standards (TTBS) and the Caribbean Council of Engineering Organisations (CCEO).

The Department also generated revenue in the amount of TT\$80,000, doing testing of walls for Trinidad Aggregate Products.

Electrical & Computer Engineering

The Department of Electrical & Computer Engineering signed a Memorandum of Understanding with ESIGELEC, France. To date, Drs. Ngalamou and Sastry have visited the institution in France and the Department has been host to two students in June/July 2008.

Surveying & Land Information

The Department of Surveying & Land Information hosted the *10th International Conference of the Global Spatial Data Infrastructure on Small Island Perspectives on Global Challenges*, February 25-29, 2008.

The Engineering Institute

The Faculty through its Engineering Institute (EI) continues to contribute to regional development through outreach activities in research, training and consultancies. Its major activity continues to be the delivery of courses for continuing professional development (CPD). During the period under review, the Institute delivered 19 CPD courses and 16 projects were in progress.

Distinguished Visitors

Maurice Adriaens

Ministry of Traffic and Telecommunications,
Netherlands Antilles.

Hafeez Bak, ASME

Trinidad and Tobago Group.

Dr. Rob Best

Pro Dean, Engineering Science Built Environment,
London South Bank University, London, UK.

Professor Peter Dale

University of New Brunswick,
Fredericton, Canada.

Dr. Peter Dare, Chair

Department of Geodesy and Geomatics Engineering

Giles Gillett

Director of Engineering
Aker Kvaerner Engineering Services Limited,
Stockton-on-Tees, UK.

Jessica Horan

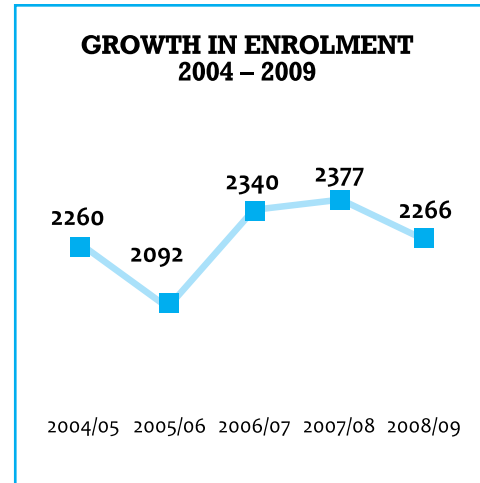
Educational Development Manager,
RICS, New York, USA.

Howard D. Johnson

Department of Earth Science & Engineering,
Imperial College, London, UK.

Brian Jones

Department of Earth & Atmospheric Sciences,
University of Alberta, Edmonton, Alberta, Canada.



Michael Michand

American Society of Mechanical Engineers, ASME.

Micha Peleg

Professor of Food Engineering,
Chenoweth Laboratory,
University of Massachusetts,
Amherst, MA, USA.

Gregg Rawlins

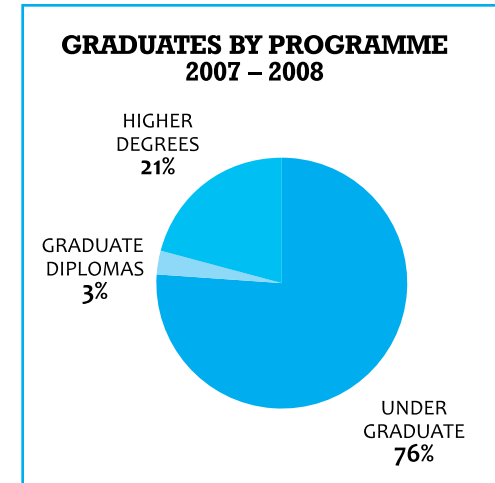
IICA Representative, Trinidad and Tobago,
Inter-American Institute for Cooperation
on Agriculture, Port of Spain, Trinidad.

Glen Round

Group technical Safety Manager
Huntsman Tioxide, Billingham, UK.

Greg Sun

Engineering Programme,
University of Massachusetts, Boston, MA, USA.



Sima Taylor

Chair, Quantity Surveys Institute, New York, USA.

Lurlene Van Buren

Study Abroad/Exchanges,
University of Massachusetts, Boston, MA, USA.

Grant Vincent, LLS, RICS

Cayman Islands

Professor Sieghard Wanke

Department of Chemical & Materials Engineering,
University of Alberta, Canada.

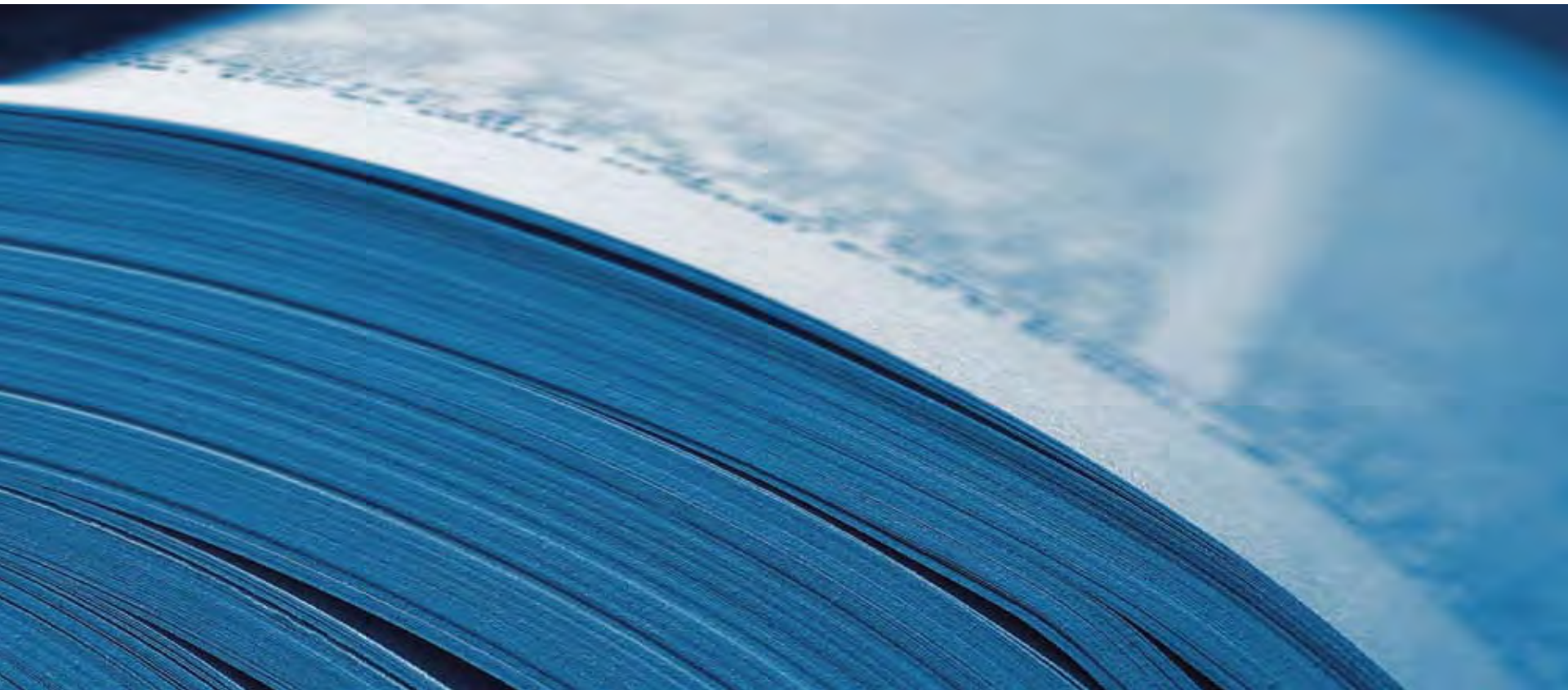
Lester Efebo Wilkinson

Ministry of Foreign Affairs (Cuba Embassy)

Professor Michael Worthington

Department of Earth Sciences,
Oxford University, Oxford, UK.

faculty of humanities & ed



Education

the faculty awarded **46 first class honours** degrees and **11 higher degrees** by research, including **five doctorates**. two of our doctoral students graduated with **high commendation**. the centre of creative and festival arts is now a full department of the faculty and **“the rainmakers”** reigned over all.



dean, faculty of humanities & education

Professor Funso Aiyejina

The Faculty of Humanities & Education (FHE) continued to expand its operations in 2007/2008 in keeping with the University's strategic plan objectives in the key areas of Teaching and Learning, Graduate Studies, Research and Innovation, and Open Campus.

In the academic year 2007/2008, the FHE rationalised its undergraduate and graduate programme and course offerings, developed new undergraduate and graduate programmes and courses, introduced e-learning and applied discipline appropriate software on a higher scale, and increased its student exchange programmes. The Faculty, through the School of Education, also established a digital library (full-text database) on Caribbean education, and a web version of Caribbean Educational Research Information Service (CERIS) bibliographical database.

The Faculty awarded 46 first-class honours degrees and 11 higher degrees, which includes five doctorates.

Dr. John Campbell of the faculty received the Vice-Chancellors' Award for Excellence in Teaching (2007), Dr. Sherry-Ann Singh was awarded a Research Fellowship at the Centre for Caribbean Studies, University of Warwick in May 2008, and Dr. Giselle Rampaul was awarded the Centre for Caribbean Studies Visiting Fellowship, Warwick University in November 2007. Professor Lalla received a UWI Press Award for Outstanding Innovative Proposal 2005 for a series Caribbean Postscripts: Afterwords on the British Canon, awarded in May 2008 and Dr. Paula Morgan and Professor Valerie Youssef also won a UWI Press award for the best multidisciplinary text for *Writing Rage: Unmasking Violence in Caribbean Discourse* in May 2008.

Students

Enrolment (On and Off Campus)

Total:	2982
Undergraduate Degrees:	2010
Higher Degrees & Diplomas:	606

There has been a notable increase in demand in the areas of Communication Studies, English Language and Literature with Education, Early Childhood Care and Education, and Film Studies. There has been a significant decrease in demand in the area of French Language and Literature.

Graduation

Total:	793
Undergraduate Degrees:	415
Higher Degrees & Diplomas:	271

The Faculty awarded 46 first-class honours degrees and 11 higher degrees by research, which includes five doctorates. Two of our doctoral students graduated with high commendation.

Honours & Awards

The top Bachelor of Arts degree graduating student was Nigel Karim who majored in Theology while his counterpart in the Bachelor of Education degree programme was Alicia Gayah-Batchasingh who majored in Early Childhood Care and Education.

The Faculty also congratulates the Festival Arts Chorale, UWI and UWI Festival Steel Ensemble, both directed by Mr. Jessel Murray, which embarked on a highly successful tour to Massachusetts, USA this year, and Arts-in-Action which gave a Royal Command Performance, for the Prince of Wales when he visited the Campus.

Second-year Film student, Graeme Suite, won awards for Best Short Documentary and Best Editing for his production, A Long Way Home, at the Lumen Awards held by Catholic Communications and the Media Association of Trinidad & Tobago.

Staff

Honours & Awards

Dr. John Campbell, Coordinator of the FOUN 1101 course was the recipient of the Vice Chancellor's award for Excellence in Teaching.

Professor Barbara Lalla received a UWI Press Award for Outstanding Innovative Proposal 2005 for a series Caribbean Postscripts: *Afterwords on the British Canon*, awarded in May 2008

Dr. Paula Morgan and **Professor Valerie Youssef** also won a UWI Press award for the best multidisciplinary text for *Writing Rage: Unmasking Violence in Caribbean Discourse* in May 2008.

Dr. Giselle Rampaul was awarded the Centre for Caribbean Studies Visiting Fellowship, Warwick University (November 2007) and the British Academy Visiting Fellowship, University of Essex (June to August 2008).

Dr. Sherry-Ann Singh was awarded a Research Fellowship at the Centre for Caribbean Studies, University of Warwick.

Dr. Geraldine Skeete received the Most Outstanding PhD Thesis Award (Humanities & Education and Social Sciences).

Promotions

Dr. Merle Hodge promoted to Senior Lecturer (Department of Liberal Arts).

Dr. Jennifer Rahim promoted to Senior Lecturer (Department of Liberal Arts).

Appointments

Dr. Zhanna Dedovets,

Lecturer in the Teaching of Mathematics (SOE)

Mrs. Sandra Figaro-Henry,

Temporary Educational Technologist (SOE)

Ms. Juliana Alexander,

Temporary Lecturer, Teaching of Science (SOE)

Mrs. Margaret Cain,

Temporary Lecturer,
Programme Coordinator for online programmes (SOE)

Mrs. Sharon Phillip-Peters,

Temporary Lecturer, Teaching of Language Arts (SOE)

Dr. Simon Yalams,

Lecturer, Technology Education (SOE)

Mrs. Cathryn Mann Benn,

Lecturer, Foundation Language Programme
(Department of Liberal Arts)

Mr. Benjamin Braithwaite,

Lecturer, Linguistics
(Department of Liberal Arts)

Ms. Kathy-Ann Drayton,

Lecturer, Speech Language Pathology
(Department of Liberal Arts)

Ms. Nardia Thomas-Allain,

Administrative Officer, Office of the Dean

Retirements & Resignations

Dr. Vena Jules (SOE)

Mr. Steven Khan (SOE)

Programmes

In the academic year 2007/2008, the Faculty rationalised its undergraduate and graduate programme and course offerings, developed new undergraduate and graduate programmes and courses, introduced e-learning and applied discipline appropriate software on a higher scale, and increased its student exchange programmes. Through the School of Education, we also established a digital library (full-text database) on Caribbean education, and a web version of Caribbean Educational Research Information Service (CERIS) bibliographical database.

New Programmes

The following programmes were introduced during the 2007/2008 academic year:

- BA in Speech Language Science.
- Postgraduate Diploma in Interpreting Techniques
- MA in English Language
- MEd (Health Promotion)

Programmes in Development

- UWI Certificate Programme in Early Childhood Care and Development
- BA Dance
- Postgraduate Diploma in Animation
- Masters in Speech Language Pathology (SLP)
- Graduate Studies in Communication Studies

Research

Listed below are the areas in which the Faculty of Humanities & Education has conducted major research projects during the academic year 2007/2008. Many of these are research in progress.

- Design, delivery and evaluation of a programme for the school-based professional development of secondary school principals.
- The Social Context of Learning: A Study of Young Children's Social Experiences in Primary Schools.
- "Universal Secondary Education" - An Investigation of the Impact of this Governmental Policy on the Secondary Education System of Trinidad and Tobago.
- Effects of Professional Teacher Trainer Programmes in Selected Schools.
- Family Development and Children's Research Centre (FDCRC).
- Multiple Intelligence and the Establishment of Magnet Schools
- Cultural Studies.
- Speech Language Pathology.
- Endangered Languages.
- Communication Studies.
- Contesting the Past: Narratives of Trinidad & Tobago's History.
- An Outrage to Humanity: the Course and Abolition of the Atlantic Slave Trade.

- An Outrage to Humanity: Why an Atlantic Slave Trade?
- Anansi, an African Legacy: bridging time, spaces and spirits.
- Black Militarism, Abolitionism and the Remodeling of Colonialism.
- Emancipation and ‘Military Necessity’ during the Haitian Revolution: challenging the hegemonic paradigms of slavery and freedom.
- Revolutionary Emancipationism in the Caribbean and its Impact on the Abolition Movement, 1760 to 1834.
- History of Traditional Science and Technology in India.
- Indian Diaspora in the Caribbean: Problems and Prospect.
- Kashmir before and after the Accession.
- Law in Plural Societies; The Caribbean and International Trade; Globalisation in theory and practice.
- Market and Field: The Workplace of the Indian Female in Trinidad: 1900-1945.
- Rural Indian Women in Trinidad: 1870-1945.
- Trinidad as a safe haven for elite Venezuelans: the case of El Colegio Bolivar 1800-1890.
- Unlikely Matriarchs: Indo-Trinidadian Women in the Domestic Sphere 1900-1945.
- CAPE History, Unit 1 – The Caribbean in the Atlantic World.
- History of the Church of the Nazarene Trinidad and Tobago.
- Maroons and Treaties in Jamaica and Surinam.
- A History of the Caribbean Agricultural Economics Society.
- A History of Forest Conservation in the British Caribbean.
- Health and Living Conditions in Trinidad and Tobago, 1900-1938.
- A Crime Solving Toolkit: Forensics in the Caribbean.
- Archaeological Project on Parks and Gardens.
- Archaeological Project on Railways in Trinidad and Tobago.
- Caribbean Heritage.
- Myths and Realities of Caribbean History.
- The Encyclopedia of Caribbean Archaeology.
- The Survey and Excavation of the pre-Columbian site of Blanchisseuse in North Trinidad.
- Research assistance to former Prime Minister and former President of the Republic of Trinidad & Tobago, Mr. A.N.R. Robinson for his forthcoming autobiography.
- School Curriculum and the Indian Diaspora: The Case of Trinidad
- The Ramayana Tradition and Socio-Religious Change in Trinidad 1917-1990.
- Caribbean-Flavoured Presbyterianism: Education as a Prescription for Socio-Political Development, 1868-2006.
- Civil rights movement in the United States during the 1960s.
- Escaped slaves in Canada during the 19th century.
- Influence of the United States media on the Caribbean.
- Labour relations and trade unions in Trinidad and Tobago.
- Class 1894-1950.
- Credit Union movement in Trinidad & Tobago.
- Trinidad & Tobago, Anti-Colonial Movement.
- Trinidad & Tobago, Parliamentary Crisis.

Early Childhood Education

The Family Development and Children’s Research Centre (FDCRC) was designated a unit of the University this academic year. The Unit conducts collaborative work with local, regional and international researchers and early childhood specialists. Initial work has already started with Professor Jaipaul Roopnarine of Syracuse University.

Liberal Arts

The research agenda of the Department of Liberal Arts continues to be rich and diverse and, in line with the Strategic Plan. It includes major thrusts in Cultural Studies and in Speech-Language Pathology, both of which serve the interdisciplinary demand of twenty-first century development. A government award to the Cultural Studies programme is being used primarily to support significant graduate student endeavours. The grant to the Speech-Language Pathology programme is being used for a screening exercise to be carried out among primary schools across Trinidad and Tobago.

Work in Communication Studies focuses on the relationships among culture, gender, conflict and communication; communication education; forensic linguistics; and health communication.

Teaching and Learning

One of the major developments in the area of Teaching and Learning was the reengineering of the Foundation Language courses. Delivery of these courses now incorporates technology and uses *myLearning* to provide online tutorials. These strategies provided pivotal support to this programme which serves an average of 5000 students, across four faculties, over three semesters. During the period staff underwent substantial training in online delivery facilitated by the Microsoft Academy of the Campus IT Service and the Instructional Development Unit.

Undergraduate Programmes & Courses

The Faculty continues to refine its offerings, courses with low intake were identified and marked for withdrawal and existing courses were modified. As such, the Faculty introduced a BA in Speech Language Science and a modified Certificate in Speech-Language Pathology is to be offered over two years. There was an increase in theoretical course offerings, especially in Linguistics and Literatures in English and approval was granted for the offering of courses in Spanish Translation I and II and in Public Communications. The Faculty also participated in the launch of a cross-campus Caribbean Languages and Linguistics Institute.

The Visual Arts programme was revised and a proposal for BA Dance was drafted. A new course in Music Therapy is awaiting final approval. Approval has also been granted for additional posts in Visual Arts, Music and Carnival Studies to facilitate the expansion of these areas.

We developed and mounted short courses on Technology Education, Teaching Reading at Primary Level, and Differentiated Instruction, and a UWI Certificate Programme in Early Childhood Care and Development was approved.

Graduate Studies

The Faculty revised its graduate offerings this year. The MA in English Language was introduced, a postgraduate diploma in Animation was under consideration and a proposal for a graduate programme in Communication Studies was drafted.

Outreach

The Faculty regularly interacts with the regional and national communities through conferences, performances, writing and numerous speaking engagements. These programmes are as much about extending the resources of the Faculty to the wider community as they are about exposing students and their work to the public and luminaries in their fields. Some of this year's highlights include activities surrounding the

V.S. Naipaul Nobel Laureate Celebration and our Writer in Residence programme featuring Earl Lovelace.

We have also entered into more formal arrangements such as our partnership with the Ministry of Education where the Faculty has been contracted to design, deliver and evaluate a programme for the school-based professional development of secondary school principals. The Faculty is also exploring the provision of programmes on reading and special education to meet pressing needs in the national public school system.

Facilitating the Learning of Languages & Linguistics

The Faculty assisted with the establishment of the Caribbean Languages and Linguistics Institute at Mona, Jamaica during the report period. The Institute specialises in courses indigenous to the Caribbean region as well as advanced theoretical Linguistics courses. It is offered to students registered in and outside of the UWI. Here on the St. Augustine campus the Caribbean Interpretation and Translation Bureau was formally launched in July 2008 and we established a Speech Language Pathology Research, Service and Clinic.

Study Abroad & Exchange Programmes

Several Foreign Language student exchanges occurred during the report period. The Faculty welcomed five UAG, Martinique and Guadeloupe students in semester II of 2007/2008, while nine UWI Foreign Language students participated in an immersion course in the 2008 Contact and Research for the Caribbean (CORECA) programme in Guadeloupe.

The caliber of our French programme in particular shone through this year as three former students were appointed as visiting instructors at French universities and 15 are employed as graduate assistants at French primary and secondary schools. One UWI exchange student is now functioning as a visiting instructor in Bordeaux University and, for the first time, three UWI students participated in the teacher training programme in IUFM (Institut Universitaire de Formation des Maîtres), Guadeloupe.

Partnerships

The Faculty continues to work closely with the Open Campus (formerly UWIDEC) and this year we increased the number of courses offered via mixed modes of delivery. We also partnered with the Open Campus for the development and delivery of the first year of a BEd (Primary) Language Arts programme.

International collaborations were established with Professor John Anderson of the University of Victoria on an assessment project on the correlation of learning outcomes, and also with Syracuse University in the area of Early Childhood Education.

Musicanova

The Department of Creative and Festival Arts extended its working relationship with the Music Literacy Trust and, in collaboration with the Inter-American Development Bank, Cultural Development Programme, held the second Musicanova concert. The concert is a celebration of original musical compositions created specifically for the steelpan. This year saw the introduction of a new competition for original music created for steelpan solos and duets. The competition was restricted to nationals of Trinidad and Tobago.

Creative and Festival Arts

Musical Arts

Production of “The Sound of Music” by the Festival Arts Chorale, UWI at the Queen’s Hall, June 26 – 29, 2008. Directed by Louis Mc Williams with musical direction by Jessel Murray, and live music provided by the National Sinfonia, this was the fourth annual production to come from the Festival Arts Chorale.

Theatre Arts

Production of “Bitter Cassava”, a play by Lester Efebo Wilkinson at the Learning Resource Centre, UWI, St. Augustine. Originally produced in 1979, this award-winning play looks at the notions of “revenge, love, superstition, placing particular emphasis on family life and how often children suffer from adult indiscretion”. The plot revolves around the old adage that “what you sow is what you reap” - and sometimes, the harvest is bitter.

Annual Showcase Concert Series

“The Rainmakers” - a 45-minute musical production integrating dance, drama and Trinidadian Carnival characters, written and directed by Franka Hills Headley, Director of Golden Hands Steel Orchestra, and featuring nine original compositions for the steel pan by UWI Music Lecturer, Dr Jeannine Remy. In this story, the people of Rainmaker Land have forsaken the true worship of The King of Rains, and drought ensues. The King of Drought has unleashed his fury on the land and its inhabitants groan in their misery. However, The King of Rains has hidden a special Rainmaker who lays asleep, deep in the heart of the earth.

Kaiso Dialogues 4

An annual event presented by the Carnival Studies programme. In November 2007 the event featured The Mighty Duke (now deceased), the Black Stalin who would later be presented with an Honorary Doctorate by the University, and Maximus Dan.

Sole to Sole

The Dance programme produced its annual dance production, Sole to Sole at the Learning Resource Centre, UWI, St. Augustine, April 27, 2008.

Jazz Night

– **in Honour of Professor Gordon Rohlehr**
Presentation of a Jazz Night for the Retirement Conference in honour of Professor Gordon Rohlehr in the School of Continuing Studies Auditorium, October 6, 2007.

Anime Caribe

Anima Caribe and the student exhibition in the National Museum, Art and Aesthetics 2008 were resounding successes and were the highlights of the Visual Arts programme.

Creative Writers’ Residential Workshop

Caribbean Creative Writers’ Residential Workshop 2008 hosted by the Cropper Foundation and Department of Creative and Festival Arts.

Film Productions

In April, 2008, the Film Programme held End of Year Screenings of student films. The one-day screening was well attended and many of the productions were later accepted for screening at the Trinidad and Tobago Film Festival in August, 2008. Student films were also featured at the Flash Point Festival in Jamaica in June, and second-year Film student, Graeme Suite, won awards for Best Short Documentary and Best Editing at the Lumen Awards held by Catholic Communications. His 14-minute film, “A Long Way Home”, chronicles the life of a former street child.

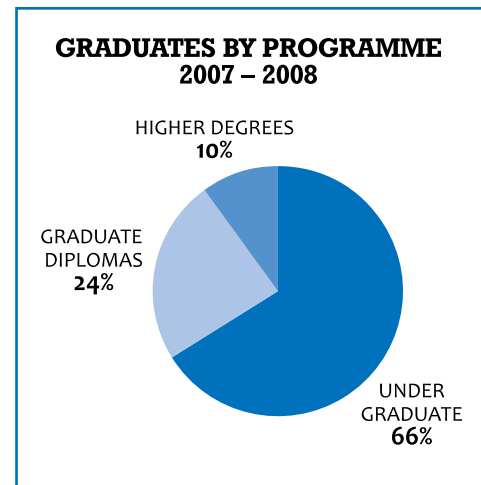
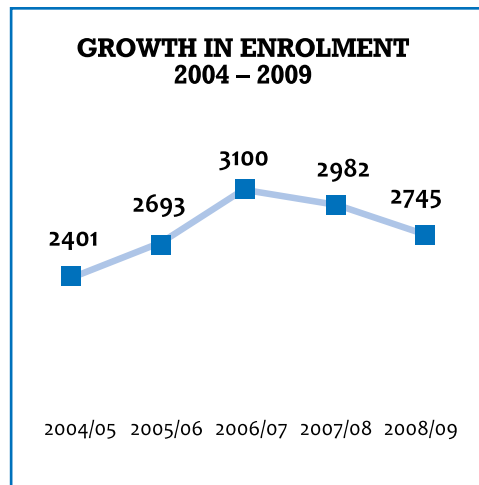
Staff and students, led by Dr. Jean Antoine-Dunne, also produced a documentary on the life and work of Professor Emeritus Gordon Rohlehr. The documentary, “Rivers of Sound”, was screened on the Campus as part of the Faculty’s tribute to Professor Rohlehr. The production included original footage shot on location in Professor Rohlehr’s home country, Guyana. The film received substantial contributions from Christopher Laird of Gayelle Television and students with prior professional experience working in the television industry. The Film Programme is sourcing additional funding to turn the documentary into a three part series.

Distinguished Visitors

Professor John Anderson
University of Victoria, Canada.

Mr. Earl Lovelace
Author, Trinidad and Tobago

Professor Jaipaul Roopnarine
Professor of Child Development,
Syracuse University



faculty of medical sciences



es



we are happy to report that the faculty maintained its **research activities, output and presentations** given at international forums. **five students** graduated from the faculty with **first class honours**. at the postgraduate level, **three students** graduated with **distinction at the masters level**, and of the **two phds awarded**, one was granted with **high commendation**.

dean, faculty of medical sciences

Professor Samuel Ramsewak

The Faculty experienced a number of successes this year, in spite of the financial, human resource and infrastructural challenges. The Preclinical Sciences Department saw the completion of a Quality Assurance audit and the addition of new laboratory equipment. The Paraclinical Sciences Department was restructured following the establishment of the Pharmacy School which emerged from the Pharmacy Programme. In the field of Adult Medicine there were significant increases in external funding for diabetes research and the Child Health Unit undertook a number of projects, for which funding had been received.

The Schools actively pursued continuing education seminars, a curriculum dialogue and workshops which were well attended by staff and students. The School of Veterinary Medicine revised its undergraduate curriculum and added new postgraduate programmes. We are happy to report that the Faculty maintained its research activities, output and presentations given at international forums.

It is expected that the ensuing year will provide additional challenges to the Faculty based on the impending local and international financial constraints. However, it is anticipated that these will be solved through innovative solutions and collaborations with the North Central Regional Health Authority and other stakeholders of the Faculty.



Students ENROLMENT (On and Off Campus)

Total:	1664
Undergraduate Degrees:	1386
Higher Degrees & Diplomas:	250

UNDERGRADUATE Clinical Medicine

The first year student intake increased by approximately 18% from 350 to 414. A total of 313 students were enrolled in Clinical Medicine with 153 in the Fourth Year and 160 in the Fifth Year. Both clinical and classroom teaching are being conducted on a year round basis in rotating clerkships.

Clinical Surgical Sciences

Our undergraduate numbers in Clinical Surgical Sciences continue to increase (in all Units). This places a greater burden on our clinical resources. In order to address these challenges we have already started expanding our programmes into General Hospitals – San Fernando, Eric Williams Medical Sciences Complex and County Hospital Sangre Grande. Facilities in the private sector are also being examined, in particular for areas in which our public hospitals may be deficient e.g., Cardiothoracic and Ophthalmic Surgery. Plans are also in place to increase out staffing to match the increased student load and requirements.

School of Dentistry

Although the demand for seats for dental education is increasing because of infrastructural limitations specific for the School, higher intake was not feasible. There was a definite female predominance 58 % in the admissions of 36 students. Overall, 47% of students were from Trinidad and Tobago, 33% from the Caribbean and the remaining 20% hailed from Botswana and the USA. In the May 2008, final DDS examination the pass rate was 77%. Students performed well in other years of the DDS programme.

School of Veterinary Medicine

A total of 136 students were registered at the School of Veterinary Medicine, 127 at the undergraduate level and nine postgraduate. There was a 16.5% increase in student enrolment for 2007/08 over the previous year, while the percentage of postgraduate student enrolment remained unchanged.

School of Advanced Nursing Education

In 2007/2008 there were 81 undergraduate students enrolled at the School of Advanced Nursing Education, compared with 72 the previous year.

School of Pharmacy

2007/2008 undergraduate student enrolment in the School of Pharmacy amounted to 165.

POSTGRADUATE

The Faculty admitted its second batch of DM Internal Medicine candidates this year. This second batch numbered seven students to complement the five students who began the programme in the academic year 2006/2007. Meanwhile, the DM Paediatrics programme graduated its first set of students as did the MSc in Clinical Psychology where nine students completed that degree.

The postgraduate programmes in all specialties related to Clinical Surgical Sciences have been expanding with increased numbers. It has been a challenge to involve the postgraduates in research but several initiatives are now in place to stimulate this activity. This year we had three publications in which postgraduate students were actively involved.

GRADUATION

Total:	241
Undergraduate Degrees:	217
Higher Degrees & Diplomas:	24

Five students graduated from the Faculty with first class honours. At the postgraduate level, three students graduated with distinction at the Masters level, and of the two PhDs awarded, one was granted with high commendation.

Para Clinical Sciences

Mr. Derek Emmanuel successfully attained his doctorate in Pathology (sub-discipline Chemical Pathology), for his project entitled, "Foetal Growth and Maternal Lipid Metabolism in Trinidad Women." He was supervised by Dr. Gershwin Davis, Lecturer in Chemical Pathology, Professor Z. Ali, Child Health (Neonatology) and Dr. Steve Wootton of the University of Southampton.

School of Veterinary Medicine

In the 2007/2008 year a total of 24 students wrote the final year undergraduate examinations in May 2008 and re-sit examinations in August 2007. Of these, all were successful with two receiving distinctions and five passing with honours.

School of Advanced Nursing Education

Nine of the first twelve full time students at the school were successful at their final examination for the undergraduate programme and will be graduating in November 2008. Of the nine students graduating this year one graduated with first class honours, five with second class honours, upper division and three with second class honours, lower division.

The School is very proud of this group. Many students are married and have families and they are able to complete the degree programme and also perform exceptionally, graduating with honours.

School of Pharmacy

Thirty students received the BSc Pharmacy Degree last year, with Mr. Ackram Hosein Khan emerging at the top of the class.

HONOURS & AWARDS

Pre Clinical Sciences

Ms. Debbie Hilaire was awarded a Canadian government scholarship under the Graduate Student Exchange Programme to work with Professor Susan Whiting and Dr. Carol Henry at the University of Saskatchewan.

Mr. Shamjeet Singh received funding to pursue training at the Institute of Cardiology at the St. Boniface General Hospital Research Center, University of Manitoba.

Staff

Clinical Surgical Sciences

Recommendation has been made for additional posts in Obstetrics and Gynaecology, Surgery, Orthopaedics and Urology as both our undergraduate and postgraduate programmes in this area are expanding.

School of Dentistry

During this period we continued the process of staff development to the grooming of the school's bright graduates into academics. Five of the school's former graduates were appointed as Teaching Assistants. Currently, one Teaching Assistant and one Assistant Lecturer are pursuing MSc programmes from the University of London via Distant Education.

HONOURS & AWARDS

Pre Clinical Sciences

Dr. Carrington was among the awardees of the University's 60 leading academics in the special UWI 60th Anniversary publication - 60 under 60.

Para Clinical Sciences

Dr. Chidum Ezenwaka (Unit of Pathology/Microbiology) was awarded the Albert Renold Award from the European Foundation for the Study of Diabetes in July 2007. This allowed him to visit the German Diabetes Center in Dusseldorf, Germany.

Dr. Gershwin Davis (Unit of Pathology/Microbiology) received the Best Poster Award (Paediatric Division) at the American Association of Clinical Chemistry Annual General Meeting 2007.

NEW STAFF

Dr. Sehlule Vuma and **Dr. Wayne Labastide** joined the Unit of Pathology/Microbiology as Lecturers in Haematology and Immunology respectively.

PROMOTIONS

Pre Clinical Sciences

Dr. Suresh Rao
Senior Lecturer

APPOINTMENTS

Pre Clinical Sciences

Dr. Jerome Foster
Lecturer in Biochemistry

Clinical Medical Sciences

Dr. Tony Bastick was hired as a temporary full-time replacement effective October 1st, 2008 in order to fill the gap generated by Dr Adams' resignation.

Dr. Virendra Singh

Lecturer in Child Health, Consultant Paediatric Endocrinologist joined the Child Health Unit August 2007.

School of Veterinary Medicine

Dr. A. Kumaresan

Senior Lecturer in Veterinary Physiology

Dr. P. Ramadass

Senior Lecturer in Veterinary Bacteriology and Mycology

Dr. L. Koma

Senior Lecturer in Veterinary Surgery, Small Animals

SCHOOL OF PHARMACY

Dr. M. Saravanan

Lecturer in Pharmaceutics

Ms. Rian Extavour

Lecturer in Pharmacy Practice

Mr. Sandeep Maharaj

Assistant Lecturer in Pharmacy Practice

OTHER APPOINTMENTS

Dr. Sandra Reid

Lecturer in Psychiatry was appointed Adjunct Lecturer in Psychiatry by the University of Toronto.

Dr. Anders Nielsen

Senior Lecturer in Adult Medicine transferred to Cave Hill Campus, Barbados

Clinical Medical Sciences

Dr. Mary Singh

Lecturer in Obstetrics and Gynaecology

School of Dentistry

Dr. Trudy Hoyte, who graduated from the School in 1999 returned from UK after obtaining MScD in Orthodontics (Cardiff), and M. Orth (Edinburgh) and joined as a Lecturer in Orthodontics.

School of Advanced Nursing Education

Ms. Rian Extavour

Lecturer (part-time),
Nursing Pharmacotherapeutics

Ms. Shelly Moore

Assistant Lecturer,
Nursing Pharmacotherapeutics

RETIREMENTS & RESIGNATIONS

Pre Clinical Sciences

Professor G.N. Melville

Professor of Physiology

Clinical Medical Sciences

Dr. Jerry Adams

Psychologist in the Psychiatry Unit

Dr. Anders Nielsen

Prof M. Omer

Clinical Surgical Sciences

Dr. Tim Gopeesingh

Senior Lecturer in Obstetrics and Gynaecology

Dr. Trevor Anatol

Senior Lecturer in Paediatric Surgery

School of Veterinary Medicine

Dr. D. Coombs

Lecturer, Equine Medicine

School of Advanced Nursing Education

Ms. Glenda Gajradge

Teaching Assistant

Programmes

PRE CLINICAL SCIENCES

The Preclinical Sciences Department completed a Quality Assurance (QA) audit during the 2007/08 academic year. Currently, the Department is addressing the recommendations of the QA report which includes re-examining the learning objectives for all the courses and the various learning methods, and aligning the examinations with the Faculty's Problem Based Learning (PBL) philosophy. Three new graduate research programmes were introduced during the last academic year to cater for changing market needs; these are Neuroscience, Molecular Genetics, and Nutrition. The Department acquired new equipment to modernise the students' physiology laboratory practicals and has plans to acquire a digital microscope and 10 new state of the art conventional light microscopes to improve the teaching & learning of microscopic anatomy.

PARA CLINICAL SCIENCES

The Department of Para Clinical Sciences was reconfigured during the 2007/2008 academic year following the establishment of the Pharmacy Programme as a full School of Pharmacy. The Department of Para Clinical Sciences now consists of the Units of Pathology / Microbiology, Pharmacology and Public Health and Primary Care.

During the 2007/2008 academic year, the Department focused on improving the clinical exposure of Year 3 medical students from the beginning of the 2008-2009 academic year. Students will be able to attend some more clinics and wards in the Eric Williams Medical Sciences Complex (EWMSC) and Port of Spain General Hospital (POSGH) to interact directly with patients relevant to different pathological clerkship. For example, students in the Haematology Clerkship will have increased opportunities to meet haematological patients and to interact with Blood Bank staff and donors. Efforts are continuing to facilitate the harmonisation of the Pathology/ Microbiology programme with that of the Mona Campus. It is hoped that harmonisation will be complete before 2010.

The Department continues to work closely with the Deputy Dean for Curriculum - Dr. Brader Brathwaite. A series of staff development meetings have resulted in assessment methods being brought closer to teaching objectives. This process is ongoing.

CLINICAL MEDICAL SCIENCES

Amidst growing undergraduate student numbers, and the need to provide postgraduate training, the Department continued to strive to provide the best possible teaching environment for its students but more resources will soon be required if standards are to be maintained. Research activity continued apace with the Adult Medicine securing significant funding for diabetes research and the Child Health Unit being extremely vibrant in this area having obtained funding for a variety of projects.

The Department also wishes to congratulate Professors Surujpaul Teelucksingh and Gerard Hutchinson who delivered their Professorial Inaugural Lectures over the course of this year.

CLINICAL SURGICAL SCIENCES

The undergraduate programme covers two years with junior and senior clerkships in General Surgery and Obstetrics and Gynaecology. The clerkship booklet for Surgery has been modified to make it more relevant to the advances in Surgery. “End of Clerkship” assessments are conducted in all areas. These are being conducted in an even more structured fashion in preparation for the Grade-Point average system that will be introduced fully in 2010.

Postgraduate programmes have been in progress in Obstetrics and Gynaecology and Anaesthetics for over 10 years. However, new programmes have been started in General Surgery (three years ago), Ophthalmology and Urology (one year ago). We expect these postgraduate programmes will grow rapidly as the demand for places is already increasing.

SCHOOL OF DENTISTRY

Membership Examination of The Faculty of Dental Surgery of The Royal College Of Surgeons

As a collaborative venture with the Faculty of Dental Surgery of the Royal College of Surgeons of Edinburgh the school has been conducting the Membership Examination (MFDSRCS). In the April 2008 examinations one each in Parts A and B examinations and one candidate was successful.

UWI-LMC Residency Programme

The dual Vocational Training Programme/ Advanced Education in General Residency Programme run by the UWI and the Lutheran Medical Center respectively is in its second year. In November, 2008, the LMC officials are carded to have discussions with UWI stakeholders to explore expansion of the existing programme to a two year training equivalent and the introduction of other residency programmes. There are currently nine residents in the 2008-2009 programme.

Accreditation

The Commission on Dental Accreditation (CODA) of the American Dental Association (ADA) conducted a site accreditation visit at The School of Dentistry in May 2008. This was to facilitate continued use of UWI as a site for the AEGD programme. The school made proper preparations, within the constraints of limited resources, in preparation for the visit. The school was successful in attaining site accreditation, making it the first Non-US site to be ever accredited as an AEGD training site. The outcome of this visit will however, be officially announced in January 2009, by the ADA. Even though the site received full accreditation, the ADA made certain suggestions on infrastructural deficiencies of the School which need to be addressed in order for the School to maintain its status. The next accreditation site visit will take place in 2013.

Continuous Education Seminars by External Examiners

The School began to organise seminars by distinguished external examiners from UK and USA. In May the first of such seminars was conducted in which the following examiners made presentations. The seminar was well attended by the staff, students and the General Dental Practitioners.

Dental Auxiliary Training (DAT) Programme

Under the aegis of the UWI Open Campus, the School is conducting a one-year part-time diploma in Dental Auxiliary Training Programme that is in increasing demand. During the period of this report there were 16 admissions, 94% of whom were female. The School is about to start a Dental Hygienists Training Programme. The DAT programme also showed a good pass rate of 94%.

SCHOOL OF VETERINARY MEDICINE

New curriculum implemented from academic year 2007/2008

The first and the only approved curriculum for the DVM programme was the curriculum of 1992. Several reviews of the curriculum have been done but there has been no other approved curriculum since 1992. Since the curriculum is supposed to be reviewed and modified from time to time

to accommodate changes that may be necessary, the current curriculum needs to be revised to accommodate the current realities facing the veterinary profession within the region and globally.

The revised curriculum makes provisions **for two levels** of entry into the DVM programme: five years for applicants with 'A' level qualifications and four years for degree holders who have acquired the requisite qualifications for entry into the four-year programme.

The new curriculum also placed more emphasis on Small Animal Medicine and Surgery as well as modified existing courses for more effective delivery. The new curriculum has developed a list of clinical competencies approved, which will be mandatory for students to acquire before they graduate. Course electives, as well as clinical rotation electives, were introduced in the revised curriculum which will enable students to acquire more knowledge in their areas of interest.

The Old DVM Curriculum

The duration of the current DVM programme is five years. The programme is subdivided into Pre clinical, Para clinical and Clinical programmes.

The courses offered in the Pre Clinical programme form the basis for the Para Clinical and Clinical programmes. These courses include: Anatomy, Physiology, Biochemistry, Pharmacology and Toxicology, which are covered in the first two years of the programme.

The main courses covered in the Para clinical programme are: Microbiology (which includes Bacteriology, Virology and Immunology), Parasitology, Public Health and Pathology which are covered in the third year of the programme. The last two years of the programme are devoted to Medicine and Surgery and the clinics.

The final year of the programme is lecture-free and is devoted almost exclusively to clinical rotations.

In addition to the five year, undergraduate Doctor in Veterinary Medicine (DVM) Degree programme, a number of postgraduate programmes were also offered, two years for full time students and three years duration for part time students.

Research PRE CLINICAL SCIENCES

Research Grants Obtained

D. Ramdath

Pan American Health and Education Foundation Grant. December 2007. "A collaborative model to address nutrition and healthy lifestyles in the school curriculum for Trinidad & Tobago".

C. Carrington

Campus Research and Publications Fund grant for a study entitled "RNA virus diversity in Trinidad bats - identification of potentially emergent viruses".

B.S. Nayak

Campus research and Publication fund for the Research proposal entitled "Role of Adeponectin and inflammatory markers in assessing the insulin sensitivity in type II Trinidadian Diabetics".

A. McRae

Caregiver burden of persons caring for patients with Dementia. CRP obtained with Drs N Baboolal and G Davis.

Major Research Projects Completed

Title

Phylogenetic analysis of SLEV in the Americas

Investigators

Albert J. Auguste¹, Oliver G. Pybus²,
Christine V. F. Carrington¹

Affiliations

- (1) The University of the West Indies,
- (2) University of Oxford

Funding

Campus Research and Publications Fund,
Caribbean Health Research Council.

Summary

Using a Bayesian coalescent approach on a dataset of 73 envelope gene sequences researchers estimated substitution rates and dates of divergence for St. Louis encephalitis virus (SLEV) in the Americas. Significant rate heterogeneity was found among lineages, such that “relaxed” molecular clock models were much better supported than a strict molecular clock. For the first time researchers also assessed the magnitude and direction of viral gene flow within the Americas. The overall direction of gene flow during the period represented by the phylogeny is from South to North, and the region between 15°N and 30°N latitude appears to be the major source of virus for the rest of North America, which

is consistent with migratory birds returning to their northern breeding grounds having acquired infection while wintering in the region of the Gulf of Mexico.

Title

Phylogenetic analysis of BCRV in the Western Great Plains, USA.

Investigators

Abinash Padhi¹, Jerome Foster², Amy Moore¹, Mary Bomberger-Brown¹, Martin Pfeffer³, Kathy Gaines, Valerie O’Brien¹, Stephanie Strickler⁴, Allison Johnson⁴, Eric Edwards⁵, Nick Komar⁵, Charles R. Brown¹

Affiliations

- (1) University of Tulsa, OK, USA
- (2) University of the West Indies
- (3) Bundeswehr Institute of Microbiology
- (4) Department of Biology, St. Olaf College, MN, USA
- (5) Center for Disease Control and Prevention, CO, USA

Funding

National Institutes for Health (USA).

Summary

Buggy Creek virus (BCRV) is an unusual arbovirus within the western equine encephalitis complex of alphaviruses. Associated with cimicid swallow bugs (*Oeciocercus vicarius*) as its vector and the cliff swallow (*Petrochelidon pyrrhonota*) and house sparrow (*Passer domesticus*) as its amplifying hosts, this virus is found primarily in the western Great Plains of North America at spatially discrete swallow nesting colonies. The two lineages showed distinct phylogeographical structure: one lineage was found in the southern Great Plains and the other in the northern Great Plains, and both occurred in Nebraska and Colorado.

Title

Evaluation of wound healing activity of *Lantana camara* L and *Persea Americana* (avocado) fruit

Investigators

B. Shivananda Nayak, S. Sivachandra Raju,
Mathew Eversley, Adash Ramsabhag

Funding

Caribbean Health Research Council

Summary

The objective of the study was to investigate excision wound healing activity of the leaf extract of *L.camara* and *Persa Americana* in rats. Treatment of the wounds with extract significantly enhanced the rate of wound contraction, synthesis of collagen and decreased mean wound healing time.

Title

RBC membrane composition in Caribbean Type 2 diabetic patients.

Investigators

B Shivananda Nayak, Singh, Surujpaul Teelucksing and Lesley Roberts

Funding

Campus Research and Publication fund

Summary

The BMI and the systolic BP of the diabetics were higher than controls. The diabetic and diabetic nephropathy subjects showed significantly higher level of RBC membrane cholesterol as compared to controls. There was a trend of increased cholesterol and decreased HDL in diabetics and diabetic nephropathy patients were noted as compare to controls but they are not significant as expected. The LDL cholesterol was significantly higher in diabetics when compared to diabetic nephropathy and control subjects.

Title

Effects of the glutamate and GABA receptor agonists on a model of migraine aura

Investigators

Jonas Addae, Nakisha Ali, Trevor Stone

Affiliation

The University of the West Indies
University of Glasgow

Summary

Spreading depression is a spontaneous slow movement of depolarisation across the cerebral cortex and has been implicated in the aura of migraine headache. Using an animal model, researchers examined how activation of glutamate and GABA receptors in the cortex affects the induction and propagation of spreading depression. It was found that, together with the conventional process of a receptor antagonist preventing a disease that is mediated by the receptor agonist, one type of glutamate receptor agonist prevented activation of another agonist. This finding supports an intrinsic physiological protective mechanism against the development of migraine aura.

Title

Role of adenosine receptors in modulating synaptic NMDA receptors

Investigators

Jonas Addae, Nakisha Ali, Trevor Stone

Affiliation

The University of the West Indies
University of Glasgow

Summary

Glutamate receptors act on different receptor types, one of which, the NMDA receptor, mediates several important processes (such as learning and memory) and a number of disease processes. The location of the NMDA receptor on the neuron (i.e. whether synaptic or extrasynaptic) affects the actions of the receptor when stimulated by glutamate. Researchers have used a method that isolates the NMDA synaptic receptor activity and studied how it is modulated by activation of different adenosine receptors. This finding provides insight into strategies to block the extrasynaptic NMDA receptors which mediate neurological diseases whilst leaving the synaptic ones that mediate normal physiological functions.

PARA CLINICAL SCIENCES

Major Projects Completed

Dr. Joan Rawlins:

- “Older Women in Trinidad & Tobago Project.”

Drs. Felicia Hosein, Patrick Akpaka, Wayne Mohammed and Michele Monteil:

- Completed a collaborative project on “The Prevalence of High Risk HPV types Among Women in Trinidad & Tobago.” This collaboration, involving the UWI, MOH, Cancer Society and CAREC has already resulted in a report, which will be timely in supporting the development of policies for Cervical Cancer prevention and control in Trinidad & Tobago.

Dr. Fitzroy Orrett:

- Antibigram for the San Fernando General Hospital (SFGH). This is the first large scale project aimed at providing doctors with guidance for empiric antimicrobial coverage for in-patients.
- Evaluation of mupirocin resistance among strains of Methicillin-Resistant Staphylococcus aureus (MSRA) recovered from clinical specimens. Prior to the introduction of mupirocin (Bactroban) at the SFGH in 1986, no pre-marketing

susceptibility surveillance was ever done. High-level and low-level mupirocin resistances were detected in 26.1% and 44.1% respectively, among 188 MRSA stains, recovered over a 2-year period. This was the first post-marketing surveillance that was done.

Dr. Altheia Jones-Lecointe:

- Obtained financial support from Tobago Regional Health Authority for new born screening for haemoglobinopathies in Tobago. A collaboration with INSERM, Guadeloupe.

Research in Progress

Dr. Joan Rawlins:

- Supervising a new graduate student, Ms. Donna Drayton who is working on a project entitled, “Gender Ageing: A Comparative Study of Poverty on the Lives of Elderly Men and Women in rural Communities in Trinidad & Tobago and Guyana.

Dr. Yuri Clement:

Obtained funding from the Campus Research and Publication Committee for projects entitled: “Investigating the role of *Leonotis nepetifolia* as a hepatoprotective agent in an animal model”

Dr. Chidum Ezenwaka

- He received an Intra-mural grant from the Campus Research and Publication Fund, to conduct a pilot research project in Tobago on “Self Blood Glucose monitoring amongst Type 2 diabetic patients.”

CLINICAL MEDICAL SCIENCES

Research is being pursued in the following areas:

- CT & MRI imaging
- Ultrasound imaging
- Radionuclide Imaging
- Thyroid disorders
- Uterine artery embolisation
- Thyroid Disorders
- HIV and Substance Abuse intervention
- Substance Abuse prevalence in the adult population and death associated with substance abuse in Trinidad and Tobago
- Metabolic Syndrome
- Alzheimer’s Disease
- Dementia and Depression
- Obstructive Lung Diseases, prevalence, mechanisms and relationship to vascular diseases
- Maternal Lipid metabolism and birth outcome
- Basic information on lipid transfer from mother to foetus

- Insulin resistance in diabetes mellitus and pre eclampsia to identify potential mothers with diabetes and hypertension who can be identified by the presence of hyperinsulinism at the end of pregnancy
- Review of neonatal asphyxia at MHHW to improve care
- Needs assessment for training health care providers in HIV/AIDS
- Student assessment versus standard setting
- Incidence and outcome of childhood cancers in Trinidad and Tobago
- Febrile neutropenia in childhood cancers
- Urine microscopy as a point of care test
- Validation of phase contrast microscopy as a method of early detection of urinary tract infections
- Manual on Baby Friendly hospital initiative
- Childhood obesity
- Developmental outcomes in children with HIV/AIDS

CLINICAL SURGICAL SCIENCES

Several research projects have been completed in the Department as follows:

Title

Screening for Diabetes in Pregnancy.

Investigators

B. Bassaw, S. Ramsewak, A. Sirjusingh

Funding

Campus Research and Publication Fund.

Title: Breast Cancer Mortality in Trinidad and Tobago: a 30 year study.

Presenter: V. Naraynsingh

Presented at the Cancer Society Annual Meeting, Crowne Plaza Hotel, 2007.

SCHOOL OF ADVANCED NURSING EDUCATION

Two research projects were completed at the School as indicated below:

Title

Teachers Perception of School Violence in the St. George East Educational District.

Investigators

Students at School of Advanced Nursing Education - A. Billingsy, D. Loreta-Jones, D. Sahadeo, M. Johnson-Chen, P. Siewdass, R. Aquilal, T. Britto-Williams, V. Davis, V. Welch-Knights, Y. Eugene-Caton

Summary

Findings- 75% of teachers affirmed that males between the ages of 14- 16 were perpetrators of school violence while the rest of the students looked on during the violent act. 37.7% perceived that behaviours manifested were minor offences. 40% of teachers perceived that their school protocol on violence were sometimes effective. The study showed that there was a strong correlation between the degree of behaviour and gender type.

Title

“Patient’s expectation and level of satisfaction with Nursing performance in the Medical Unit at the Port-of-Spain General Hospital”.

Investigators

Students at School of Advanced Nursing Education N. Clarke, U. Almond, A. Martin, B. Crichlow, S. Douglas, K. Doyle, S. Harris, E. Powder, J. Cunningham, J. Thomas

Summary

Findings are as follows: 41.3% of them had high expectations and perceived the nurses were performing well. 46.7% of clients had moderate expectations and felt that nurses only performed average, and 12% felt nurses only performed poorly: 47.1% of males and 35% of females felt that nurses performed well, 23% of males and 38.8% of females felt their

performance was average while 29.9% of males and 26.3% of females felt nurses performed poorly.

There was a weak correlation between client's expectation and levels of satisfaction and a strong correlation between nurses' performance and levels of satisfaction, as well as nurses' performance and client's confirmation.

Strategy Appraisal

The Department of Pre Clinical Sciences had a successful Quality Assurance review this year and there were increased resources for students laboratory practicals with the purchase of six additional Biopac systems for Physiology practicals.

Two academic staff members were enrolled in University of British Columbia Scholarship in Teaching and Learning certificate programme. The Department has started teaching the Basic Sciences component of D.M. in Ophthalmology and has introduced three new MPhil/PhD programmes in Neuroscience, Molecular Genetics and Human Nutrition. Meanwhile, a Departmental Graduate Studies Committee has been formed to develop and implement plans for improved monitoring and management of graduate students.

Outreach PRE CLINICAL SCIENCES

The Department hosted a stakeholder consultation on the Assessment of the National Health Research System of Trinidad and Tobago and partnered with University of Saskatchewan to deliver three-day curriculum workshop to curriculum Officers of the Ministry of Education.

CLINICAL MEDICAL SCIENCES

The Psychiatry Unit provides a consultation liaison service to the Hospital and to the staff of the NCRHA. The Unit also provides a consultation service to students of at the St. Augustine campus through the CAPS/Health Service Unit and to a variety of public sector organisations such as the Trinidad & Tobago Defence Force and the Board of Inland Revenue.

The Adult Medicine Unit hosted the Year 4 Student Symposium "Your Kidney and You" with guest lecturer, Dr. Lesley Roberts. The Unit was also instrumental in finalising funding for the Helen Bhagwansingh Diabetes Education Research and Prevention Institute to the tune of TT\$5 million.

The Child Health Unit organised a three-day symposium providing HIV/AIDS Training. To date, 25 doctors have benefitted from five cycles of training in the management of HIV/AIDS for health care professionals.

The Radiology Unit has provided the main support for the Government of the Republic of Trinidad and Tobago in its initiative of providing free medical imaging services to all medical institutions of the regional health authorities. The University lecturers provide clinical service (including on-call commitments) in diagnostic radiology to patients at the EWMSC.

SCHOOL OF DENTISTRY

The school continues to provide Oral Histopathology Diagnostic Services and Prosthetic Laboratory Services in-house and to General Dental Practitioners (GDPs). Furthermore, as a collaborative activity the school is continuing to provide technical infrastructure and Cytotechnician's training programme of the Eastern Regional Health Authority. These ventures are generating a modest income to the school.

SCHOOL OF VETERINARY MEDICINE

Lecturers in this unit provided consultations to Food Animal Clinicians, some Government farms and to the University Field Station as required or on request. Our specialists in *Avian and Exotics* gave advice to the Emperor Valley Zoo, schools, broiler and table egg producers, duck producers and pet bird fanciers.

Meanwhile, the Public Health Laboratory benefited from the School's expertise in providing quality control for both pasteurised milk and deli-meat products.

The UWI-NCRHA Relationship

The complex financial, infrastructural and administrative links between the UWI and the NCRHA is creating bottle necks in day-to-day administration of the School. This needs to be reviewed at the earliest opportunity. An aspect in this regard is the services provided by the interns to the NCRHA and the earnings that go into the account of the NCRHA. The School requests that this matter be taken with the Ministry of Health seeking some form of payment for interns.

The School continued with its thrust toward community outreach, providing invaluable veterinary service to the country.

SCHOOL OF ADVANCED NURSING EDUCATION

The School of Advanced Nursing Education celebrated "Nurses Week" from May 12 to 18, 2008 by distributing bookmarks to various Faculties, Departments, Units (both academic and non academic) within The University of the West Indies showcasing the development and contribution of the School of Advanced Nursing Education over the years.

External Links

The School developed several potentially fruitful links with other universities and local and international organisations such as the University of Huddersfield, UK, and Anglia Ruskin University also based in the UK. Research and publication opportunities as well as student support are being explored with the University of California at Berkeley.

Revenue Generating Activities

The Department of Pre Clinical Sciences generates some income by providing assistance to the College of Science Technology and Applied Arts of Trinidad and Tobago (COSTAATT) in the teaching of Radiological Anatomy to their students. The Psychiatry Unit of the Department of Clinical Medical Sciences continues to operate an independent account with funds obtained from research funding and clinical consultancies. Money from this account supports the Unit's activities. The School of Veterinary Medicine also generates income by providing laboratory services to the veterinary teaching hospitals and practising veterinarians, as well as diagnostic services provided for the food industry particularly the ready-to-eat deli-meat producers.

GRANTS

HIV/AIDS Capacity Building

The Faculty has been awarded a sub-contract for Capacity Building in HIV/AIDS treatment, care and support with funding as follows:

- USAID - \$91,000 USD
- European Union - \$50,000 USD
- National AIDS Coordinating Committee - \$24,000 USD
- Ministry of Health, Trinidad and Tobago - \$64,000 USD

Telehealth Programme

Hundreds of children from across Trinidad & Tobago and the neighbouring Caribbean territories have benefited from the UWI's Telehealth programme. The programme involves two-way, live, interactive video-conferencing consultations between the Faculty of Medical Sciences at The University of the West Indies and the Sick Kids Hospital in Toronto, Canada bringing cost-effective, timely solutions to sick children and their families. This year, support for UWI's Telehealth programme came from the following:

- Atlantic LNG - \$40,000 USD
- Trinidad & Tobago Ministry of Health - \$15,000 USD

Non-Communicable Diseases

The University of the West Indies has received the approval of the Inter-American Development Bank (IDB) for a technical assistance grant in the amount of US\$650,000 to undertake a project to establish research and surveillance programmes for non communicable diseases.

Infrastructure SCHOOL OF VETERINARY MEDICINE

The Steve Bennett Building was formally opened on Wednesday February 20, 2008 and houses two classrooms one laboratory and three offices, which was much needed by staff and students.

Distinguished Visitors

Mrs Cheryl Anerson
Nurse Training Tutor , ITECH,
University of Toronto, Canada

Ms. Laura Banfield
Mc Master University.

Dr. Graham Brown
Visiting veterinarian from Jamaica
lecturing in Practice Management

Dr. Peter Carrotte
Glasgow Dental Hospital and School
The End of the Root

SCHOOL OF VETERINARY MEDICINE
Professor Paul Dekar

Minister of Religion , University of Memphis,

CLINICAL MEDICAL SCIENCES

Dr. Aditi Desai
Endodontics

Mr. James Dietrich,
Mc Master University.

Dr. Roy Dobson
Associate Professor of Pharmacy
Administration, College of Pharmacy and
Nutrition, University of Saskatchewan,
Saskatoon, Canada

Ms. Marilyn Entwistle
Advisor, Health Services Administration, Pan
American Health Organisation/World Health
Organisation Trinidad and Tobago, West Indies

Dr. David Felix
Royal College of Surgeons of Edinburgh
- Oral Problems in HIV Infection

Professor James Ferguson
Visiting Professor of Large Animal Surgery

Dr. Douglas Forbes
Visiting Lecturer in Small Animal Orthopaedic
Surgery

Dr. Doug Gleddie
Provincial Coordinator, Ever Active Schools,
Edmonton, Canada

PARA CLINICAL SCIENCES
Professor Denis Gorecki
Dean, College of Pharmacy Nutrition,
University of Saskatchewan, Saskatoon, Canada

Professor Benjamin Hart
Visiting Professor of Animal Behaviour

Dr. Carol Henry

Associate Professor, College of Pharmacy and Nutrition, University of Saskatchewan, Canada

Dr. Carolyn Ingram

Mc Master University.

Dr. Brenda Kalyn

Associate Professor, College of Education, University of Saskatchewan, Canada

Drs. Landis and Quesenberry

Visiting US Army Veterinarians

**SCHOOL OF ADVANCED NURSING
EDUCATION**

Visitors from the University of Saskatchewan

Professor James R. La-Rose

Professor of Anatomy,
Palmer College of Chiropractic, Florida

Dr. Justine Lee

Visiting Lecturer in Veterinary Emergency
Medicine

Dr. Philippe Lemey

Research Scientist,
Katholieke Universiteit Leuven, Belgium

Dr. Kevin Morgan

University of Westminster

Professor Frederick Hickling

UWI, Mona

Professor Fits Muskeit

Professor of Pathophysiology and Clinical
Chemical Analysis, University Medical Centre,
Gronigen, Netherlands

Professor Sudhakar Nayak

Professor of Biochemistry, Kasturba Medical
College, Manipal, India

Professor June Nunn

University of Dublin - Tooth Surface - Loss of
Erosion

Professor Michael Pogrel

Professor S.R. Prabhu

Dean, School of Dentistry, RAK Medical &
Health Sciences University,
United Arab Emirates
University of California - Osteonecrosis

Professor S. G. Rao

Vice Chancellor, RAK Medical & Health Sciences
University, United Arab Emirates

Drs. John Rose

University of Birmingham

Mrs Kamla Sharma

Director, International office Hospital for Sick
Kids, Toronto Canada

SCHOOL OF DENTISTRY

Professor Jaipaul Singh

Professor of Physiology,
Central University of Lancashire, UK

Professor O. Slocombe

Visiting Professor of Veterinary Surgery

Dr. Camil Stoian

Visiting Lecturer in Veterinary Dentistry

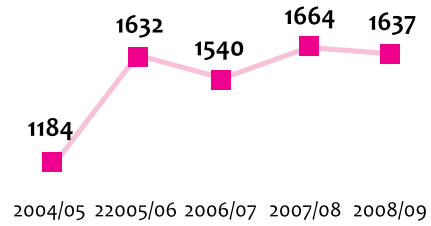
Dr. Dorothy Tullmann

University of Virginia

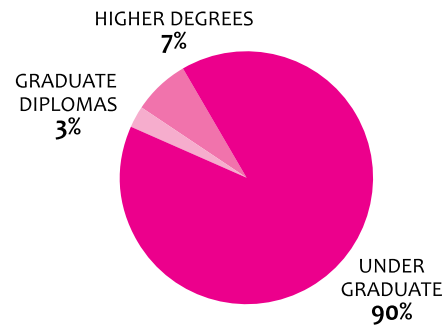
Dr. Kimberley Whitfield

Visiting Lecturer in Small Animal Surgery

**GROWTH IN ENROLMENT
2004 – 2009**



**GRADUATES BY PROGRAMME
2007 – 2008**



faculty of science & agric



ulture



The Faculty has witnessed a **sustained increase** in its **undergraduate student population** over the last five years. Although the total number of graduate students in the Faculty is relatively small when compared to other faculties it is important to note that the **ratio of students pursuing research degrees (MPhil and PhD) when compared to taught masters' degrees is the highest**



dean, faculty of science & agriculture

Professor Dyer Narinesingh

The Faculty of Science & Agriculture is currently the second largest faculty at the St. Augustine campus. It continues to play, through its teaching, research, development, innovation and outreach activities, a pivotal role in providing the appropriate human resource requirements needed to transform the Caribbean region. The Faculty has, through its myriad of activities and working with its various stakeholders, been focusing on finding solutions to Caribbean problems and is in the vanguard of promoting the sustainable use of our natural resources.

This year, refereed publications increased by 28% due mainly to the output from the Departments of Life Sciences and Food Production, and our research output is expected to increase significantly with the formation of research clusters, increased funding specifically for research, as well as funding for postdoctoral research fellows to drive the research initiatives. We are also reaching out to the industrial sector help us increase the opportunities for real life experiences for our students through field trips, projects and internships (service learning). Among our goals for the coming year are a greater use of technology to enhance the delivery of curriculum and improved laboratory facilities, including virtual laboratories.

Students ENROLMENT (ON AND OFF CAMPUS)

Total:	3572
Undergraduate Degrees:	2963
Higher Degrees & Diplomas:	341

The Faculty has witnessed a sustained increase in its undergraduate student population over the last five years. Although the total number of graduate students in the Faculty is relatively small when compared to other faculties it is important to note that the ratio of students pursuing research degrees (MPhil and PhD) when compared to taught masters' degrees is the highest at the St. Augustine campus. This sustained increase in student intake and the surge in research activities have continued to place extreme stress on both the physical and human resources of the Faculty.

GRADUATION

Total:	502
Undergraduate Degrees:	472
Higher Degrees & Diplomas:	26

At the undergraduate level 425 students graduated with BSc (General) degrees in various academic disciplines offered by the Faculty. Of these about 70% were from the School of Science and 30% from the School of Agriculture.

HONOURS & AWARDS

Seven percent of the students graduating received First Class Honours. At the graduate level, 14 students received MSc degrees, four received MPhils and there were eight PhDs.

Most Outstanding Postgraduate Students for 2008

Mr. Jeffery Leela: awarded the MSc degree in Mathematics with Distinction.

Ms. Rosemarie Evita Mohais: awarded the PhD degree in Mathematics with High Commendation.

Mr. Arvind Sateesh Mohais: awarded the PhD degree in Computer Science with High Commendation.

Ms. Mitzi Charles was the top graduate in Chemistry.

Staff

HONOURS & AWARDS

A number of our academic staff received recognition for their contributions to science and technology.

Life Sciences

Professor John Agard, member of the international team of scientists sharing in the glory of the prestigious 2007 Nobel Peace Prize "for their efforts to build up and disseminate greater knowledge about man-made climate change and to lay the foundations for the measures that are needed to counteract such change".

Professors John Agard, Indar Ramnarine, P. Umaharan and Dr. D. Chadee were recognised among the University's 60 leading academics in the special UWI 60th Anniversary publications - 60 under 60.

Physics

The prestigious Mercosur Prize in Science and Technology was awarded to **Professor Ramsey Saunders** for his work on Solar Technologies for Water Portabilisation in Isolated Rural Zones of Latin America and the Caribbean. Professor Saunders was also inducted into the Hall of Fame at St Mary's College, Trinidad.

Dr. Indra Haraksingh received the "International Pioneer Award for Solar Energy" at the World Renewable Energy Congress X in Glasgow, Scotland in July 2008.

Cocoa Research Unit

Mr. Darin Sukha –awarded the PhD in Food Science and Technology

Mr. Surendra Surujdeo-Maharaj –awarded the PhD (with high commendation) in Plant Sciences

Ms. Naailah Ali – awarded the MSc (with distinction) in Food Science and Technology

PROMOTIONS

Life Sciences

Professor John Agard

Professor of Marine and Environmental Science

Professor Indar Ramnarine

Professor of Fisheries and Aquaculture

Professor Pathmanathan Umaharan

Professor of Plant Sciences

Mathematics and Computer Science

Mr. Chris Sammy

Senior Laboratory Assistant

Physics

Dr. S. Haque was appointed as Head of Department and promoted to Senior Lecturer

Cocoa Research Unit

Darin Sukha

Research Fellow

APPOINTMENTS

Cocoa Research Unit

Sarah Bharath

Part-time Technical Assistant.

Carlene Lakkan

Technical Assistant working on the GORTT Research and Development Fund project “DNA markers for cacao traits”.

Naailah Ali

Part-time Technical Assistant working on the Dutch LNV Project “To assess the quality attributes of the Imperial College Selections”.

Balram Latchman

appointed Contract Officer I working on the Dutch LNV project “To Safeguard the ICG,T”.

Chemistry

Mrs. Nadia Singh

Development Engineer I

Dr. Ann Wilson

Assistant Lecturer

Life Sciences

Professor Andrew Lawrence

Chair, Environmental Biology

Food Production

Dr. Matthew Wilson

Senior Lecturer in Geography

Ms Rowena Butland

Lecturer in Geography

Dr. David Robinson

Senior Lecturer in Soil Physics

Physics

Ms. S. Williams

Lecturer, Medical Physics

Dr. Davinder Sharma

Lecturer in Electronics

RETIREMENTS & RESIGNATIONS

Retirement

Dr. St. Clair Barker

Lecturer, Agricultural Economics and Extension

Mr. Bhaggan Boodram

Senior Laboratory Assistant, Life Sciences

Professor Edward J. Farrell

Professor in Mathematics,
Mathematics and Computer Science

Professor Harold Ramkisson

Professor Emeritus,
Mathematics and Computer Science

Resignations

Dr. Marlon Knights

Lecturer in Animal Science, Food Production

Professor Lincoln Hall

Chemistry

Dr. Arvind Mohais

Lecturer in Computer Science,
Mathematics & Computer Science

Dr. David Butler

Head, Cocoa Research Unit

SABBATICAL LEAVE

Life Sciences

Dr. Grace Sirju Charran

Dr. Christopher Starr

Professor John Agard

OBITUARIES

Cocoa Research Unit

Dr. Adeniyi David Iwaro

Programmes

The Faculty continued to place curriculum reform on the front burner as part of its ongoing commitment to ensure that its curricula offerings are relevant and current, and that they are a reflection of tomorrow's clients needs. In this context a number of existing courses and programmes were revised as well as new ones introduced

Among the new programmes introduced were the BSc in Information Technology (Evening University) and the MSc in Marketing and Agribusiness. Courses in asymptotic and perturbation analysis, advanced mathematical modeling, human computer interaction, and web usability were also introduced. Revisions were made to the existing MSc and PhD in Agricultural Economics. New curricula for programmes in Optometry, Forensic Science and The Science and Management of Tropical Biodiversity were also in advanced stages of preparation for delivery in 2009.

AGRICULTURAL ECONOMICS AND EXTENSION

UWI/STC Collaboration

The Department, in collaboration with Shortwood Teacher's College (STC), in Jamaica, continued its offering of its BSc Human Ecology degree to graduates of the three-year Teacher's Diploma in Home Economics. The programme which commenced in July/August 2004 is being delivered at STC during the vacation periods for teachers. The first cohort comprised 33 students.

Continuing Programmes

In addition to the contribution to the teaching in the various Faculty programmes, the Department continued to offer undergraduate degrees (face to face mode) in Agribusiness Management, Human Ecology and Human Nutrition and Dietetics as well as the BSc in Agribusiness Management by Distance. At the postgraduate level, the PhD, MPhil and MSc in Agricultural Economics and the PhD and MPhil in Agricultural Extension are also offered.

The Department also contributed to teaching in the School of Veterinary Medicine. Staff in the Department also serviced the External Programme in Agriculture (EPA) and the Certificate Programme in Agriculture (UCPA) by distance.

New and Revised Programmes

- MSc Marketing and Agribusiness (new)
- PhD Agricultural Economics (revised)
- MSc Agricultural Economics (revised)

CHEMISTRY

New/Existing Programmes

The Department is expected to deliver the Occupational and Environmental Safety and Health Professional Masters programme (developed at Mona Campus) by January 2009. In addition it continued to offer the major in Chemistry, the minors in Chemistry, Analytical Chemistry and Applied Chemistry as well as the special option in Chemistry and Management.

FOOD PRODUCTION

New/Existing Programmes

The Department continued to offer the BSc in Agriculture and majors in Agricultural Science and Geography. In addition it offered the MSc programmes in Tropical Animal Science and Production, Crop Protection and Tropical Commodity Utilisation.

LIFE SCIENCES

New/Existing Programmes

The Department continued to offer majors in Biology, Biochemistry and Environmental and Natural Resource Management (in conjunction with the Department of Food Production). Minors were also offered in Biochemistry, Biology, Biotechnology, Botany, Environmental Biology, Environmental and Natural Resource Management, Marine Biology and Zoology. Mathematics and Computer Science

Existing

In addition to its contribution to the teaching of mathematics in the Faculty of Engineering, the Department continued to offer as part of its undergraduate programmes the single and double majors in Mathematics and Computer Science, the minors in Mathematics, Computer Science and Statistics as well as the BSc in Information Technology and the BSc in Computer Science and Management to the day students. To the Evening University students the Department offers the BSc in Computer Science and Information Technology. The MSc in Mathematics and Computer Science are offered at the graduate level.

Revision of Existing Programmes/ New Programmes Introduced

The BSc in Information Technology was introduced for the first time into the Evening University Programme offerings in the Faculty and new courses such as Computer Forensics, Web Usability, Human/Computer Interaction and Numerical Methods for Partial Differential Equations were also introduced in both Mathematics and Computer Science at the graduate and undergraduate levels.

PHYSICS

Existing

The Department continued to offer the major in physics and minors in Physics, Environmental Physics, Material Science and Medical Physics and Bioengineering at the undergraduate level.

Research

Research topics abound within the Faculty of Science and Agriculture. Our lecturers continue to pursue their own areas of interest even while supervising the work of our graduate students. As noted earlier, while the Faculty may not have comparatively large numbers of postgraduate students, it does have the highest ratio of research as opposed to taught higher degrees. It is also a reflection of the caliber of our staff that some are called upon to supervise the work of students

at other institutions. Dr. Dave Chadee for instance is currently a joint supervisor of two PhDs at the University of Notre Dame. Another outstanding achievement came with the development by Dr. W. Goodridge of the Department of Mathematics and Computer Science, of a software package “Aki License Management System” to be used by Copyright Organisations in Trinidad and Tobago and Barbados.

Adequate funding has however, continued to be one of the major obstacles in the conduct of cutting edge research (both in terms of quality and output). Faculty, recognizing this serious limitation, encouraged its members to form research clusters (intra-departmental; inter-departmental/campus; inter-university) and to aggressively pursue funding both locally, regionally and internationally. As a result of this initiative our Faculty members were able to secure the largest percentage of the Campus Research and Publication funds as well as the special fund allocated by the Trinidad and Tobago Government for research. In addition members were also able to secure significant funding from a number of international agencies.

In summary Faculty members were successful in securing \$10.5 M (T&T) from sources within Trinidad and Tobago and another \$12.5 M (T&T) from international agencies. The latter includes a \$1.6 M (C) from

The Teasdale Corti Global Health Research Partnership Programme. This is part of an international research consortium on Public and Environmental Health Interactions in Food and Water-borne Illnesses.

Also of significance is the \$2.5M funding from the World Bank to undertake studies on the restoration of the Nariva swamp project. Part of this project involves a study on carbon sequestration in wetlands-one of the very few studies of this kind undertaken in the world. Also of significance was the grant of 403,520.00 Euros under the EU Edu-Link programme for the development of an MSc in Biodiversity Conservation and Sustainable Development.

Major Research Projects Completed

A number of projects of significance were completed during the 2007/2008 academic year. Among these were:

CHEMISTRY

- Geochemical studies of the geothermal areas of the Lesser Antilles with a focus on Dominica and St. Lucia: Implications for geothermal monitoring.

FOOD PRODUCTION

- Effect of 1-MCP on postharvest quality of papaya.
- Infield variation of citrus in Trinidad.
- Studies on the autoecology and management of *Commelina diffusa* in Fairtrade banana (*Musa* spp.) in St. Vincent and the Grenadines.
- An assessment of Barbados's groundwater for contamination by atrazines and its major dealkylated metabolites.
- First phase of heavy metals in cocoa.

LIFE SCIENCES

- Modeling associations between paediatric asthma admissions, meteorological parameters, and airborne pollen content during Saharan dust and non dust periods in Trinidad and Tobago to permit prediction of outbreaks of asthma in Trinidad and Tobago.
- Evaluation of *Ceriodaphnia rigaudii* as a potential fresh water toxicity test species for use in Trinidad and Tobago.
- Evaluation of persistent organic pollutants in Sea Lots in the Port of Spain harbour.

- The development of effective management strategies to control vascular wilt in pumpkin in Trinidad.

PHYSICS

- Science documentary "Adventures in Discovery" (Haque, S. & Sampson, T.).

THE NATIONAL HERBARIUM

- Development of an open-source Learning Content Management System (Burrokeet).
- Influence of inorganic and organic amendment on the hydraulic properties of heavy metal clay soils used in sports fields' construction.
- Potential use of food processing bio-solids as fertilizer amendments in agricultural cropping systems.
- The impact of selected cover crops on soil fertility and suppression of *Commelina diffusa* through farmer Participatory Research by Fairtrade banana growers in St. Vincent and the Grenadines.
- Geochemical studies of the geothermal areas of the Lesser Antilles with a focus on Dominica and St. Lucia: Implications for geothermal monitoring.
- Effect of 1-MCP on post harvest quality of papaya

- Infield variation of citrus in Trinidad
- Studies on the autoecology and management of *Commelina diffusa* in Fairtrade banana (*Musa spp.*) in St. Vincent and the Grenadines
- An assessment of Barbados' groundwater for contamination by atrazines and its major dealkylated metabolites.
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- Modeling associations between paediatric asthma admissions, meteorological parameters, and airborne pollen content during Saharan dust and non dust periods in Trinidad and Tobago to permit prediction of outbreaks of asthma in Trinidad and Tobago.
- Evaluation of *Ceriodaphnia rigaudii* as a potential fresh water toxicity test species for use in Trinidad and Tobago.
- Evaluation of persistent organic pollutants in Sea Lots in the Port of Spain harbour.
- The development of effective management strategies to control vascular wilt in pumpkin in Trinidad.

Research in Progress AGRICULTURAL ECONOMICS & EXTENSION

- Analysis of Consumer Behaviour during an outbreak of Exotic Livestock Pests and Diseases on Livestock Demand Analysis of the Jamaican Fresh Agricultural Produce Market.
- Access to and control of resources for agricultural productivity by Gender.
- Improving classroom teaching through action research in the classroom on two topics: Group learning; Engaging students in the learning processes.
- Farmer Field Schools in Extension programmes in the Caribbean.
- Labour productivity among the elderly.
- Risk mitigation behaviour among farmers.
- Nutritional management in the Caribbean.
- Causes and Impact of Food Prices on Caribbean Economies.
- Climate Change and its Impact on Agriculture.
- Organic Farming Systems for the Caribbean.

Research Funding and Incentives

- **Sharon D. Hutchinson:** Strengthening of the Tourism Sector through the Development of Linkages with the Agricultural Sector in the Caribbean. Funded by the OAS for IICA. November 2007 – April 2008. Amount of Award - TT\$38,000. Principal Investigator – Dr. Sharon Hutchinson. Co-Principal Investigators – Dr. Doolarie Singh-Knights; Ms. Wilhelmina Kisoonsingh.
- **Dr David Dolly:** Government of Trinidad and Tobago grant (\$TT 100,000): Options to support the expansion of the cocoa industry in Trinidad and Tobago through a technical vocational programme.

Research Partnerships and Collaboration

Joint Supervisor, Dr C A Pemberton

- Seeram, Laishalla. 2008. University of Algarve, Portugal. "Coastal Lagoon Goods and Services and Human Development". Erasmus Mundus European Masters in Water and Coastal Management.

Joint Supervisor, Dr David Dolly

- Department of Agricultural Leadership, Education and Communication, Texas A&M University, College Station, Texas. *Joint PhD supervision, GOFF Sam, Factors affecting participation and non participation among Completers and non Completers of Five Farmer Field Schools in Trinidad.*

Sticklen, M.

- Assessing Organic Farming in Trinidad and Tobago. Fulbright Scholar

CHEMISTRY

Research completed and the applicability

- **Dr. Denise Beckles:** Geochemical studies of the geothermal areas of the Lesser Antilles with a focus on Dominica and St. Lucia: Implications for geothermal monitoring

Research in Progress and proposed applicability

Dr. Denise Beckles:

- The characterisation of endocrine disruption in the freshwater systems of Trinidad and Tobago
- Determination and characterisation of sources and sinks of ozone depleting gases in Trinidad and Tobago and measurement of their emission rates

- Water Quality Analysis: A comparison between the chemical quality of municipal tap water provided by State- and privately-run water treatment facilities in Point Fortin

Dr. Andrew Caffyn

- Graduate student project in collaboration with BP Chemicals Ltd. "Rhodium and iridium perfluoroalkylphosphine complexes as possible methanol carbonylation catalysts"

Dr. Ivan Chang Yen

- Application of inexpensive testing systems for detection of lead in paint and environmental samples.
- Evaluation of the safety of aluminium cooking pots in Trinidad and Tobago.
- Supercritical Fluid Extraction of Turmeric
- Supercritical Fluid Extraction and Steam Distillation of Basil

Dr. Richard Fairman

- "Langmuir Blodgett System for Growth and Characterisation of Thin Films:" The interaction of molecules at interfaces, as models to the performance of industrial catalysts and coatings

and inhibitors of corrosion and their application to potential gas to liquid conversion technologies

- "Molecular Modelling:" Molecular dynamics simulation of reactants on zeolite surfaces using commercial software on high speed cluster of Linux computers.

This program has potential application in both catalyst design and optimisation

- "Microwave Assisted Syntheses:" Microwave synthesis as an alternative to standard organic synthetic procedures – green chemistry (non-solvent or reduced solvent alternatives)

Dr. Lebert Grierson

- Waste/Virgin plastic recycling of polyethylene, polypropene, polystyrene and PMME polymers (in collaboration with BPUK/BPTT) with application to Environmental Waste Management of waste plastics.

Dr. Nicole John-Thomas

- Evaluation of students' pre-university conceptual understanding of Chemistry
- Understanding of conceptual learning processes as a solution to problems encountered using

algorithmic procedures often used by students (understanding concept versus memorizing procedure).

- Developing Greener Organic Chemistry Laboratory Experiments

Dr. Anderson Maxwell

- Development of catalysts based on the [2.2] paracyclophane skeleton for use in the synthesis of single isomer drugs and other chemicals of biological importance.
- Discovery of biologically important and chemically interesting metabolites produced in culture by bacteria and fungi isolated from unusual habitats e.g. pitch lake, the swamps. (In collaboration with Dr. Adesh Ramsubhag of the Dep't of Life Sciences).
- Synthesis of proton conducting polymers for use in fuel cells. (In collaboration with Dr. Harinder Missan of the Department of Physics).
- Discovery of compounds with antitumour, antimalarial and anti-inflammatory activity from local plants especially of the families Rubiaceae and Euphorbiaceae.

Dr. Ramish Pingal (in collaboration with A.R. Maxwell and A. Ramsubhag)

- The exploration of biologically active natural compounds from aquatic and terrestrial bacteria as well as filamentous fungi. Identifying natural products in bacteria and fungus growing environments with antimicrobial, anticancer and insecticidal properties leading to pharmaceutical development.
- The preparation of biologically active trisubstituted pyrazolines from simpler organic molecules. Research to design molecules with antimicrobial properties especially antiviral (e.g. Dengue, West Nile, herpes) and anti-fungal characteristics leading to development of a useful pharmaceutical.

Dr. Russel Ramsewak

- Discovery of biologically active compounds with varying structural diversity from terrestrial plants and marine organisms. Structural elucidation and bioassaying of pure compounds from terrestrial plants and marine organisms.

Professor Gurdial Singh

- Synthesis of TB Epitopes for the development of new vaccines
- Carbohydrate chemistry for dengue virus inhibitors
- Oxidation of Methane
- Enzymatic synthesis and new biosensors
- Insect anti-feedents

FOOD PRODUCTION

Research in Progress

- Scientific potential of caves in TT
- Evaluation of tropical greenhouses for vegetable production
- Sustainable non-chemical approaches to the management of *Commelina diffusa* in Fairtrade banana in St. Vincent and the Grenadines
- Weed management in selected vegetable and field crops
- Agronomic studies in corn
- Tomato varietal screening for Geminivirus using Crop Health Therapy Technology
- An investigation of selected crop residues for control of weeds in cowpea
- Soil solarisation for managing weeds in cabbage
- The performance of imported duck strain under different production systems in Trinidad in collaboration with Central Farms Ltd.

- The use of enzyme and by-product feed ingredients on broiler performance in conjunction with National Feed Mills.
- The utilisation of by-product feeds in pig production in collaboration with SFC.
- The pubertal development in hair sheep in collaboration with Blenheim /THA and Veterinary School.
- Heavy metal uptake by cocoa.
- Wetland zonation and soil salinisation in the Godineau Swamp area.
- Junior school environmental education, where children get their understanding of nature.
- Soil moisture sensing.
- Postharvest studies in fresh-cut limes.
- Physicochemical and organoleptic changes in balata fruits.
- Simulated studies on marine shipment of hot pepper.
- Chilling injury studies in selected tomato cultivars.
- Climate change monitoring and assessment in Trinidad
- Impact of El Niño Southern Oscillation on rainfall in Trinidad
- Thermal properties of Trinidadian soils

- Engineering properties of major soils used on Trinidadian cricket pitches
- Strength, hydraulic characteristics and erodibility of some humid tropical soils under intense rainfall.
- Long-term storage of selected yam cultivars
- Quality attributes of value added products from selected yam cultivars
- Work on large-scale hydrodynamic computational modelling of the Amazon to provide crucial information of water surface dynamics for a “virtual mission” of the proposed US\$700M joint NASA/CNES satellite, SWOT (*Surface Water Ocean Topography*). SWOT, scheduled for launch around 2015. This large, international collaborative project began in 2004 and concludes with the publication of a white paper on the SWOT satellite mission in late 2008.
- Modelling research work on the Amazon in related projects, such as the assessment of the potential effects of climate change on the Amazon floodplain wetland ecosystem.

- Evaluation of bioagents, organic amendments and household chemicals for the management of *Radopholus similis* in Fairtrade banana

LIFE SCIENCES

Research in Progress

Dr. Mary Alkins-Koo

- Geographic and environmental influences on composition and structure of stream communities.
- ‘Bibliography of research conducted at the William Beebe Tropical Research Station (Simla), Arima Valley, Trinidad’. In collaboration with the Asa Wright Nature Centre
- Development of case studies for teaching environmental science at secondary and tertiary levels. In collaboration with The Cropper Foundation.
- Strengthening capacity for teaching environmental science and geography at CAPE level.

Dr. Dave Chadee

- Xenomonitoring for Lymphatic filariasis (LF) in Brazil, Costa Rica, Dominican Republic and Trinidad and Tobago (funding from the Pan American Health Organisation, Washington, DC, USA).

- Dengue seroprevalence in secondary school children and adult population in Trinidad (funding from Ministry of Health, Trinidad and Tobago).
- Prevalence of *Trichomonas vaginalis* in Trinidad (in collaboration with the Queen's Park Counseling Centre, Ministry of Health, Trinidad)
- Population genetics of *Aedes aegypti* in Trinidad (Part of a NIH Grant with Professor D.W. Severson from University of Notre Dame, Indiana, USA).
- Longevity of *Aedes aegypti* eggs in Trinidad
- Climate Change and Dengue outbreaks in the Caribbean (with Professor A. Chen, University of the West Indies, Mona, Jamaica)
- Seroprevalence of *Helicobacter pylori* in Trinidad (with Adash Ramsubhag and Gail Bacchus-Taylor).
- Vector Borne Disease Control in urban areas in Costa Rica and Trinidad (part of a NIH Grant with Professor J.C. Beier, University of Miami, Florida, USA)
- Biological control of the *Aedes aegypti* mosquitoes.
- Detection, quantification and viability of *Cryptosporidium* spp in water.

- Evidence based public health with reference to Leptospirosis in Trinidad.

Co-founder of two Research Clusters at The University of the West Indies, St. Augustine, Trinidad.

- Tropical Medicine: Infectious Diseases Cluster (Co-Chairman with Professor A. A. Adesiyun). This cluster brings together academics from Veterinary School, Medical School and Department of Life Sciences. Currently supervising a 20-year research project with medical students from Mt. Hope to determine the effects of non-ionizing radiation from Cell Towers on selected populations in Trinidad.
- Biodiversity and Environment Cluster: Biogenics of Natural Products (Co-Chairman with Dr. A. Maxwell, Chemistry Department). This cluster brings together academics from the Department of Chemistry and Department of Life Sciences, Faculty of Science and Agriculture.

Collaborations with Ministry of Health in Suriname

- A project on the epidemiology of malaria in Suriname is currently being conducted. Contracts have been prepared for training, evaluation and surveillance work for the Malaria Mission in Suriname.

Dr. Brian N. Cockburn

- Investigation of the antioxidant status of diabetic individuals in Trinidad.
- Investigation of the nutritional status of individuals receiving chronic renal dialysis.
- Investigation of the nutritional content of sweet potato varieties maintained by the Ministry of Agriculture, Lands and Marine Resources.
- Implementation of a Type 2 Diabetes Mellitus School Screening Programme in Trinidad & Tobago. This work is an initiative of the Helen Bhagwansingh Diabetes Education, Research and Prevention Institute. The major on-going objective is to raise national awareness of the pathophysiology of type 2 diabetes mellitus and so promote lifestyle changes among the local population.

- Investigation of the nature and prevalence of the metabolic syndrome amongst Indo and Afro-Trinidadian diabetics. The objective is to identify whether major differences exist in clinical manifestations of the syndrome among the two groups and whether simple measurements or additional metabolite assays would aid in diagnosis/treatment.

THE HERBARIUM

A Biodiversity Monitoring System for Trinidad & Tobago.

This project is funded by the UK Darwin Initiative in collaboration with Oxford University, UK and the National Herbarium of Trinidad and Tobago at UWI. It will enable us to make an estimate of habitat and species loss since the last detailed vegetation inventory in 1984. The research will also provide a conservation status of the endemic, rare, threatened and endangered species in Trinidad & Tobago. Ultimately, the information gathered will assist State Agencies with drafting legislation to protect endangered species and habitats.

The development of a virtual herbarium

An Ethnobotanical TRAMIL Survey of Indigenous Plants used in Herbal Remedies in Rural Communities in Trinidad. This Project is funded under the Trinidad and Tobago Health Science Initiative (TTHSI). The data collected will inform the selection of local herbs for clinical trials to establish efficacy, safety and toxicity of medicinal plants used in traditional medicine in Trinidad and the wider Caribbean region. The potential of such plants developing into new crops to support an emerging medicinal plant.

Other Research

Dr. Adrian Lennon

- Characterisation of the Anthurium anthocyanin biosynthetic pathway
- Development of yellow spathes in Anthurium
- Characterisation of the putative chlororespiratory proteins, IMMUTANS and Ndh complex, in C3 and C4 plants

Dr. Azad Mohammed

- An evaluation of the ecological risk of persistent organic pollutants in the Point Lisas area. The results generated would provide baseline information for Trinidad and Tobago for the twelve priority POPs listed under the Stockholm Convention.

- Monitoring of Green House Gas emissions in wetlands. Efflux of green house gases from wetlands can make a significant contribution to global climate changes. Methane and Nitrous Oxide emissions are of primary concern since both these gases have higher global warming potentials than carbon dioxide. Our current project investigates how restoration of the Nariva swamp would offset the emissions of both these gases.

Professor Indar Ramnarine

- Research in aquaculture, fisheries biology, and behavioural/evolutionary studies using the guppy as a model.

Dr. Sephra Rampersad

- Host specificity and relative aggressiveness of isolates of the causal agent(s) of vascular wilt in pumpkin in Trinidad.
- Correlation between genetic diversity, geographic location, host specificity and morphology of isolates of the causal agent(s) of vascular wilt in pumpkin in Trinidad.
- The effect of AMF on rate of epidemic increase and AUDPC in pumpkin.

- The effect of AMF on PR protein expression in pumpkin seedlings.

The development of effective management strategies to control vascular wilt in pumpkin in Trinidad. The research and findings represent new information hitherto not present in current literature for any other country.

Christopher Starr

- Nesting biology of solitary wasps
- Defensive tactics of web-building spiders
- History of insect sociobiology, with emphasis on the contributions of François Huber and Jan Dzierzon

Research Funding

Dr. Gregor Barclay

Barclay, G.F., and Ramlal, B. Government of Trinidad and Tobago Research Development Fund \$210,000. (First tranche) “Modeling the Impact of Riverine and Ground Water Nutrient Input from Human Activities on Coastal Nutrients and Plankton Productivity.”

MATHEMATICS & COMPUTER SCIENCE

Areas of Research Focus

Bio-Mathematics

- Prey-predator Models

Fluid Dynamics

- Study of Interfaces.
- Heat transfer in porous media.
- Symmetries of differential Equations
- Mathematical Modeling.
- Non-linear waves.
- Thin film.
- Non-linear chemical oscillations.
- Desorption dynamics in polymeric systems.
- Non-Newtonian Fluid Flows, in particular, the flow behaviour of these fluids for which its motion has been induced due to time dependent and independent pressure gradients, as well as moving boundaries, with and without slip.
- Thermal Instability.
- Non Newtonian Fluid Mechanics with special focus on Micropolar Fluids.

Graph Theory

- Graph Polynomials

Statistics

- Symmetry of Distribution
- Mathematical Statistics and applications of Statistics to epidemiology, demography. He has begun to prepare work in Genetics which will be the focus of an active inter-disciplinary group involving Biologists, Statisticians and Computer Scientists.
- Statistical Inference in Bio-medical research.
- Estimation and hypothesis testing.
- Bio-statistics, survival analysis, clinical research and reproductive health.

Artificial Intelligence

- Application of case base reasoning to medical expert systems.
- Distributed multi criteria decision systems.
- Evolutionary Computation
- Semantic Web
- Logic Functions and Equations.
- Computer-based Education.
- Artificial Intelligence and applications.

E-Learning

- Information Visualisation.
- Graph drawings.
- Using the computer to teach music with special application to the pan.

- Investigating the relation between 'A' level grades and performance in Computer Science courses.
- Attempting to identify the skills persons must possess which will predispose them to becoming good programmers.
- Education in Computer Science
- Learning Objectives.
- Adaptive Learning Systems
- Mobile Learning
- Serious Games for Learning

Health Care

- Mobile Systems for Health Care

Human-Computer Interaction

- Usability testing.
- eCommerce usability
- Usability Engineering.
- Personalisation and Emotion-Oriented Computing.
- Computational Intelligence

Networking

- The proposal of multiple constraint optimisation algorithm called routing decision system (RDS) to address the problem of finding paths in core networks that satisfy traffic-oriented performance problems while simultaneously satisfying resource-oriented performance problems.

- Wireless and Mobile Computing.
- Software Design.
- Availability and Reliability in Distributed Systems.

Software Engineering

- Implementing Roles in Object Systems

Research in Progress

- Tests for Normality
- Study of Interfaces.
- Heat transfer in porous media.
- Symmetries of differential Equations.
- Prey-predator Models.
- Mathematical Modeling - Applications: Sports modeling; design of a football; Mathematical model for crime in Trinidad and Tobago.
- Non-linear wave theory: Study of blood flow
- Thin films: Asymptotic and numerical analysis of droplet break-up and droplet spreading.
- Non-linear chemical oscillations: Frontal Polymerisation. Stability and characterisation of chemical fronts.
- Desorption dynamics in polymeric systems
- Immanents of Graphs.
- Relationships between different kinds of graph polynomials.

- The Reconstruction Conjecture.
- Graph Assembly with researchers at Pace Univ, N. Y.
- Almost traceable graphs with researchers at Pace Univ., N.Y.
- Simulating Distributed Transactions using Web Services.
- Towards the development of an ideal course in Wireless Networking.
- An E-learning Tutorial for the Teaching of MIDP and Wireless Applications.
- Performance of a distributed system with cost bound compensation.
- An SMS response system for distributing wireless course notes
- Software Engineering.
- Decision Systems and Computer Networking and Technology in Medical Education.
- Incorporate multi-criteria decision making into the study
- First phase of Caribbean-wide Healthcare System "Building a Local MediNet for Trinidad and Tobago" started in February 2008
- Micropolar flows.
- Flows due to the Longitudinal and Torsional Oscillations of cylinders & rods

Research Funding and Incentives

Dr. Alexander Nikov organised the opening of the Caribbean's first Web Usability Laboratory at The University of the West Indies, St. Augustine (May 2008).

Dr. P. Mohan was awarded a grant by Microsoft Research based on the Cell Phone as a Platform for Healthcare RFP for a project titled, "A Caribbean-wide Healthcare Management System Based on Cellular Phone Technology."

Research Partnership and Collaboration

Dr. Donna Comissiong is currently working on research projects with the following international collaborators:

- Professor R. A. Kraenkel, (Dept Theoretical Physics) IFT-UNESP, Sao Paulo, Brazil
- Professor M. A. Manna (Dept Theoretical Physics) Univ. Montpellier, France
- Professor V. A. Volpert (Dept Applied Math and Eng Sci) ESAM, Northwestern University, IL USA
- Professor L. K. Gross (Dept Applied Math), University of Akron, USA
- Professor Edward Farrell has continuous collaboration with his colleagues, Professor L. Quintas (Mathematics and Statistics) at Pace University, New York.

Dr. A. Nikov, prepared a proposal for cooperation and joint research with the Department of Industrial Design, Braunschweig University of Art, Germany, in the area of computer-related industrial design with application in web-based systems like the anthurium industry web portal connected via the newly established Faculty's Web Usability Lab.

PHYSICS

Ms. Sybele Williams

- Musculoskeletal disorders arising from occupational exposure
- Developing protocols to ensure quality assurance in the delivery of services involving diagnostic imaging

Professor Ramsey Saunders

- Blood Volume Pulsations
- Nanoplaques for Alzheimer's disease
- Nanotechnology
- Water Purification and Biomagnetism

Dr. H. Missan

- Development of polymer electrolyte membranes for polymer electrolyte membranes fuel cells and lithium battery applications
- Establishment of a fuel cell laboratory

Dr. Shirin Haque

- Astrobiology at the Pitch Lake,
- Feasibility of a Radio Telescope Project
- Monitoring of quasar variability
- Application of Physics in Psychology.

Research Funding and Incentives

- Peter Moore's Trust (Barbados \$10,000 US) & Cave Hill Campus (\$5,000 US) production of "All is number" documentary" – S. Haque)

Research Partnerships and Collaboration

Professor Ramsey Saunders

- Photoplethysmography special reference to blood volume pulsations with Professor J. Addae, Medical Sciences and Professor Christian Posthoff of Mathematics and Computer Science
- Analysis of EEG using Chaos Theory with Professor J. Addae, Medical Science and Professor Christian Posthoff of Mathematics and Computer Science
- Water potabilisation with teams in Chile, Brazil, Argentina, Peru and Mexico
- EEG analysis with research at State University New York (SUNY)

- Magnetocardiography with Dr. D. Rassi from University of Wales, Swansea
- Alzheimer's research with Free University, Berlin, Charite

Dr. Harinder Missan

- Collaborations with Queens Fuel Cell Research Centre, Kingston, Canada on fuel cells research

Dr. Shirin Haque

- Collaborations with Villanova University, Washington State University (USA) and University of British Columbia (Canada) on Astrobiology.
- University of Turku, Finland on observational astronomy
- Carleton University, Canada on theoretical astronomy

Ms. Sybele Williams

- Collaborations with Helmholtz Institute, Aachen, Germany and with the radiology Department and physiotherapy Department at the Medical Sciences Faculty.

COCOA RESEARCH UNIT

Ongoing projects

- The CFC/ICCO/BI project entitled *Cocoa productivity and quality improvement: a participatory approach.*
- Project to evaluate cocoa germplasm for resistance to Witches' Broom disease with support from the World Cocoa Foundation (WCF).
- Project to develop a DNA fingerprinting database for all major cacao collections in the Americas in conjunction with USDA and CIRAD.
- DNA markers for cacao traits in collaboration with the GORTT and USDA
- *Safeguarding the International Cocoa Genebank, Trinidad: a global resource for the cocoa industry*
- *To assess the quality attributes of the Imperial College Selections.* This project was approved by the Dutch LNV in June 2006 for funding by the Support Scheme for Sustainable Development of the Cocoa and Chocolate Sector.
- *Development of a nutraceutical and flavour profiling system of cocoa beans in Trinidad and Tobago* This new project was approved for funding from the GORTT Research Development Fund in April 2007.

This is a joint project between CRU (Dr. D.A. Sukha) and the Department of Chemistry, (led by Dr. I. Chang Yen).

- *Assessment of the effect of the micro-floral succession during post-harvest cocoa fermentation on flavour* in collaboration between CRU and Towson University.
- *Investigation and Prevention of Heavy Metal and Ochratoxin A Contamination of Cocoa in Trinidad and Tobago.* This project is funded by the Ministry of Agriculture, Lands & Marine Resources (MALMR): Project Team: Dr. I. Chang Yen, Department of Chemistry; Mrs. F. Bekele, Cocoa Research Unit; Dr. I. Bekele, Dept. of Food Production; Dr. B. Sukha, Analytical Chemist, MALMR Professor L.A. Wilson, Professor N. Ahmad and Professor E.J. Duncan (Professor Emeriti).

Major Projects Initiated

As a result of increased emphasis being placed on research and development in the Faculty, a number of multidisciplinary research clusters have been formed and projects, related to finding solutions to problems, initiated. These include among others:

- Development of modern tree crop production and fruit utilisation systems for improved breadfruit commercialisation in Caribbean agro-ecosystems
- Community Empowerment through ecotourism/agro- tourism and ethno-cuisineology
- Supercritical Fluid Extraction of Tumeric and Basil
- Divergent synthesis of dendrimers with paramagnetic lanthanide cores for use as MRI contrast enhancement agents
- Assessment of cocoa bean traits for butterfat yield and quality for the identification of superior accessions for germplasm enhancement
- Using RDS (Routing Decision System) to solve traffic-oriented performance problems
- Establishment of a Web Usability Laboratory
- Establishment of a Fuel Cell Laboratory

- Carbon sequestration in a tropical wetland (Nariva Swamp)
- Micropropagation in breadfruit and chatainge
- Biodiesel production from waste oil-optimisation and viability for atmospheric protection
- Evaluation of bioagents, organic amendments and household chemicals for the management of *Radopholus similis* in Fairtrade banana

Strategy Appraisal CHEMISTRY

Teaching and Learning

The Department has developed new lab experiments to provide the skills and competencies required of the modern chemistry graduate and improved access to, and increased the number of analytical instruments available to undergraduate students. There was also an increase in the number of technical staff to improve instrument, NMR and chromatography services to our growing undergraduate population. The department also re-introduced tutor-tutee academic advisory consultations within the Department within the framework of a staff to student ratio of 1:25.

Graduate Studies

Postgraduate student advisory appraisals are now required to take place twice per year at beginning of each semester and students are required to make regular research seminar presentations. Four instrument labs were upgraded and refurbished for improved quality of research

Other Strategic Areas of Importance

The Department contributed to The University's attempts at strengthening regionalism through the training of 70 CAPE secondary school teachers; by facilitating visits by secondary school students to the Department of Chemistry and by working towards the harmonisation of curriculum across the three campuses

In the areas of building quality and transforming leadership, the Department designed and implemented a quality assurance manual this year.

FOOD PRODUCTION

The review of the undergraduate programmes in agriculture continues. This year the Geography major was reviewed and the revised programme approved for implementation in 2008/09. Postgraduate programmes have been also been reviewed and three new MPhil and PhD programmes were approved. Proposals for additional new programmes are under consideration.

Upgrade of basic laboratory and field infrastructure and instrumentation were undertaken.

The Department, on behalf of the School of Agriculture, is part of the Consortium for the transformation of the agricultural sector in the OECS member states and contributed to the hosting of the AGRITECH EXPO 2008 which showcases to all stakeholders and the general public the latest technologies driving the “new agriculture”.

COCOA RESEARCH UNIT (CRU)

The CRU continues to strive in its mission to provide support for the provision of cacao varieties suited to sustainable cocoa production, both locally and globally, by making planting material available with improved traits for high yield potential, disease resistance, high fat content and with good flavour characteristics.

Outreach

Through its various Departments and staff, the Faculty of Science and Agriculture regularly interfaces with stakeholders and members of the public. Our regional and international ties include longstanding relationships with the University of Guyana and the Iwokrama International Centre in Guyana. From public lectures, television interviews and newspaper

articles to organisation of or participation in conferences and seminars or providing training for professionals in education and industry – the Faculty has a presence that is felt nationally, regionally and internationally. Below are some of our primary outreach activities for the 2007/2008 academic year:

JOURNAL OF TROPICAL AGRICULTURE

The Department of Agricultural Economics and Extension took over the responsibility for printing the journal, *Tropical Agriculture* (Trinidad). Volumes 82 and 83 were printed within the reporting period.

WORLD FOOD DAY EXHIBITION IN TOBAGO

The School of Agriculture, through the Department of Agricultural Economics and Extension coordinated the World Food Day Agricultural Exhibition in Tobago and conducted a five-day workshop in Antigua and Barbuda on “Developing an Agro-tourism Sector in Antigua and Barbuda”.

TRAINING

The Department of Chemistry hosted a three week training workshop for 70 Secondary School Teachers in collaboration with the Ministry of Education on Analytical Methods and Separation Techniques (Unit 2 Module 2) for the Caribbean Advanced

Proficiency Examinations (CAPE). The Department of Life Sciences provided training in plant identification techniques to Forest Officers attached to the Forestry Division, Ministry of Agriculture, Lands and Marine Resources (MALMR) and together with the Peakes and Power Boats Marinas, engaged in discussions with industry stakeholders and published articles in the TT Yachting magazines on Marine Invasive species.

The Department of Food Production organised a one-day workshop on needs assessment of greenhouse vegetable producers in Trinidad and Tobago, hosted a greenhouse stakeholders meeting and workshop, as well as a two-day training workshop for banana extension officers in St. Lucia.

The UWI and the National Herbarium of T&T hosted an International Herbarium Techniques Course with seven facilitators from the Royal Botanic Gardens, Kew, UK in November 2007. A grant of TT \$30,000 was provided by the Ministry of Public Utilities and the Environment to assist with the running of the workshop. Twenty-five participants attended the course. Participants came from Guyana, Antigua, Jamaica, Trinidad and Tobago and the UK.

The Cocoa Research Unit hosted training workshops on sensory evaluation principles and techniques for participants from the Cocoa and Coffee Industry Board, a one-day training course on cocoa processing technology for cocoa fermentary operators and buying agents in Trinidad and conducted training of MALMR staff in morphological characterisation of cacao and assisted with the characterisation of all of the commercial Trinidad Selected Hybrids bred by the Ministry.

TECHNICAL ASSISTANCE

The Department of Food Production worked with the National Fairtrade organisations of the Windward Islands (Dominica, St. Lucia and St. Vincent and The Grenadines) during negotiations with the Fairtrade Labeling Organisation (FLO, UK) for continued exemption of critical agricultural inputs. The Department also provided assistance to Central Farms Ltd – the largest duck producer in Trinidad, the Caribbean Broiler Association, and engaged in discussions with the West Indian Tobacco Company Ltd. (WITCO) for a joint project on rehabilitation of degraded lands. Meanwhile the Department of Life Sciences hosted six meetings of the Cabinet Appointed Working Group to determine the implications of Global Warming, Climate Change and Sea-Level rise and researchers at the Cocoa Research Unit designed a Crossing

Scheme and Enhancement Programme to introduce genes for Black Pod resistance into the Trinidad Selected Hybrid Breeding Programme of MALMR for the benefit the local cocoa industry.

INTERNATIONAL RESEARCH COLLABORATION

The Faculty signed an MOU with Utah State University (USU), to develop research links. USU, as part of the MOU, have “kindly loaned” ~ US\$20,000 worth of research equipment to support research in tropical soil process and teaching. Research links were also developed with the University of Rio, Brazil, with Princeton University, USA, with CITA, Spain, and with the Geode Caraibe unit, Universitie des Antilles et de la Guyane, Martinique. Discussions have been initiated with Florida A&M University for collaboration in research and student exchange The Faculty is working with the Cropper foundation on developing watershed studies in Trinidad and through the Department of Life Sciences we collaborated with the Forestry Division, Ministry of Agriculture, Lands and Marine Resources to conduct the Rapid Botanical Survey in Tobago.

At the Cocoa Research Unit, staff conducted tests on chocolate and cocoa liquor samples for *Naturaplus Chocolate Company* in Ecuador, carried out organoleptic

evaluations on cocoa bean samples for *Rausch Schokoladen GmbH*, Germany and engaged in on-going collaboration in quality and sensory assessments with *Guittard Chocolate Company Limited*, USA.

The CRU also facilitated the preparation of a Cooperative Agreement between the Cocoa Research Unit and the Department of Useful Plants and Plant Ecology, Biocentre of Klein Flottbek, University of Hamburg, Germany; and the preparation of a Collaborative Agreement between the State of Queensland (Australia) acting through the Department of Primary Industries and Fisheries and the University of West Indies, for a project on *Mapping compositional parameters of cocoa to sensory profiles*.

A new partnership between the US Department of Agriculture, Beltsville and the Department of Life Sciences, should also lead to collaborative work on the emergent pest, red palm mite alongside on-going work on marker technology for cacao molecular breeding with the USDA's Sustainable Perennial Crops Laboratory.

Revenue Generating Activities

Staff consultancies, lab services, training workshops and the sale of animals such as rabbits and sheep constitute the primary means by which the Faculty generates additional income.

Distinguished Visitors

Professor Inteaz Ali
McGill University, Montreal, Canada

Natasha Ali,
CDB Implementation Officer, Conventions and Policy Section, Royal Botanic Gardens, Kew, UK

Marie-Ange Arsene
Université des Antilles et de la Guyane, Guadeloupe

Amada Bê A
Université des Antilles et de la Guyane, Guadeloupe

Professor Daniel Bentil
University of Vermont

Bishop Calvin Bess
Anglican Bishop, Trinidad and Tobago

Pete Bishop
The Shop, London, UK

Jean-Luc Bouchereau
Université des Antilles et de la Guyane, Guadeloupe

Keron Campbell
Institute of Jamaica, Kingston, Jamaica

Professor John P. Carroll
Professor of Wildlife Ecology, Warnell School of Forestry and Natural Resources, University of Georgia, Athens, USA

Judith Cavey
Norwich, Norfolk, UK

Professor A.A. Chen
Professor of Physics, Member of the IPCC Panel which was awarded the Nobel Prize, UWI, Mona, Jamaica

Christian Cilas
CIRAD Montpellier, France

Ruth Clarke
(Taxonomist) and Herbarium, Royal Botanic Gardens, Kew, England.

Monica Jane Clement
Trinidad and Tobago Embassy, Brazil

Dr. Collin Clubb
Co-ordinator, Graduate Studies, Royal Botanic Gardens, Kew, UK.

Mariana Costagula
Visiting Scientist, Argentina

Jerome Delaigue
Post graduate student in Ethno botany, France.

Kate Denniston
Towson University, MD, USA

Rafael Duran
Centro de Investigación Científica de Yucatán, Mexico

Lucía Ellis
Visiting Scientist, Belize

Professor Kevin Fitzsimmons
University of Arizona, USA

Dr. Tim Gabriel
Academic-Industrial Lecturer in Chemistry, Department of Chemical and Biological Sciences, University of Huddersfield, UK

Dr Virginia Garrison
US Geological Survey, Florida, USA

Dr. Benjamin Gilbert
Natural Product Chemist, Departamento de Produtos Naturais FarManguinhos – Fiocruz, Brazil

Amos Glasgow
Visiting Scientist, Chateaubelair, St. Vincent

Professor Jean-Guy Godin
University of Montreal, Canada

Philippe Godon
CIRAD, Capesterre Belle Eau, Guadeloupe

Roanna Gopaul
Ministry of Foreign Affairs, Trinidad and Tobago

S.N. Gordon
T&T High Commission, Ottawa, Canada

Professor Gode Gravenhorst
University of Gottingen, Centre for Tropical and Sub-Tropical Agro- Forestry

Dr Patricia Griggs
Co-ordinator, Higher Education, Royal Botanic Gardens, Kew, UK.

Madeline Groves

Implementation Officer, CITES, Convention and Policy Section, Royal Botanic Gardens, Kew, UK

Jesse Guittard

Guittard Chocolate Co. Burlingame, CA, USA

Professor N. K. Gupta

Indian National Academy of Sciences, India

Sue Hainsworth

Green Ink, Bridgewater, Somerset, UK

Yvette Harvey

(Taxonomic Botanist) Herbarium, Royal Botanic Gardens, Kew, England.

Judy Hayes (née Baker)

Templestowe, Victoria, Australia

Ted Hayes

Templestowe, Victoria, Australia

Linda Heath

Dept. of Psychology, Loyola University, Chicago, IL, USA

Joseph Henry

Visiting Scientist, Guadeloupe

Jose Herrera

Visiting Scientist, Columbia

Kaslyn Holder

Curator of the Guyana Herbarium and Lecturer, Dept. of Biology, University of Guyana

Keith Holmes

CABI, Trinidad and Tobago

Pierre Emmanuel Hublet

Museum of Cacao and Chocolate, Brussels

Professor Scott Jones

Professor of Soil Physics, Dept of Plants, Soils and Climate, Utah State University, USA.

Biki Khurana

Rausch Chocolates, Mainz, Germany

Professor Roberto A. Kraenkel

Institute for Theoretical Physics, Brazil

Professor Hendrik Kuhlmann

Vienna University of Technology, Austria

Professor H. Lehto

Radio Telescope Project, University of Turku, Finland

Aisha Leverett

Loyola University, Chicago, IL, USA

Max Louis

Université des Antilles et de la Guyane, Guadeloupe

Professor Dirk Makuch-Schulze

Astrobiology Project, Washington State University

Professor Anne Magurran

University of St Andrews, Scotland

Dr Mike Majeskwki

US Geological Survey, Denver, USA

Professor Jean Louis Mansot

Université des Antilles et de la Guyane, Guadeloupe

Elizabeth McCullough (née Baker)

Jacksonville, FL, USA

Victoria Mendes-Charles

Trinidad and Tobago High Commission, Nigeria

Martha Mendez

Centro de Investigación Científica de Yucatán, Mexico

Dr. Sylvia Mitchell

Biotechnology Centre, UWI Mona, Jamaica

Professor Andre Nachbin

Instituto de Matematica Pura E Aplicada, IMPA, Brazil

Professor Rishi Nath

Department of Mathematics and Computer Science, York College, The City University of New York, USA

Lindsay Nichols

Loyola University, Chicago, IL, USA

Suzanne Nielsen

Journalist, St. Maarten Daily Herald, Saba, Northern Antilles

Dr Carl Orazio

Branch Chief Chemistry, Columbia Environmental Research Center, US Geological Survey, Columbia, Missouri, USA

Patrick Lewis

Herbarium Technician, UWI, Mona, Jamaica

Cynthra Persad

Ministry of Agriculture, Research Division, Centeno Trinidad and Tobago

Chris Pratt

Project Coordinator, USAID conservation project in Antigua & Barbuda

Professor Efim Pelinovsky

Institute of Applied Physics, Switzerland

David Preece

BCCCA (now CRA) / Cadbury Schweppes plc., UK

Elisabete Cunha Pessoa

Museum of Cacao and Chocolate, Brussels

Professor Peter Pulay

Professor of Quantum Mechanics, University of Arkansas, USA

Professor D. Rassi

Medical Physics Swansea, Wales

Lauren Raz

Curator of the Herbarium, Centre for Tropical Plant Conservation. Fairchild Tropical Garden, Florida, USA.

Fred Reno

Université des Antilles et de la Guyane, Guadeloupe

Professor David Reznick

University of California Riverside,

Roland Roberts

Towson University, MD, USA

Lisa Sandberg

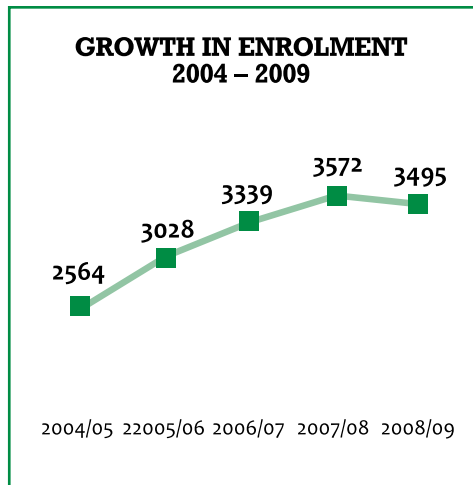
Loyola University, Chicago, IL, USA

Jim Saunders

Towson University, MD, USA

Professor Wilhelm Schneider

Vienna Institute of Technology, Austria



Ms. Myrtle Seepersad

University of Göttingen, Centre for Tropical and Sub-Tropical Agro- Forestry

Professor David W. Severson

Department of Biological Sciences, University of Notre Dame, Indiana, USA

Professor K.R. Sreenivasan

President of ICTP, International Centre for Theoretical Physics, Italy

Alessio Tessieri

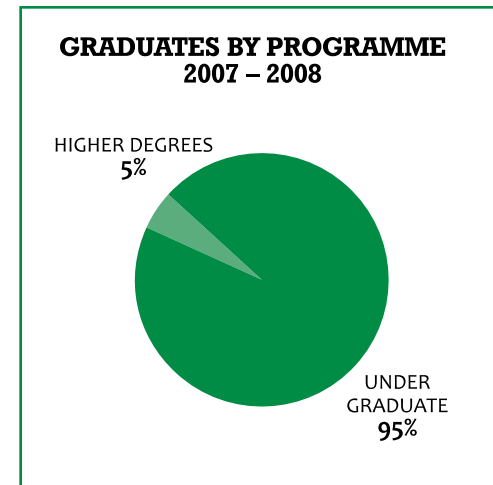
Amedei, Italy

Ina Vanderhoof

Toronto, Canada

Benoit Vandervelde

Museum of Cacao and Chocolate, Brussels



Claude Vuillaume

CIRAD, Capesterre Belle Eau, FWI

J.A. Nicholas Wallis

Daklow, UK

China Williams

Legal Advisor, in the Convention and Policy Section, Royal Botanic Gardens, Kew, UK

Larry Wimmers

Towson University, MD, USA

Jolene Yukes

Project Coordinator, Institute of Economic Botany, New York Botanical Gardens, U.S.A

Professor Narcisse Zahibo

Université des Antilles et de la Guyane, Guadeloupe

faculty of social sciences





We continue to attract increasing numbers of high calibre students, including several national scholarship winners; and there is increased enrolment of students from OECs member countries.

dean, faculty of social sciences

Dr. Hamid Ghany

The Faculty of Social Sciences continued to make notable progress during the 2007/2008 academic year, the first year of the new Strategic Plan, 2007-2012, notwithstanding the resource constraints which impacted on the delivery of its programmes.

Total enrolment in the Faculty in the 2007/2008 academic year stood at 5,212. The Faculty continued to have the largest number of students registered at the St. Augustine campus. In 2007/2008 805 students graduated from the Faculty with BSc degrees in 2007/2008.

The Faculty introduced several new undergraduate and postgraduate programmes including International Relations, Social Work, Criminology, Mediation, Aviation Management, Strategic Management and Leadership, and Tourism Development and Management. The Faculty also introduced an undergraduate elective in Entrepreneurship and Innovation and the L'Ecole Finesse: Workplace Protocol for Students, a course for co-curricular credit which addresses the profile of the UWI graduate of the future. E-Tutorials and the Tutorial Centre model were adopted to alleviate the space constraint confronting the Faculty and blended teaching methodologies were introduced in the delivery of several courses.



During the 2007/2008 academic year the Faculty provided financial support to some of its staff and students to visit institutions abroad so as to strengthen collaboration with international universities and promote study abroad and exchange opportunities. The Faculty continued to build research capacity and create an enabling environment for growth in research activity and dissemination of research results by establishing two online journals during the 2007/2008 academic year, *The Caribbean Journal of Social Sciences and Business, Finance and Economics* in Emerging Economies. Editorial and Advisory Boards have been constituted for the former journal and articles are being reviewed for the first issue on "Governance". The Dean is serving as the first guest editor. The latter was created through collaborative efforts of the Departments of Economics and Management Studies, the Sir Arthur Lewis Institute for Social and Economic Studies and the Caribbean Centre for Monetary Studies.

Staff in the Faculty continued to serve on Government Task Forces, Committees, Commissions and Regulatory Bodies and conducted research in strategic focal areas such as HIV/AIDS and sustainable development relevant to the local economy and the region.

The Faculty held 'Research Days' in February 2008 based on the philosophy of a festival of seminars. Faculty staff and graduate students delivered sixteen presentations over the two-day period. The Sir Arthur Lewis Institute of Social and Economic Studies (SALISES) also introduced the SALISES Forum, a public discussion series dealing mainly with issues of local and regional interest.

The Faculty of Social Sciences embarked on a series of activities in commemoration of the Year of Sir Arthur Lewis which also formed part of the Faculty's contribution to the UWI's 60th Anniversary celebrations. Activities included the Sir Arthur Lewis Symposium in February 2008 and the Distinguished Lecture Series in each month from February to June 2008.

We hosted the first-ever cross-campus conference of the three Faculties of Social Sciences over the period 28th, 29th February and 1st March, 2008. This conference dealt with matters of academic policy, teaching and learning, cross-campus administrative issues and collaborative research. The grand finale to the three-day conference was a dinner at the Hyatt Regency Hotel in Port-of-Spain to celebrate the 60th Anniversary of The University of the West Indies.

The feature speaker at the dinner was the Prime Minister of the Republic of Trinidad and Tobago, the Honourable Patrick Manning, M.P.

The Faculty continued with its franchise arrangements with the Sir Arthur Lewis Community College in St. Lucia, the Clarence Fitzroy Bryant College in St. Kitts and the Cipriani College of Labour and Cooperative Studies which all offer Level 1 of the Faculty's BSc Programmes so as to meet the needs for tertiary education in some of the non-campus territories. A similar arrangement was established with the St. Vincent and the Grenadines Community College during 2007/2008 for commencement in 2008-2009.

The Faculty will continue to develop academic programmes that will satisfy societal needs, engage in meaningful dialogue with the public and private sectors and further explore intra- and inter-institutional collaboration to build research capacity and enhance graduate studies and research.

Students ENROLMENT (ON AND OFF CAMPUS)

Total:	5212
Undergraduate Degrees:	3476
Higher Degrees & Diplomas:	1335

The Department of Management Studies continued to experience strong growth in demand for its courses and programmes with an annual intake of approximately 450 new students. Demand for Departmental courses from students from other faculties and Departments also experienced robust growth, with indirect enrolment from these sources, increasing by roughly 15%. As an example, enrollment in the year under review, from the Faculty of Science and Agriculture amounted to approximately 250 new students.

Among the highlights in the area of student enrollment are the Faculty's continued ability to attract increasing numbers of high calibre students, including several national scholarship winners; and an increased enrolment of students from OECS member countries, particularly St. Lucia, St. Vincent and the Grenadines, and Dominica.

GRADUATION

Total:	1179
Undergraduate:	741
Postgraduate:	333

Fifty-three students graduated with first class honours. Twenty-seven of these came from the Department of Management Studies. Twenty-nine MBA graduates and an equal number of graduates from our other taught Masters programmes graduated with distinction and one of our five PhD students graduated with high commendation.

Staff PROMOTIONS Behavioural Sciences

Dr. Daphne Phillips
Senior Lecturer

Dr. Ronald Marshall
Senior Lecturer

Dr. Nasser Mustapha
Senior Lecturer

APPOINTMENTS

Behavioural Sciences

Mr. Maukesh Basdeo
Assistant Lecturer

Mr. Daurius Figueira
Lecturer

Dr. Nicole Albada
Lecturer

Dr. Indira Rampersad
Lecturer

Dr. Kerry Sumesar-Rai
Lecturer

Dr. Anthony Ronald Boufoyo Bastick
Lecturer

Mrs. Karene Ann Nathaniel
Assistant Lecturer

RETIREMENTS & RESIGNATIONS Behavioural Sciences

Dr. Simon Cottee
Resigned

Dr. Terrence Bartholomew
Resigned

Professor Ralph Premdas
Retired

Management Studies

Dr. Raghava Gundala
Resigned

LEAVE OF ABSENCE

Behavioural Sciences

Mrs. Jacqueline Cameron-Padmore
Dr. Kathleen Valtonen

Teaching and Learning

This year the Faculty introduced e-tutorials which, in addition to helping resolve issues related to room availability, have also allowed us to broaden the pool of qualified tutors in that we can now incorporate persons living abroad. The Faculty has found that the use of a blended teaching methodology in the delivery of several courses is receiving a favourable response from students.

Other significant developments this year were the strengthening of the internship modules in our International Tourism and Aviation Management programmes and the increased participation of our students in Study Abroad programmes at universities in Canada, the USA and the UK, as well as at the sister campuses at Mona and Cave Hill.

The Management Student Society (MSU) continues to provide students with opportunities for participation in extra curricular activities relating to the acquisition of leadership skills. More students in the Department of Management became involved this year in the mentorship programme run in conjunction with members of the business community, and they participated in the cross campus First Caribbean International Bank Case Analysis competition.

In the Department of Behavioural Studies, the team in the Office of the Practicum Coordinator delivered and assessed the first training programme for Practice Teachers, a seven module programme called “The Award for Practicum Instructors”.

Programmes

DISTANCE EDUCATION AND COURSE DELIVERY AT SATELLITE LOCATIONS

During the last academic year, the Department of Management Studies continued to assist in the administration and delivery of the BSc Management Studies and the BSc Accounting programmes offered to hundreds of students through the Open Campus. The Department also continued in 2006/2007 to assume responsibility for the delivery of Levels 1 and 2 of the BSc

Management Studies courses offered at the Sir Arthur Lewis Community College in St. Lucia; Level I of the BSc Management Studies and Accounting courses offered at the Fitzroy Bryant College in St. Kitts; the Management and Accounting courses in the BSc Pharmacy programme offered by the Faculty of Medical Sciences, Mount Hope, and Level I of the BSc Management and Accounting courses offered through a franchise arrangement with the Cipriani College of Labour and Cooperative Studies.

NEW PROGRAMMES

The MSc Tourism Development and Management and the Advanced Diploma in Tourism Management were introduced for the first time in the year under review. Fifteen students were enrolled this year as the first cohort.

The PhD in Business Administration was approved this year. This programme, which is based on the North American model, represents a departure from the traditional PhD programme at UWI in that it is comprised of a significant taught component as well as a substantial thesis.

Research MAJOR PROJECTS COMPLETED Behavioural Sciences

Mrs. J. C. Padmore and Ms. K. A. Nathaniel

- **SONDAI** (Social Work Oriented, Needs-Driven, AIDS Interventions), is a unique initiative of the Unit was established to address the psychosocial implications of HIV-AIDS. This year-long project allowed the Unit to:-
 - train a cadre of postgraduate social work students in advanced knowledge and skills for working with PLHIV (Persons Living with HIV);
 - assist agencies in the development of appropriate policies and practice;
 - building capacity in the voluntary sector among the agencies in the community that worked with PLHIV;
 - accommodate the participation of a visiting scholar from the Sinikithemba Clinic (University of KwaZulu-Natal), whose knowledge, experience and expertise in HIV intervention with children and families, strengthened the University's links with the community;

- use our networking skills to work with the National AIDS Coordinating Committee (NACC), the Ministry of Health of Trinidad and Tobago and the Tobago House of Assembly to coordinate the pilot delivery of a structured training programme to social work practitioners in the field i.e. **“HIV-AIDS and Social Work Practice: Building Reflexivity & Strengthening Capacity for Evidence Based Practice. A Training Manual”**.

Dr. D. Phillips - Research on Youth Violence

Dr. N. Mustapha - study on “Improving the Quality of Education in Secondary Schools of Trinidad and Tobago” involving a national sample of approximately 3000 students.

Dr. N. Albada

- *The emotional quality of childhood memories and depression in Trinidadian older adults*-This project examined whether the emotional quality of childhood memories predicted depression in late life. One hundred men and women over the age of 60 from various regions of Trinidad participated in the project. The data was collected as part of psychology students' third-year research project.

Principal Investigator
Nicole Alea

Student-Investigators
Rae-Ann C. Thomas, Bernadette G. Manickchand, Marlene P. Ramirez-Cole, Camille P. Renaud-Simon, & Kemi L. Bacchus, University of the West Indies, St. Augustine.

Publication Status
The manuscript for this project is currently under review at the *Caribbean Journal of Psychology*.

- *Telling stories as a Caribbean heritage* - This project involved an extensive review of the literature on how telling stories, particularly autobiographical stories, became a part of the heritage of the people of the Caribbean. It was argued that autobiographical story telling served to maintain a sense of individual and cultural continuity in the face of oppression, and also served a social-bonding function for Caribbean people. A small amount of data was used to substantiate this claim.

Principal Investigator
Nicole Alea

Student-Investigator

Sideeka Ali, The University of the West Indies, St. Augustine.

Publication Status

The manuscript for this project has been accepted to be part of a book edited by Basil Reed, *Caribbean Heritage: A Source Book*.

- *Autobiographical memory and dementia: Memory quality and function* - The project examined how the quality of autobiographical memories from four life periods (i.e., childhood, young adulthood, midlife, and the most recent years) is different in non-demented older adults and individuals with dementia (e.g., Alzheimer's disease). The quality of these memories is related to the individuals' sense of self and the quality of their social relationships. Sixty non-demented and 25 demented older adults participated in the study. The data was collected while I was an Assistant Professor at the University of North Carolina Wilmington, USA, and continued under the direction of my colleagues there after my leave.

Principal Investigator

Nicole Alea

Co-Investigators

Tony Puente (PhD), University of North Carolina Wilmington, USA; Kate McLean (PhD), Western Washington University, USA

Student Investigator

Alicia Hyatt, University of North Carolina Wilmington, USA

Publication Status

One manuscript from this project is currently in preparation for publication: the methods section is complete and the results section of the paper is currently being written. The expected date for submission is December 2008 to *Psychology and Aging*. An additional manuscript is expected from this project in the future.

- *Predictors of depression in Trinidadian older adults*-This project examined whether social support, physical health, and attitudes about death (e.g., acceptance, fear, etc.) predicted depression in older adults. The sample consisted of 125 men and women between the ages of 60 and 75 from representative geographical areas of Trinidad. The data was collected as part of psychology students' third-year research project.

Principal Investigator

Nicole Alea

Student-Investigators

Anissa Thomas, Nydika Sylvester, Tonya Roach, & Mariam Ali, The University of the West Indies, St. Augustine.

Publication Status

The manuscript for this project is currently in preparation. The methods and results section are written, and the introduction is currently being finalised. The expected date for submission is November 2008 to *Aging and Mental Health*.

Department of Economics

D.Pantin

- Payment for Environmental Services in St. Lucia. Project for IWCAM.

E. Scott

- Income Poverty and State Support in Trinidad and Tobago: The Case For Alignment. Karl Theodore and Ewan Scott. Labour Market and Poverty Studies Unit, Department of Economics UWI. Prepared for the Department of Economics Conference on the Economy (COTE) 2008. October, 2008

K. Theodore

- Towards a Developmental Regulatory Framework for Credit Unions in Trinidad and Tobago: Public Policy Issues with an International Perspective --June 2008

M. Attzs

- Disaster Risk Prevention Project for the Commonwealth of the Bahamas. Specifically responsible for drafting the Procurement Plan and the Project Execution Mechanism for the Bahamas Natural Risk Preventive Management Project.

M. Franklin

- Venture Philanthropy and Sustainable Economic Development: Community based tourism founded on the Leatherback Turtle in T&T (with Dr. R. Hosein) - Paper submitted to Caribbean Marine Studies Journal, September 2006
- Open Petroleum Economies, Government Spending and Overheating of the Construction Sector in a booming economy (with Dr. R. Hosein). Paper submitted to the Journal of Construction Management and Economics. June 2007

- Coping with Labour Shortages in the Construction Sector of a Small Booming Hydrocarbon Exporting Economy with emphasis on Vocational Education and Training (with Dr. R. Hosein). Paper submitted to the Caribbean Journal of Education. June 2007

M. Franklin, and D. Thurab-Nkosi,

- Online Delivery of a Mathematics Course in a Distributed Environment: The Case of UWI Distance Education Centre. Malaysian Journal of Distance Education. September 2007. (Also being considered for inclusion in the Proceedings of the 2007 Biennial Cross Campus Conference in Education, School of Education, UWI, St. Augustine).

M. Franklin, R. Hosein and A. Persaud (2008)

- Informal Commercial Importers in the Caribbean: Evidence from Trinidad and Tobago and Guyana. This paper was submitted to the SES Journal. April 2008
- Demand for Economists in the Caribbean (with D Lewis and J. Mc David)

R. Hosein

- Venture Philanthropy and Sustainable Economic Development: Community based tourism founded on the Leatherback Turtle in T&T (with M Franklin) - Paper submitted to Caribbean Marine Studies Journal, September 2006
- Open Petroleum Economies, Government Spending and Overheating of the Construction Sector in a booming economy (with M Franklin). Paper submitted to the Journal of Construction Management and Economics. June 2007.
- Cariforum-EU Economic Partnership Agreement: The Welfare Impact and Implications for Policy in T& T, Journal of Business, Finance and Economics in Emerging Economies
- The Rapid Growth of China and Economic Implications for CARICOM Economies, Journal of Eastern Caribbean Studies.
- The Evolving Pattern of Trade in a Small Hydrocarbon Exporting Economy and Some Policy Recommendations for Sustainable Development, Journal of Business, Finance and Economics in Emerging Economies.

- CARICOM: Some salient factors affecting trade and competitiveness, *Journal of Commonwealth International Affairs*.
- (2008) *Informal Commercial Importers in the Caribbean: Evidence from Trinidad and Tobago and Guyana*. This paper was submitted to the *SES Journal*. April 2008, with M Franklin and Anand Persaud
- *Booming Mineral Resources and the Imperative of Economic Diversification* (Sent to the *Journal of West Indian Engineering*).

RESEARCH IN PROGRESS

Department of Behavioural Sciences

A. M. Bissessar

- *Drug Policy in Mexico and the Caribbean* (Book)
- *Governance and transformation*
- *Local Governance Structures*
- *Climate Change and Urban Planning*

Ms. K. A. Nathaniel

- “Ready or Not? – defining *readiness for practice* among Social Work students (PhD thesis)
- “A Penny for your Thoughts – exploring the reflections of Social Work Students”

- “Pre-Practicum – preparing Social Work students for fieldwork: a model of andragogy”

Dr. D. Phillips

- *Single Parent Mothers and Poverty*
- *Public Health and Health Promotion*

Dr. N. Mustapha

- *Continuing research on*
- “Religiosity and Delinquency”
- *Substance Abuse among secondary school students*.

Dr. N. Albada

- *A cross-cultural validation of the TALE questionnaire* - This project is validating the factor structure of the Thinking About Life Experiences (TALE) Questionnaire in a Trinidadian sample. This questionnaire has been given to a group of young Americans and Germans (Bluck, Alea, Habermas, & Rubin, 2005) and a lifespan sample (Bluck & Alea, in preparation). In addition to validating the questionnaire cross-culturally, the current project extends previous research by examining whether the extent to which people think and talk about the past is related to psychological well being. Data

collection is being funded by a Campus Research and Publication Fund award.

Principal Investigator
Nicole Alea

Student-Investigators
Sideeka Ali & Mary Arneaud,
University of the West Indies, St. Augustine.

Status

Data has been collected on 100 young and middle aged adults, and additional data collection on this age group will be done during October 2008. Older adult data collection is expected to begin in January. The goal sample size is 300 from young adulthood to old age. Data entry and coding is current.

- *Identity in multiracial Trinidadian adolescents and young adults* - This project is examining the extent to which a sense of identity in multiracial Trinidadians is influenced by peers versus parents at two points in development: adolescence and young adulthood. The sample includes adolescents from 12 to 18 years-old, and young adult college participants ranging in age from 19 to 35 years-old. The

initial data was collected as part of psychology students' third-year research project.

Principal Investigator
Nicole Alea

Student-Investigators
Cindy Chadband, Lexs Forrester, Jesse-Bryan Hackshaw, Aneesa Hosein, Cherisse Rambarose, The University of the West Indies, St. Augustine.

Status
Data has been collected on 133 adolescents and 36 young adults. Additional data collection will be done during November to gather more data from young adults. Data entry and coding is current

Department of Economics

A. La Foucade

- Human Immunodeficiency Virus & Acquired Immune Deficiency Syndrome. A Reference Text of Major Milestones, Key Events and Developments in the Caribbean. First Edition. Editors Althea La Foucade, Karl Theodore, Ewan Scott, Christine Laptiste, Kimberly-Ann Gittens-Baynes, Charmaine Metivier.

- Costing of Health Programmes in Small Island States: Issues and Challenges

D. Pantin

- Socio-Economic input for preparation of the 2nd National Communication on Climate Change for Trinidad and Tobago specifically the Vulnerability and Adaptation component on the National Communication. EMA;
- Linkages between poverty eradication and environmental management in the OECS. For OECS Secretariat.

E. Scott

- Human Immunodeficiency Virus & Acquired Immune Deficiency Syndrome. A Reference Text of Major Milestones, Key Events and Developments in the Caribbean. First Edition. Editors Althea La Foucade, Karl Theodore, Ewan Scott, Christine Laptiste, Kimberly-Ann Gittens-Baynes, Charmaine Metivier.
- Costing of Health Programmes in Small Island States: Issues and Challenges (in collaboration with the Health Economics Unit, UWI)

K. Theodore - Team Leader

- Tourism and HIV/AIDS in the Caribbean, An HEU project being done for PANCAP, CARICOM To Design and Support the Implementation of a National Health Insurance System in the British Virgin Islands – A project being done for the Government of the British Virgin Islands.
- Strengthening the Community of Persons Living with HIV/AIDS and Those Affected by HIV/AIDS in the Caribbean – A Community Based Initiative- A Global Fund Programme Project, with the HEU as a sub-recipient receiving a grant from the Caribbean Regional Network of People Living with HIV/AIDS (CRN+), the principal grant recipient.
- HIV/AIDS and Human Development in the Caribbean - A project being funded by the UNDP. It aims at improving the effectiveness of the response to HIV/AIDS through the quality of the response to the epidemic, as well as the targeting of programmes being implemented by shifting to a much higher level that which currently prevails via research, training and technical policy support throughout different countries within the region.

M. Alghalith

- New Theory of Hedging
- Alternative Theory of Asset Pricing
- Hedging with Background Risk: A Complete Generalisation.
- Generalised Stochastic Production Functions: Specification and Estimation Methodology.
- Adding One Risk to Another: Generalizing Background Risk
- Conditional Demand Under Multiple Uncertainty
- A New Risk-Aversion Definition.
- Generalised basis risk.
- Hedging and Production decisions under uncertainty: a survey.
- Theory and applications of risk and uncertainty.
- A note on the limitations of expected utility theory.
- Endogenous probability measures.
- Preferences estimation without approximation.
- The choice between additive and multiplicative output uncertainty.
- Optimal portfolio diversification: a new risk measure.

M. Attzs

- The Impact of Natural Disasters on Microfinance Institutions in IDB member countries of the English-speaking Caribbean.

- Economic Impact of Disasters on Caribbean Economies: case studies of Jamaica and Grenada
- “Disasters and Sustainable Tourism Development: Exploring the Economic Impact of HIV/AIDS on the Tourism Industry in Selected Caribbean Destinations: case studies from the Dominican Republic, Jamaica, Barbados, St. Lucia and Tobago.
- Research project on the feasibility of Gender mainstreaming in Disaster Risk Management and Climate Change Adaptation in Trinidad and Tobago
- Preparation of the 2nd National Communication on Climate Change for Trinidad and Tobago specifically the Vulnerability and Adaptation component on the National Communication
- Survey of national and regional businesses on Company policies on climate change including strategies for reducing greenhouse gas

M. Franklin

- Dutch Disease and West Indies Cricket (with Dr. R. Hosein)
- Cervical Cancer in Trinidad and Tobago (with R. Mc Lean)

- Resource Wealth, Corruption and Violent Crime in Trinidad and Tobago (with R. Hosein and J. Joseph)
- ICT

R. Hosein

- Dutch Disease and West Indies Cricket (with Dr. R. Hosein)
- Cervical Cancer in Trinidad and Tobago (with R. Mc Lean)
- Resource Wealth, Corruption and Violent Crime in Trinidad and Tobago (With R. Hosein and J. Joseph)
- Intra Industry Trade within a Small Regional Trading Block Including only Developing Economies (95% completed).
- The Stolper-Samuelson Theorem, Trade Liberalisation and Wage Inequality in Trinidad and Tobago (95% completed).
- Regional Economic Partnership Agreement and the Implications for CARICOM Development into the 21st Century (Sent to Carinneam Journal of International Relations)
- Determinants of Medal Count at the Beijing Olympics (with Patrick Watson)

- Fiscal Imprudence, Adaptive Expectations and the Budgetary Price of Oil in a Small Oil Dependent Economy revealed Comparative Advantage in Athletics and Social Cohesion in the Caribbean
- The impact of the global food/oil price uncertainty on the T&T economy or certain aspects of the economy.

Management Studies

A. Bowrin

- An Empirical Investigation of Financial Reporting Quality in the English-speaking Caribbean.
- Business Case Study of Financial Management in a Small Energy-based Organisation.
- Time Pressure, Task Complexity and Audit Effectiveness.
- An empirical investigation of internal controls among credit unions in Trinidad.
- An empirical analysis of Supervisory Committees in the Caribbean.

S. Fraser

- Student attitudes towards eLearning environments at UWI, St. Augustine (being carried out in conjunction with Mrs. Aisha Wood Jackson of Campus I.T. Services, UWI, St. Augustine).

- Conducting a national telephone survey on online purchasing in Trinidad and Tobago.
- Challenges faced by Caribbean companies attempting to use eCommerce.
- Update of 2003 study on B2C activity in Trinidad and Tobago.

L-A. Jordan Miller

- Jordan, L. and Hayle, C., “Sports Event Management: The Caribbean Experience.”

A. Lewis

- “Strategic Destination Marketing: Case Studies from Small Island Developing States.”

P. Ramlakhan

- Adequacy of Risk Management Practices in Commercial Banks.

R. Ramlogan

- “Industrial Relations: A Caribbean Perspective,” This research examines industrial relations across the Commonwealth Caribbean.
- “Sustainable Development – A Judicial Interpretation.” This research will attempt to define sustainable development through judicial pronouncements.

M. Raghunandan

- Governance Issues in Credit Union (jointly).
- Corporate Greed – Earnings Manipulation (jointly).
- Should I put my Money in the Credit Union? Assessing the Worthiness of Credit Unions (jointly).

E. Simms

- “Determinants of Export Performance: The Case of Manufacturers in Trinidad and Tobago,” (jointly with Joni Jacob).
- “An Eclectic Analysis of the International Entry Mode Choices of Manufacturing Firms in Trinidad and Tobago,” (jointly with Hima Singh).
- “The Measurement of Service Quality: The Case of Two Service Firms in Trinidad and Tobago,” (jointly with Veronica Reid).

B. Pacheco

- “Once Rejected Twice Shy: Consumer Responses to Rejection as a Determinant of Purchase Intentions,” (this project is funded by the Campus Research Grants Committee).

Outreach

Behavioural Sciences

Lecturers in the Department of Behavioural Sciences provided technical assistance and consultancy services to organisations such as the UNDP, the Trinidad & Tobago Association of Nutritionists and Dieticians, the Family Court and the Ministry of Social Development. The Dean himself was involved in the organisation of several seminars and workshops such a one-day seminar for the Constitutional Affairs and Parliamentary Studies Unit (CAPSU) on the 2007 General Election in Trinidad and Tobago; a half-day seminar, on the work of Sir Arthur Lewis as part of the activities for the Year of Sir Arthur Lewis; and a two-day University of Alberta / The University of the West Indies Socio-Economic Forum.

The Faculty of Social Sciences Research Days were held in honour of the 60th Anniversary of The University of the West Indies and comprised 16 one-hour sessions held over two days (eight on each day) in a virtual festival of seminars. St. Augustine campus also hosted the first-ever Faculty of Social Sciences Cross-Campus Conference. This conference brought together the leading administrators of the Faculty on all three campuses to discuss curriculum review, academic policy, teaching and learning issues, research and publication, and administrative matters.

Department of Economics

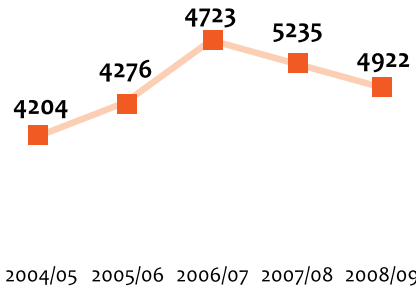
Staff at the Department of Economics at St. Augustine worked with their peers at Cave Hill and Mona towards rationalizing and harmonizing course offerings across the three campuses. The Academic Staff belonging to the Department of Economics also participated in the Cross Campus Conference of the Faculty of Social Sciences and hosted the Department's own Conference on the Economy 2007. During the year in review staff conducted work with the Turtle Village Trust, the Board of the Family Planning Association and the Regulated Industries Commission. The department also staff contributing to the Caribbean Network for Persons Living with HIV/AIDS (CRN+).

Revenue Generating Activities

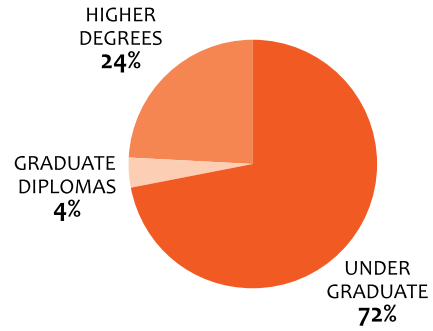
The Department of Behavioural Sciences, led by the Dean of the Faculty, provided academic support to the Caribbean New Media Group (CNMG) for the general elections in Trinidad and Tobago. In addition to academic support, the delivery of the

service also included the deployment of MSc Government students as television analysts for "Campaign 41" thereby allowing the students an opportunity for experiential education. One other major revenue earner continues to be the Summer School programme presented by the Department of Economics. This year, that activity generated TT\$290,142.

**GROWTH IN ENROLMENT
2004 – 2009**



**GRADUATES BY PROGRAMME
2007 – 2008**



**units &
centres**

Arthur Lok Jack Graduate School of Business (GSB)

EXECUTIVE SUMMARY

During 2007/2008 Arthur Lok Jack Graduate School of Business took steps to affirm its position as the Caribbean's leading provider of business education, training, research and consultancy services. Several new initiatives served to underpin its weight in the academic world including a renewed focus on teaching and learning leading to new programme offerings, recruitment of full time Faculty, higher quality standards and the launch of e-learning platforms – all geared towards meeting and exceeding accreditation requirements. Academic enrolment continued to be buoyant in spite of increasing competition and student services were enhanced to better meet student expectations. Student and Alumni Relations Services were revamped resulting in the re-activation of the Alumni Planning Committee, re-launch of the Alumni newsletter and introduction of an Alumni Internship Programme.

Internationalisation of the Business School continued to take centre stage and new alliances were formed with several key academic institutions abroad.

The Business School's non academic Units continued to perform well and were responsible for training thousands of individuals on open enrolment courses, conferences and customised in-company programmes. Through a relentless focus on new programme innovation, these units have provided the corporate community with industry relevant training and thought leadership delivered by world class facilitators who are leaders in their fields.

ACTIVITIES FOR THE YEAR IN REVIEW 2007/2008

In January 2008, the first cohort of the Doctor of Business Administration (DBA) was enrolled at the Arthur Lok Jack Graduate School of Business. Seven students made up the first group. The programme was also launched jointly at the Mona School of Business and the Cave Hill School of Business.

On February 21, 2008, the School was among the first institutions to be registered by the Accreditation Council of Trinidad and Tobago. Following this, the School applied for accreditation with ACTT and is now a candidate for accreditation. The four year candidacy commenced June 9, 2008.

In response to the explicitly expressed needs of the energy sector, Chambers of Industry and Commerce, the Ministry of

Energy and Energy Industries, as well as the Ministry of Science, Technology and Tertiary Education, an Energy Business Leadership Specialisation on the International Master of Business Administration was designed and gained approval for offer to the student body of the Arthur Lok Jack Graduate School of Business.

The School implemented the use of Lok Jack eLearning, a course management software solution that allows for hosting of course materials online. The system can also facilitate the upload of students' coursework and posting of examination results. This represented a major change in terms of programme administration and teaching/learning methodologies.

The School formally organised courses into four Subject Area Groupings (SAGs) namely Business Strategy, Marketing, Finance and Economics and Human Resource Management. A leader was appointed on a retainer basis for each Subject Area Grouping.

The Business School formally launched its mentorship programme in February, 2008. The programme started with 21 mentees and 15 mentors made up of graduates of the Lok Jack GSB.

Dr. Ron Sookram joined the academic unit as Programme Director for the DBA in July 2008 and Mr. Balraj Kistow was appointed as a full time member of Faculty in August 2008 to build internal capacity in the subject area of finance.

INTERNATIONALISATION

The teaching of Spanish and Mandarin Chinese continues to be a significant vehicle through which students of the Lok Jack GSB are exposed to foreign cultures and business etiquette. The international features of the curriculum design are also reinforced through study tours and visiting Faculty members from the Caribbean and beyond. From February 29 to March 9 our MBA students visited Argentina on their International Study Tour. The group of 60 comprised 56 students, 1 member of Faculty and three managers of the School. Students visited leading argentine companies and the Austral Business School in Buenos Aires.

STRATEGY APPRAISAL

The Business School was successful in meeting its objectives as outlined in its board approved operational strategic plans for the year. In keeping with The UWI's and our own core strategic focus, the School continued to place an emphasis on cutting edge research. The main research initiatives are indicated below:

- Collaboration with the World Economic Forum on the *Global Competitiveness Report 2008-2009*;
- Collaboration with Canada's Fraser Institute for the production of the *Economic Freedom of the World Report 2008-2009*;
- Production of quarterly *Corporate Confidence Indices*; and
- Annual Evening Business Conference & Research Awards held in June.

In terms of major enablers, the Business School continued to engage in aggressive advertising and branding and has standardised the use of The UWI Crest in its marketing initiatives.

OUTREACH

The Business School introduced a dual degree programme with Florida International University's Chapman School of Business which enables students of Lok Jack GSB's International MBA to do part of their course of Study at FIU and vice versa. The School acquired membership in the Executive Master of Business Administration (EMBA) Council – a US-based organisation which includes the top providers of Executive MBA programmes. This will facilitate networking and collaboration with other leading business schools and further enhance the international standing of Lok Jack GSB. Membership was also obtained in CLADEA, the Latin American Council of Management Schools.

Major Conferences & Seminars organised during the year included:

- Distinguished Leadership Conference 2008
- Women in Leadership Conference 2008
- 2008 Premiere HR Conference – Winning the War for Talent
- The Ideas Forum: “Cross Cultural Differences in Ethical Management: How Ethically Suspect Behaviours Differ Across Societies”
- The Ideas Forum: “Corporate Social Responsibility and the Bottom Line – Making Ethics Work for Business”

REVENUE GENERATING ACTIVITIES

A total of 2573 persons were trained in open enrolment and customised in company programmes in areas such as finance, project management, skills development and events management. On the Consulting side of the business services such as the following helped to generate revenue:

- Leadership Development and Human Resources training and consulting interventions
- Performance (Business Process) Improvement consulting interventions
- Assessment - Psychometric and Aptitude Assessments for individuals, teams and organisations
- Employee Management Assistance Services
 - Two important consultancy projects were undertaken:
 - Transformation of the Justice of the Peace System
 - Status Report on the Implementation of the National Plan of Action for Children

Regionally, the unit worked with the Commonwealth Secretariat, UK to successfully deliver a five day programme “Strategic Planning for Senior Public Officers” held in Tobago in July 2008. This programme brought together senior public officers from Trinidad and Tobago, St. Lucia, Dominica, Jamaica, Turks & Caicos, Belize, Cayman Islands, St. Vincent, Montserrat and Tortola.

DISTINGUISHED VISITORS

John Kotter

Professor, Harvard Business School

Lee E. Miller

Managing Director, NegotiationPlus.com

Dr. Dale Masi

President/CEO, Masi Research Consultants, USA

Simon Jayne

Senior Consultant, Saville Consulting, UK

Jacqui Archer

Director, Saville Consulting Barbados Limited, Barbados

Caribbean Centre for Monetary Studies (CCMS)

EXECUTIVE SUMMARY

As the centre enters its 40th year, it has been reinvented to serve the changing policy and financial needs of the Caribbean region in the 21st century. The networking of economists and policy makers of the region, through the annual monetary studies conference and collaborative research programmes, continues to be at the core of the centre’s work, but over the years there has been an increasing focus on providing services to private sector financial institutions, with the introduction a decade ago of senior level policy seminars. In addition, the centre has become an integral part of the Caricom machinery, preparing the “Report on the economic performance and convergence of the Caricom region” twice per year for the regional governors’ meetings, as well as special reports requested by the governors.

The output of the centre includes, besides the report on economic performance, monographs and collected papers (the most recent of which was issued in 2006), working papers and policy papers. In 2006 the CCMF launched the *Journal of Business*,

Finance and Economics in Emerging Economies (JBF3E), jointly with the Departments of economics and management studies and SALISES, all of The UWI St Augustine campus. The centre also maintains an archive of all papers presented at conferences of the regional Programme of Monetary Studies and the Caribbean Centre for Monetary Studies, from the first conference in 1968.

With the assumption of duties by a full-time Director on July 1, 2008, the focus has been on electronic delivery of CCMF services, for the most part. Work was already underway to provide electronic access the archive of past conference papers, via the CCMF website. The website is being redesigned in order to improve access to these materials, and a number of features have been added or are being added. They include graphical presentations of regional comparative economic and financial data; online access to the *JBF3E*; online access to the CCMF newsletter which was introduced in September 2008; links to all the Caricom and contributing central banks; a portal where users can find descriptions of data available from all sources of Caribbean economic statistics, along with descriptions of what is to be found at each link; online access to senior level policy seminars; brief descriptions and tables of contents of all CCMF/CCMS publications; and short biographies of the CCMF staff and research associates, along with electronic copies of their most recent papers.

The crisis of the international financial system highlights the timeliness of the centre's broader focus on financial sector issues, in addition to economic policy issues. The CCMF is actively seeking funding for a major regional collaborative project on financial risk analysis in the context of growing financial linkages within the Caribbean, in collaboration with CARTAC and other regional institutions. The difficulty of accessing data for regional comparisons is a matter of long standing concern.

A CCMF project for establishing a database for such comparisons has been revised to take advantage of regional synergies and to identify information gaps that need to be filled. A third collaborative project for which funding is being sought addresses price formation and trends in inflation, also a matter of urgent concern to the region.

An important initiative by the chair of the CCMF executive committee attracted significant financing from private sector financial institutions, to supplement the contributions of the Caricom central banks, and two non-Caricom central banks (Aruba and the Netherlands Antilles) have joined as contributing members. The additional funding, made available on the appointment of the full time executive director, has permitted the appointment of an additional research fellow, to bring the centre's complement of researchers to five - three research fellows, a research assistant and the director.

STAFF

New Executive Director Appointment

DeLisle Worrell is the newly appointed Executive Director of the Caribbean Centre for Money and Finance, and Professor of Economics at the Sir Arthur Lewis Institute of Social and Economic Studies. He is a former senior economist with the International Monetary Fund, and former Deputy Governor of the Central Bank of Barbados. He is the author of *Small Island Economies: Structure and Performance in the English Speaking Caribbean since 1970* (New York: Praeger Publishers, 1987), and of books on Caribbean and South Pacific economies.

Dr. Worrell has published articles on money, banking, exchange rates, economic modeling and forecasting, in books and journals in the US, UK, Mexico and the Caribbean. He has held research fellowships at the Smithsonian Institution, the Institute for International Economics and the Federal Reserve Board in Washington, at Yale University, Princeton University and The University of the West Indies. He has been consultant to the Inter-American Development Bank, the Foundation for Development Cooperation in Brisbane, Australia, the US Agency for International Development, the World Bank, the UN Economic and Social Council and the Caribbean Community Secretariat.

Dr. Worrell is a graduate of The University of the West Indies (BSc Economics, 1967) and of McGill University, Montreal, Canada (PhD, 1975).

RESEARCH

Financial Risk Assessment

This proposal is for a project that addresses the major challenges to the Caribbean financial institutions and regulators arising from the ongoing changes in the regional financial sector. They include the growing integration of financial institutions and sectors across the Caribbean; the growing incidence of financial conglomerates, mergers and acquisitions; and the diversification of financial products. There are now a substantial number of regional financial institutions which have networks of operations across the region (and sometimes beyond), in addition to the foreign institutions which have long standing regional networks. Financial conglomerates including banks, insurance providers, securities brokers and other (financial and nonfinancial) services are now commonplace. There is a range of financial products being bought and sold throughout the Caribbean, and in a few countries the assets of nonbank financial institutions are comparable in magnitude to those of commercial banks.

The regulatory community in the Caribbean, as well as the financial institutions themselves, recognise the importance of regulatory and risk management upgrades that serve to protect the integrity of the financial systems in the changed financial circumstances. The recent developments expose countries to risks of contagion from neighbours with whom they are linked financially; risks that losses in one type of financial service (insurance for example) may infect others (such as banking); and uncertainty about the riskiness of new financial products, as well as the always present danger of contagion from outside the region. Regulatory reform has been widespread, in efforts to address these problems, and these issues have been a feature of regional discussion – at the regional supervisors’ annual meetings and elsewhere – for more than a decade.

The Caribbean recognises that ongoing upgrades to financial regulation and risk management do not yet fully address the needs of the regional financial systems. There are gaps in data collection and dissemination, for example the absence of information on financial flows between countries of the region. Although there has been some work on contagion, between countries and institutions, as well as studies on the probability distribution of risks, the risk assessments used in practice

are simplistic and based on arbitrary assumptions. No country collects data needed to conduct risk assessments of the aggregate regional and global risk exposures of locally incorporated banks and insurance companies. And there is no institution or group that takes a view of risk exposures for the region as a whole.

The proposed project addresses the need for financial assessment upgrades in a comprehensive way, building on the foundations that have already been laid and the methodologies that have been adopted by central banks and other regulatory bodies in the region. The focus of this project is on the upgrading of data and analytical methods, rather than on legislation and regulations. The project involves a) coordinated studies of the financial sector and risk assessment methodologies; and b) a programme of technical assistance, using a combination of regional and non-regional resources, for the implementation of programmes for improved data collection and dissemination, and upgrades in financial sector analysis and reporting. This technical assistance would be coordinated jointly by CCMF and CARTAC, and should involve exchange visits among central banks and other resource sharing arrangements.

Statistical Database

This project is to plan and implement a statistical database facility at CCMF that would generate the revenue to sustain its operation through annual subscriptions to the data it would provide. The database would include data that is of importance to financial and commercial enterprises, and make it available in convenient and accessible form. In addition, the project would identify data that is essential for policy formulation and public information, which is not currently available.

The first phase of the project would be to identify financial markets' data requirements, and to make recommendations as to how the deficiencies might be most effectively addressed, including by the CCMF. In addition, during phase one of the project, additional staffing would be provided to compile comparative data on the Caribbean region, from currently available data, to fill a known gap in the region's statistical needs.

The second phase would be an action plan and implementation of a database for the collection and dissemination of data identified in the first phase to be supplied by the CCMF.

Price Formation

The proposed project is meant to bridge the gap between inflation models, inflation policy and the actual practice of price formation in the Caribbean. It is modelled on the Eurosystem Inflation Persistence Network (IPN) project, coordinated by the ECB, with participation of Euro area central banks and government statistical bureaux (see www.ecb.int). The project would consist of studies in the following areas:

- Studies that describe and test the process of price formation, the dynamics of inflation and the scope and effectiveness of anti-inflationary policies;
- Studies that extract information on the frequency and magnitude of price changes from input data for the construction of the monthly CPI, over about 5 recent years. These studies would also test for possible factors affecting the frequency and magnitude of price adjustments;
- Surveys of price setting behaviour in selected business activities, and the factors that play an important part in the pricing decision.

The project would be undertaken by a team of researchers drawn from the CCMF staff and associates, the UWI, the central banks of Caricom countries and other countries contributing to CCMF, and bureaux of statistics of these countries.

Contributing Financial Institutions

- Central Bank of Aruba
- Central Bank of Barbados
- Central Bank of Belize
- Bank of Guyana
- Central Bank of Trinidad and Tobago
- Central Bank of Haiti
- Eastern Caribbean Central Bank
- Central Bank of Bahamas
- Bank of Netherlands Antilles
- Bank of Nova Scotia, Barbados
- Barbados National Bank, Barbados
- Butterfield Bank, Barbados
- Dominica National Bank
- First Caribbean International Bank, Barbados
- Guardian Holdings, Trinidad
- RBC Royal Bank of Canada, Barbados
- Republic Bank Limited, Trinidad
- Sagícor Life Inc., Barbados
- St. Kitts Nevis & Anguilla National Bank

OUTREACH

The Annual Monetary Studies Conference, Belize, November 2007.

This conference featured a number of policy papers, including an analysis of the determinants of excess liquidity of oligopolistic and oligopsonistic banking systems, and their implications for the effectiveness of monetary policy. There was a paper on the dilemma faced by central banks whose intervention may have implications for the exchange rate, and a related paper on exchange regimes and monetary policy independence. Another paper explored policies to prevent destabilising speculation that generates global imbalances.

Several papers dealt with the macroeconomic behaviour of small open economies. They included presentations on the possible effect of remittance flows on the competitiveness of exports, tests of the impact of technology on competitiveness, the effects of economic diversification on output volatility and the liberalisation of the capital account and the risk of a reversal of capital inflows.

Other presentations covered a miscellany of topics, including stock market performance, fiscal issues, the sustainability of fiscal and external deficits and issues relating to economic growth. Conference papers are available for download at www.ccmf-uwi.org.

Senior Level Policy Seminars

Two senior level seminars were held. A seminar/workshop in Barbados on December 3, 2007 had as its theme “Operational risk – an integral part of sound management”. The second seminar, held in Trinidad on May 3, 2008, dealt with “The impact of the subprime mortgage crisis in the US on Caribbean financial markets and business activity”. Presentations covered the origins of the crisis, possible consequences for the Caribbean, the regulatory implications, challenges to the housing and mortgage markets, and appropriate business strategies. This seminar was among the most successful in the Centre’s experience.

Website Upgrade

The upgrade of the website with a view to making it the principal vehicle for delivering CCMF services began in earnest in July 2008. When the upgrade is complete the site will among other things, allow users to download all CCMF/CCMS/RPMS conference papers, from 1968; senior level policy presentations; articles from *JBF3E*; and to view announcements as well as our newsletter.

Centre for Gender & Development Studies (CGDS)

OVERVIEW

The CGDS began preparations to celebrate its 15th Anniversary in September 2008 reflecting on its challenges and achievements and looking forward to continue its service to students and organisations (local, regional and international). During the year, there were significant staff changes testifying both to the growth and dynamism of the Centre. New substantive research initiatives came on stream. We began implementation of the Strategic Plan 2007-2012 and as part of the UWI’s core strategic focus on graduate studies/research, the CGDS revised and enhanced its graduate offerings allowing students to move easily from the BSc or the BA to the Postgraduate Diploma, MSc, MPhil and/or PhD.

STAFF

Honours and Awards

R.E. Reddock

- International Woman of Courage Award – US Department of State, March 2008.
- Bestselling Textbook Award – *Interrogating Caribbean Masculinities: Theoretical and Empirical Analyses* – UWI Press Fifteenth Anniversary and Author Award 2004-2007 – presented in May 2008.
- Selected among the University's 60 leading academics in the special UWI 60th Anniversary publications - 60 under 60.
- Latin American Studies Association (LASA) Lecturing Fellowship 2007; to the University of Florida, Gainesville for visit in September 2007.

P.A. Mohammed

- Elected President – Caribbean Studies Association at 34th Annual Conference
- Selected among the University's 60 leading academics in the special UWI 60th Anniversary publications - 60 under 60.

Promotions

Professor R. Reddock

Deputy Principal, St. Augustine Campus effective August 2008

Professor P. Mohammed

Campus Coordinator of Graduate Studies and Research

Professor J. Parpart

Coordinator, Centre for Gender and Development Studies, Graduate Studies

Dr. G. Hosein

Lecturer

Ms. D. McFee

Outreach and Research Officer

Ms. T. Nickenig

Project Coordinator of Gender & Sexuality

Ms. S. Rochford

Temporary Research Assistant

Ms. T. Ottley

Temporary/Part-time Documentalist

Resignations and Retirements

Ms. E. Blondel

Temporary Part-time Documentalist
- Resigned

RESEARCH

Making of Feminisms in the Caribbean

Funding was received from the Campus Research Fund and work is ongoing on this collection which will be housed at the UWI, St. Augustine Main Library. Ms. Deborah McFee is coordinating this research and has been working with Ms. Lorraine Nero of the St. Augustine Main Library. Tapes are being transcribed and the Women and Development Studies Group's collection is being indexed.

Caribbean Cultural Studies

Virtual Museum

This research is conducted by Professor Patricia Mohammed through funding from a UWI/Government of Trinidad and Tobago Research Grant. This Virtual Museum intends to engage the subject matter of cultural phenomena from a contemporary perspective, while establishing trails and traces to the past.

Gender, Sexuality and Implications for HIV and AIDS

This programme, funded by UNIFEM proceeds from the theoretical premise that gender profoundly influences sexuality, and sexual conduct that places individuals at risk for HIV infection. It seeks to answer questions about the influence of gender norms, expectations, attitudes, myths, ideologies and the associated power

relations on sexual behaviours in Trinidad and Tobago, especially among youth. The findings will be used to propose research-based interventions to aid in the prevention of HIV/AIDS and other sexually transmitted diseases, and substance abuse.

Sex, Power and Taboo: Gender and HIV in the Caribbean and Beyond

This manuscript was compiled from the conference organised in March 2004 and other specially commissioned papers and is being published by Ian Randle Publishers later in 2008. Editors are Dorothy Roberts, Rhoda Reddock, Diane Douglas and Sandra Reid. Funding for the manuscript production was provided by a grant from UNFPA.

Breaking the Silence: A Multi-Sectoral Approach to Preventing and Addressing Child Sexual Abuse In Trinidad and Tobago

This project, funded by The United Nations Trust Fund for Violence Against Women (UNTF) and the United Nations International Children's Emergency Fund (UNICEF), seeks to examine the subject of child sexual abuse throughout Trinidad and Tobago, and to develop interventions aimed at empowering women and children, utilizing both qualitative and quantitative research methods. Project partners include the Coalition Against Domestic Violence (CADV), Caribbean Health Research Council (CHRC) and Arts in Action Theatre in Education Group of the UWI, St. Augustine.

Building Responsive Policy: Gender, Sexual Cultures and HIV & AIDS in the Caribbean

This research will take place in three countries - Barbados, Suriname, and Trinidad and Tobago. It includes a secondary analysis of the political economy of sexuality and HIV/AIDS in each of the selected countries; and an examination of selected media and informational/advocacy campaigns on HIV/AIDS to document and assess the underlying messages that challenge or reinforce the gender-based causes of the epidemic. A number of country specific case studies will also be carried out. This project is being funded by IDRC and coordinated by UNIFEM – Caribbean Office.

TEACHING & LEARNING New Programmes

The CGDS has introduced a revised graduate programme to replace the earlier programme which was offered between 1997 – 2001. It now offers a Postgraduate Diploma and MSc Gender and Development Studies; an MPhil and PhD in Interdisciplinary Gender Studies. This year, ten students – five each from Humanities and Social Sciences graduated with undergraduate degrees that included a minor in Gender. Of these, one graduated with First Class Honours. At the postgraduate level, one student graduated with an MPhil in Gender and Development.

STUDENTS

Enrolment in the four courses offered during Semester 1 increased from 171 to 184. However, enrolment in courses offered during Semester 2 almost doubled, rising from 129 in the previous year to 201 in 2007/2008. There was increased interest in all three established courses – Men and Masculinities in the Caribbean; Sex Gender and Society; and Gender, Ethnicity and Class in the Anglophone Caribbean – and a new course on Cinema and Gender was added as part of the new Film Programme. The most outstanding undergraduate student for the year was Ms. Laura Battersby who graduated with first class honours majoring in Literatures in English with a minor in Gender Studies.

SPECIAL PROJECTS: Students Showing Community and Outreach Service

During 2007/2008, the Centre for Gender and Development Studies continued its efforts at making community outreach part of classroom learning. Students in the Year 1 course: *Introduction to Women's Studies: Theoretical Concepts and Sources of Knowledge* (GEND 1103) organised 'popular actions' as part of their coursework assignment. These consisted of interactive workshops, poster campaigns, learning-centred games, symbolic protests and art.

The posters and art were placed around the campus and the workshops and discussion groups were held in the main Quadrangle and around the LRC. Approximately 100 students on the campus participated in these activities

In January, 2007, the student group Consciousness Raising, primarily comprised students enrolled in courses offered by the Centre for Gender and Development Studies, established an executive, mandate and listserv and began to share information as well as participate in the activities of national women's NGOs.

STRATEGY APPRAISAL

Teaching and Learning:

Curriculum Review - this was delayed due to the challenges encountered in arriving at a regional approach but this process will begin on the St. Augustine campus early in 2009.

Cross-listing of courses – discussions have begun with the Faculty of Humanities & Education, Social Sciences and Banner for the cross-listing of courses and will be continued during the coming semester.

Teacher Quality: Dr. Gabrielle Hosein pursued and completed the British Columbia Certificate Course in the Scholarship of Teaching and Learning (SoTL). All new academic teaching staff completed IDU courses. Staff also attended Moodle training and all courses are now uploaded on Moodle.

OUTREACH

The CGDS offers undergraduate courses through the faculties of Science and Agriculture, Humanities and Education and Social Sciences. It also offers a Minor in Gender Studies in the Faculty of Humanities and Education and a Minor in Gender and Development in the Faculty of Social Sciences. Associate staff from the various faculties support the work of the Centre through involvement in teaching and /or research in gender-related areas. Currently 19 gender-related courses are on offer at undergraduate level all though other faculties.

The Civilian Conservation Corps once again requested the services of the CGDS for their induction Training Programme which was conducted by our Outreach and Research Officer. This is an ongoing programme in collaboration with the Ministry of National Security.

CGDS staff also participated in the television series organised by the Gender Affairs Division of the government entitled – Putting Gender on the Agenda.

Linkages

August – December 2007

Professor P. Mohammed was a Visiting Professor with the Department of Women's Studies and Latin American Caribbean and US Latino Studies at State University, New York, Albany.

October 2007

Professor P. Mohammed was a Visiting Lecturer at the Centre for Men's Leadership and Service, St. John's University/College of St. Benedict University, Minneapolis.

September 2007

Professor R. Reddock Lecturing Fellowship 2007 the University of Florida, Gainesville.

Lunchtime Seminars

Seven seminars were held during Semester 1 and eight during Semester 2. Ms. Michelle Seeraj was responsible for organising those held in Semester 1 and Ms. Staria Rochford for Semester 2. The seminars attracted a wide cross-section of the community and were well attended.

International Women's Day

The CGDS celebrated International Women's Day 2008 on March 6th in the JFK quadrangle with an interactive game for students 'Steppin Up' Feminist Movement Building game developed by Dr. Gabrielle Hosein. Approximately 50 students, both male and female participated in the game.

The Nariva Swamp Video /DVD Presentation

The CGDS held a public viewing of the Video and DVD on April 24th 2008 at the Centre for Language Learning. The audience included sixth-form students from selected secondary schools as well as young people from the communities of Kernahan and Cascadoux (where the research was carried out). Representatives from the Environmental Management Authority and the Ministry of Education also attended. Approximately 100 students participated in this event. The DVD is on sale especially for teaching purposes.

Gender and Integrated Water Resources Management (IWRM) Workshop

This training workshop took place during the week of April 7th – 11th 2008 at the Faculty of Social Sciences Lounge as part of the activities of the Women, Gender and Water Network (CWGWA) of the CGDS and included a one-day field visit to Plum Mitan Village. Dr. Gwendoline Williams was the main facilitator and participants were drawn from Water and the Environment related agencies in Grenada, Dominica, Jamaica, Haiti, Guyana, Suriname, Barbados, the Environmental Management Authority, the Water and Sewerage Authority and the Gender Affairs Division of the Ministry of Culture and Gender Affairs of Trinidad and Tobago. Resource persons included Dr. Fredericka Deare, Dr. David Dolly, Dr. Grace Sirju-Charran, Professor Rhoda Reddock Ms. Penelope Beckles and Ms. Joycelyn Dow of Guyana. This workshop was funded by the Global Water Partnership-Caribbean as well as the Caribbean Water Network.

UNIFEM – Legal and Policy Analysis of Sex Work in the Caribbean

This UNIFEM expert group meeting which was coordinated by the CGDS and took place during the period February 21st – 22nd, 2008 at the Ambassador Hotel, Port of Spain. Attendees included persons from Suriname, Jamaica, Barbados, St. Lucia, Dominica, Guyana, the Bahamas, Santo Domingo and Trinidad and Tobago. They included representatives of UNAIDS, PAHO, Caribbean Vulnerable Communities, Family Planning Association, AIDS Action Foundation, UNFPA, PANCAP as well as Commercial Sex Workers. The purpose of this meeting was to develop policy guidelines highlighting the need for regional policy initiatives around the issue of HIV/AIDS to address the needs and concerns of sex workers.

REVENUE GENERATING ACTIVITIES

Gender and Integrated Water Resources Management (IWRM) Workshop – April, 2008 - This workshop generated \$TT12,348.

Gender and Governance Module for Capacity Building for Youth in Governance Programme, UNDP, July to November 2007. Dr. G. Hosein facilitated this activity which generated \$4000.

Mid-Year Course - GEND 1103 Introduction to Women Studies - After a successful first intake this course was once again offered and had an attendance of 29 students. Students asked for other courses to be held in the Summer but due to lack of human resources, this request could not be granted. Dr. Gabrielle Hosein was the coordinator for this programme. Ms. Camille Samuel and Ms. Camille Antoine served as lecturers and tutors. The income generated from this course was \$15,500.

DISTINGUISHED VISITORS

Mr. Ryan Rideau
University of California, Berkeley

Dr. Claudia Bernard-Goldsmith
University of London

Ms. Carole Houlihan
Gender Consultant, Snowball, Canada

Ms. Mary Ann Mulvihill
Gender Equality Specialist, CIDA, Ottawa, Canada

Ms. Myrtle Seepersad
Scientific Coordinator of the Centre for Tropical and Sub-tropical Agriculture and Forestry CETSAF, University of Göttingen, Germany

Professor Gode Graven Hont
Head of Department of Biochemistry University of Göttingen, Germany

Kawamuiuyo Gill
The University of the West Indies, Cave Hill Campus

Hilary Robertson-Hickling
Lecturer, Head, Behavioural Sciences Unit Dept. of Management Studies, University of the West Indies, Mona Campus

Professor Frederick Hickling
Professor of Psychiatry,
University of the West Indies, Mona Campus

Institute of International Relations (IIR)

The Institute of International Relations is working towards regaining its eminence and energy. Over the next three years the Institute will focus on post-graduate teaching and supervising, pure and applied research, networking/partnerships and alumni/mentoring; and will increase its outreach to civil society, governments, higher education, international organisations, media, the private sector and think-tanks.

Among the highlights for the academic year 2007/2008 are:

OUTREACH

The IIR, together with the United Nations Development Programme (UNDP) and other United Nations (UN) agencies co-hosted the launch of the Human Development Report (HDR) 2007, as well as the Economic Commission of Latin America and the Caribbean (ECLAC) Caribbean report and cosponsored the first-ever Commonwealth Day seminar in Trinidad in early March. The Institute also co-hosted research and policy workshops with the Centre for International Governance Innovation (CIGI) and other agencies such as the Coalition for the United

Nations Educational, Scientific and Cultural Organisation (UNESCO) Convention on Cultural Diversity. We also designed and hosted a regional workshop supported by the Campus Research & Publication Fund on 'Caribbean Perspectives on "New" Caribbean Issues: from vulnerability to resilience?' which attracted participation from the three UWI campuses and beyond. The Institute continued its own lunchtime & early-evening seminars, some cosponsored, on Cuba, the Economic Partnership Agreement (EPA), the international food crisis, and Guyana.

Our weekly newspaper columns also continued with a switch from the Sunday Guardian to the Sunday Newsday, and alumni, friends and fellows continued to revive our quarterly newsletter, IIR Today. The following year promises to be a busy one with the Institute participating in the myriad events pre-summits scheduled, including the Annual General Meeting of the Academic Council in the UN System (ACUNS) 4-6 June 2009, the Summit of the Americas and the Commonwealth Heads of Government Meeting.

TEACHING & LEARNING

Postgraduate programmes offered at the IIR were enhanced with a rehabilitated Graduates' Room, MPhil and PhD seminars and mentoring, including Model United Nations (UN) possibilities with postgraduates and high schools. In addition to facilitating the new MSc in International Relations in Suriname, there were also student visits to Guyana and Suriname (late 2007) and to Central America (early 2008). As the new academic year commenced, we were informed that the proposed name change for the MSc from IR to Global Studies had been approved.

ADMINISTRATION

The Institute held its first Retreat in early 2008 and its first International Relations subgroup in the tri-campus UWI Social Sciences conference in late February.

RETIREMENTS & RESIGNATIONS

Mid-2008 was marked by the formal 'retirement' of two well-established, irreplaceable colleagues: Professor Vaughan Lewis & Mr Anselm Francis. In addition to internal farewells, including one orchestrated by the alumNI, the Dean hosted an event for the latter and there was a panel during the conference on Sir Arthur Lewis for the former. Dr. Keith Nurse left for Cave Hill to assume the Directorship of the Shridath Ramphal Centre for International Trade Law, Policy and Services.

We have been pleased to cooperate increasingly with other parts of UWI from the Faculty of Social Sciences to SALISES as well as with other Caribbean universities and think-tanks, such as ADEK, ITAM & UPR. With goodwill and strong networks, the Institute of International Relations can again regain its lustre and relevance in the new century.

Seismic Research Centre (SRC)

The Seismic Research Centre (SRC) has been providing Eastern Caribbean governments with expert advice on geologic events and associated hazards affecting these islands for over fifty years. It is one of the few specialised research institutions of the University and its work directly impacts vulnerable island communities throughout the Eastern Caribbean. In addition to the routine monitoring of 19 live volcanoes and a seismically active region, the Centre collaborates with local, regional and international agencies on research projects relevant to its core areas of operation (seismology, volcanology and education & outreach) with a view towards better understanding geologic processes so as to reduce risk. All aspects of the research undertaken by the Centre is therefore of direct relevance and importance to the region.

OVERVIEW

The 2007/2008 academic year was marked by a successful bid for the five-year management contract of the Montserrat Volcano Observatory (MVO), the reclassification of the Unit to that of a University Centre, the hosting of a major regional meeting and the occurrence of the largest earthquake in the Eastern Caribbean in more than 30 years. During the year, the Seismic Research Centre also published and distributed a five-year Strategic Plan to stakeholders and regional partners.

A concept note for the construction of a new building to adequately house the Centre's operations was drafted and submitted to the Executive Management of The UWI and to all contributing territories. An early morning fire in May 2008, caused by old and faulty electrical wiring underscored the vulnerability of the monitoring network to the hazards posed by the existing building stock and gave further impetus to the call for a new building.

Research at the Centre continued to be focused on the core areas of volcanology and seismology with some attempts being made to examine issues related to the impact of our public education programmes. During the review period, preliminary work was completed on the modelling of volcanic gravity currents in the Lesser Antilles and

on development of a GIS based method for risk and vulnerability assessment of volcanic islands.

Geologically, the past year was a busy one for the Centre as the seismograph network recorded a minimum of 898 earthquakes in the area of responsibility. There were 28 significant felt events for the period, the strongest of which being the magnitude 7.3 North of Martinique event of 29 November, 2007. The epicentral locations of events for the period indicate dense clusters in the areas North of Martinique, North of Dominica, Gulf of Paria and the Paria peninsula vicinity.

Volcanic activity in the Eastern Caribbean for the reporting period was relatively quiet with most of the volcanoes exhibiting background levels of activity.

Planned activities of note for the 2008-2009 academic year include the streamlining of our management operations in Montserrat, implementation of the second phase of our seismic network upgrade, installation of continuous GPS stations in the remaining islands under our responsibility, enhancement of our school outreach programme including production of a *Gesoscience at Work* poster series for educators and sourcing of an architectural design for a new building.

RESEARCH

Major Projects Completed

VSAT – Seismic Network Upgrade

From August 2006-April 2008, the Seismic Research Centre embarked on a major upgrade of the Centre's seismic monitoring network. Through the generous support of the American People via USAID/OFDA and the Government of Trinidad and Tobago, the Centre secured grants of US\$249,680 and US\$140,000 respectively to upgrade stations in St. Kitts, southern Dominica, St. Lucia, St. Vincent, Tobago and Trinidad.

As part of the project, a meeting of regional seismic network operators was organised at which common ground was sought on the requirements for data sharing within the agencies in the Caribbean, Central American and the northern countries on the South American continent. The Centre's recognition of the need to continue the station upgrade that was initiated through this project has resulted in additional funding being obtained from the UWI central administration and the European Union (through an INTERREG project with the IPGP) to continue the upgrade of seismograph stations beyond the life of the project.

Geochemical and isotopic characterisation of geothermal systems in the Lesser Antilles, and its use as a tool for monitoring changes in volcanic activity.

Geothermal monitoring of hydrothermal systems on Dominica and St. Lucia was initiated in 2001, as part of an integrated volcanic monitoring programme, to geochemically characterise the systems and to establish baseline levels of activity from which changes can be detected. The geothermal fluids of Dominica and St. Lucia were found to be typical of those found in island arc-type settings. The geothermal waters in both islands were classified as predominantly acid-sulphate type formed as a result of dilution of acidic geothermal gases being diluted in near surface oxygenated groundwater, with the gases having strong hydrothermal signatures being dominated by carbon dioxide and having hydrogen sulphide as the main sulphurous gas.

Study of the hazards and impact, on human health, of persistently degassing volcanoes; and the use of geothermal sites for recreational purposes.

Geothermal sites in Dominica and St. Lucia are used for recreational purposes including sight-seeing, bathing and drinking. A PhD research project on the use of the geothermal waters at these sites for recreation was conducted and results indicated greater concentrations of lead, cadmium, nitrite, iron and aluminium than was safely recommended for consumption by the USEPA. The research found that the concentration of sulphur dioxide emissions at these sites may also prove hazardous to health with long term exposure. These concerns must be examined in greater detail for proper safety guidelines to be created and implemented for safe use of these sites for recreational activity.

Ongoing Projects

CDERA-IDRC ICT Applications in Earthquake Damage Assessment

Grant funding from the International Development Research Centre of Canada (IDRC) enabled the Centre to recruit a full-time Research Assistant to work on a project the main objective of which is to test and analyze the role of Information and Communication Technologies (ICTs) to strengthen community knowledge and support in the collection of post information for earthquakes in the Eastern Caribbean.

New SRC building project

The SRC urgently requires a completely new, purposefully designed building to address the present congestion and to halt deterioration of valuable equipment and resources which are currently inappropriately stored. The new building should allow for adequate accommodation of present activities and should make provision for the planned developments in terms of geosciences at the Centre.

A concept note outlining the case for this new building has been sent to the Prime Ministers of all contributing territories as well as to all members of the Executive Management of The UWI seeking their support. The UWI Centre has committed to providing funding for architectural design of a new building and The UWI Projects Office will draft a proposal. The construction of a new facility will be a key contribution to the successful implementation of the SRC Strategic Plan and this project will be actively pursued in the next five years.

MVO Management Contract

The SRC and Institut de Physique du Globe de Paris (IPGP) submitted a joint bid to manage the Montserrat Volcano Observatory (MVO) for the next five years. The joint SRC/IPGP contract took effect on April 1 and follows an almost ten year relationship between the British Geological Survey (BGS) and the MVO.

Management of the MVO is a major undertaking for the SRC that will help to strengthen the existing close collaboration with the IPGP. The management contract is in line with the UWI's current thrust towards promoting disaster risk reduction in the region. It will provide major opportunities for deepening research not only in geosciences but also in hazard and crisis management. The award of this contract emphasises the relevance and importance of the work being done by the SRC and its joint management with the IPGP brings the Caribbean's only erupting volcano back under the watch of regional scientists.

Building a geochemical database of geothermal features in volcanic islands of the Lesser Antilles for the purpose of volcano monitoring.

This research will continue to build on the previous work conducted (2001-present) to establish long-term patterns in behaviour of volcanic emissions associated with hydrothermal systems and how they respond to changes in magmatic input. This information will be used along with other tools (ground deformation and seismicity) to monitor volcanic activity in the region, thus providing information to island governments and the general public. Key personnel involved in this research include Dr. Erouscilla Joseph and Dr. Nicolas Fournier.

PhD and MPhil Theses

Joseph, E. (2008): *Geochemistry of Geothermal Systems in Saint Lucia and Dominica, Lesser Antilles: Implications for Volcanic Monitoring.*

OUTREACH

Workshops & Meetings

VSAT – Seismic Network Upgrade – RSNO₂ Meeting

The second meeting of Regional Seismic Network Operators of the Caribbean Basin Seismic Agencies (RSNO₂) was held 25-29 February, 2008. The meeting was sponsored by the USAID/OFDA and was part of an ongoing effort to establish a tsunami warning system for the Caribbean Basin. An important objective of the meeting was to advance the process of data sharing and formalisation of protocols. The meeting was timed so as to inform the next meeting of the ICG-CARIBE-EWS that is due to be held in early March 2008. Eighteen participants from 13 networks institutions who, between them, operate seismic networks covering 27 territories attended the meeting. Representatives from two international agencies (IRIS, FDSN) also attended. They received presentations on national, regional and international seismic networks, all of which are targeted for use in the tsunami warning system for the Caribbean and adjacent areas.

Lectures & Exhibitions

Since November 29, 2007 earthquake North of Martinique which was felt throughout the Eastern Caribbean, the SRC has received a marked increase in requests for presentations and information material on earthquake safety. The SRC's "Earthquakes: Science & Safety" lecture series was delivered to various special interest groups including:

- Trinidad & Tobago Regulated Industries Commission
- Bank of St Lucia (staff)
- Office of Disaster Preparedness and Management Media Workshop
- Tropical Shipping (staff in St Lucia, Barbados and Trinidad)
- UWI Community (staff of Main Library, Medical Sciences Library and the Graduate School of Business)

Earthquake themed exhibitions were also mounted upon request at the CDERA Comprehensive Disaster Management Conference (Barbados), the Arthur Lok Jack School of Business, the UWI Main Library, and during First Citizens' Bank's *Safety Week 2008*.

During the reporting period, the Trinidad & Tobago Ministry of Education partnered with the SRC to launch a *Natural Hazards Disaster Preparedness Resource Pack* which

included interviews with SRC staff for a DVD. Additionally, 14 of the 18 posters in the resource pack were produced by the Seismic Research Centre. During the 2008-2009 academic year the SRC will be producing a *Geoscience at Work* poster series to be used as a resource by educators involved in geohazards.

Linkages

The Seismic Research Centre strengthened its capacity through collaborations with the following institutions:

- Aspinall & Associates, United Kingdom
- The University of Trieste, Trieste, Italy
- GeoForschungsZentrum (GFZ), Potsdam, Germany
- International Institute of Earthquake Prediction Theory and Mathematical Geophysics
- Istituto Nazionale di Geofisica e Vulcanologia, Italy
- Institut de Physique du Globe de Paris, France
- Montserrat Volcano Observatory, Montserrat
- The University of Bristol, Department of Earth Sciences, United Kingdom
- The University of the West Indies, Department of Chemical Engineering, St. Augustine

- The University of the West Indies, Department of Petroleum Geosciences, St. Augustine
- The University of the West Indies, Department of Surveying and Land Information, St. Augustine
- Universite Antilles Guyane, Guadeloupe
- University of East Anglia, School of Environmental Sciences, United Kingdom

STAFF

Appointments

Mr. Machel Higgins
Computer Programmer

Ms. Farrah Madoo
Research Technician

Mr. Kafele Reddock
Research Technician

Resignations

Dr. Rosemarie Mohais

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

ENROLMENT

SALISES admitted a further seven students into its MPhil/PhD programme, making for a total of 23 enrolled in the programme during the academic year of which two graduated with the PhD degree.

PHD GRADUATES

Dr. Asha Kambon (supervised by Professor Elsie LeFranc and Dr. Dennis Brown). Title of thesis: *Investigating Policy Formulation Processes in the Social Sector in Regard to Youth in Transition from School to Work in Two Caribbean Small Island Developing States (SIDS): Barbados and Trinidad & Tobago.*

Dr. Denise Gaspard-Richards (supervised by Dr Godfrey St Bernard). Title of thesis: *Male Reproductive Behaviour and Fatherhood – An Exploration of Social Roles and Responsibility Patterns in Trinidad and Tobago.* Degree awarded with High Commendation.

HONOURS & AWARDS

Dr. Sandra Sookram was awarded a British Academy Visiting Fellowship to spend two months at the University of Leicester doing research in the area of poverty, and was named as one of 60 members of the academic staff, drawn from all three campuses, to be specially honoured among the University's 60 leading academics in the special UWI 60th Anniversary publications - 60 under 60.

TEACHING & LEARNING

Staff members continue teaching and graduate supervision of students enrolled in the SALISES programme. We expect one student to graduate with the PhD degree during the coming academic year and are also hopeful that about five students will upgrade from the MPhil to the PhD.

The SALISES, St Augustine, has received final approval for the MSc in Social Statistics and will begin delivery in Semester 1 of the 2008/2009 Academic Year. It has received funding for two full-time students and will seek further funding from Regional and International agencies to allow for student participation from throughout the Caribbean. The programme is targeted, initially, at the Caribbean region but will be offered worldwide after a few years.

We expect to have an intake of about six students in the MPhil/PhD programme in the 2008/2009 academic year and we will continue to work to attract quality students into it, to work within the research programme described above. Staff members will also be teaching and supervising students enrolled in the SALISES MSc programmes as well as in the programmes of the wider Faculty of Social Sciences.

Staff members will continue the process of attending conferences and submitting material for publication. Hopefully, some of the many papers already submitted in 2007/2008 and in previous academic years, some of which have already been accepted for publication, will appear as publications. Colleagues have agreed to continue targeting four journal publications per year and should begin by submitting at least this many.

SALISES SEMINAR SERIES

The Institute plans to introduce a seminar series where members of its staff and other researchers will be invited to present the results of their most recent research activity. It is expected that, at each seminar, a pre-circulated paper will be presented publicly and discussed among an audience that will include staff and students. It is hoped that this will be used to facilitate the creation of

a SALISES Working Paper Series. The first Seminar will take place in early October and we are targeting three to four papers per semester.

RESEARCH

The SALISES will aggressively pursue funding through research grants, especially from international donor agencies. Some applications have already been made, including one to the SSHRC-IDRC in partnership with the C-FOAM (University of Ottawa, www.C-FOAM.management.uottawa.ca) on the topic “Social and economic adaptation to sea-level rise in the coastal zones of the Caribbean and Canada”. After submitting a “letter of intent” we were one of 9 “finalists” chosen to submit a full proposal, and this will be submitted early in the 2008/2009 academic year. We expect to submit about three more proposals in the coming year.

OUTREACH

The Year of Sir Arthur Lewis

The St Augustine Campus of the University declared the year 2008 as the Year of Sir Arthur Lewis. The SALISES, St Augustine, was asked to play a leading role in this enterprise. Activities have so far involved a series of Distinguished Lectures, a one-day workshop and a conference for graduate students.

The Year of Sir Arthur Lewis comes to an end on December 31, 2008. The SALISES, St Augustine, will be involved with the wider Faculty of Social Sciences in the hosting of the Sir Arthur Lewis Memorial Conference to be held on the St Augustine Campus over the period September 25-27, 2008. The Distinguished Lecture Series will continue with three more lectures by Dr Compton Bourne, President of the Caribbean Development Bank (September 2008), Dr De Lisle Worrell, Executive Director of the Caribbean Centre for Money and Finance and SALISES Honorary Professor (October 2008) and Professor Gustav Ranis, Professor Emeritus at Yale University (December 2008).

Conferences

Members of staff and graduate students presented papers at the 9th Annual SALISES conference, held in Mona Jamaica over the period March 26-28, 2008 on the theme “Reinventing the Political Economy Tradition of the Caribbean: A conference in honour of Norman Girvan”. They also attended and presented papers at other conferences.

SALISES FORUM SERIES

During the academic year, the Institute introduced the SALISES Forum, a public discussion series dealing mainly with issues of local and regional interest. At any given forum, three to four panellists treat a topic of interest on which they have expertise, and then there follows a question-and-answer session involving the audience that includes members of the University Community, the general public and the Press. The series has been highly successful and has involved distinguished members of staff and persons from the wider community. The Inaugural Forum was held on January 10, 2008, on the topic of “The 2007 General Elections in Trinidad & Tobago: Analysis and Aftermath”. Other fora covered the topics “The Mustill Report: Meaning and Implications”, “The Economic Partnership agreement (EPA): Threat or Opportunity?” and “Rising Prices: Causes, Consequences and Solutions”. The series will continue in the coming academic year.

REVENUE GENERATING ACTIVITIES

The Institute at St. Augustine will continue its Executive and Professional Training programmes and will be aggressively seeking after Institutional consultancies.

DISTINGUISHED VISITORS

Ms. Dana Seetahal

Independent Senator and Attorney-at-Law,
Trinidad and Tobago

Mr. Vernon De Lima

Attorney-at-Law, Trinidad and Tobago

Mr. Stylianos Christopoulos

Chargé d’Affaires, Delegation of the European
Commission in Trinidad and Tobago

Mr. David Abdullah

Federation of Independent Trade Unions
and Non Governmental Organisations
Trinidad and Tobago

Ms Dianne Seukaran

Former Minister in the Ministry of Trade,
Government of Trinidad and Tobago

Honourable Peter Taylor

Minister of Legal Affairs,
Government of Trinidad and Tobago

Professor Rajeev Goel

Economist, Illinois State University, USA

Ms. Wendy Lee-Yuen

Agriculturalist and Former Chairman of NAMDEVCO
Trinidad and Tobago

Mrs. Mary King

Economist and Former Independent Senator,
Trinidad and Tobago

Mr. Hans Horbach

Amabssador of the Netherlands

Mr. Juan Pablo Espinoza

Second Secretary and Consul, Embassy of Chile

Sport & Physical Education Centre (SPEC)

The Director and staff were instrumental in the successful hosting of several landmark activities during the year.

The UWI SPEC International Half Marathon which attracted the participation of over 700 local and international athletes and the sponsorship of many well positioned corporate bodies in Trinidad and Tobago. First Citizens was our Presenting Sponsor and the Chancellor, the New Campus Principal and the Vice Principal were in attendance.

UWI SPEC is scheduled to host the inaugural Caribbean Games 2009 Volleyball Championship. The University of the West Indies is also scheduled to be the Games Village for over 1,500 athletes who are expected to participate in this event.

The signing of the MOU between The UWI and FIFA to offer an International Masters in Management, Law and Humanities of Sport which will be offered jointly by The UWI and FIFA and would be housed by the Institute for Sport Studies which is being established under the umbrella of The UWI Sport and Physical Education Centre (SPEC).

ACADEMIC PROGRAMMES

The Centre continues to offer the following academic programmes:

- In 2008 the Bachelor of Education in Physical Education - Secondary continued with a total of seventy-six (76) in-service physical education teachers. This ground breaking degree is an initiative between The University of the West Indies Sport & Physical Education Centre and the Ministry of Education.
- Certificate in The Art & Science of Coaching (under the aegis of the School of Education)
- Certificate in the Art & Science of Coaching for Gym & Fitness Instructors (Discipline Specific) was conducted as a special project for the First Citizens Sports Foundation
- Minor in Sport Management (under the aegis of the Department of Management Studies)
- BSc in Sport Management (under the aegis of the Department of Management Studies)
- BSc in Sport and Exercise Science will be begin in the in Semester 1 2009/2010 (under the aegis of the Faculty of Medicine)

An increase in enrollment is expected over the coming year in existing programmes at Undergraduate and Certificate levels, the introduction of a new programme at postgraduate level and specialised delivery of programmes for regional students. The centre is also working to improve the quality of instructors and lecturers in specialised areas, to increase access to learning resources and to provide state-of-the-art equipment and facilities through regular upgrades.

STAFF & STUDENT SERVICES

There has been growth in the number of student organised sporting competitions. The Engineering Student Society, Management Society of UWI, Inter-Hall Sports and the Student Guild have organised futsal, table tennis, basketball, cricket and aerobic tournaments.

Staff and students have been using the facility five days per week. Students work in the weight room and attend aerobic dance classes and spin cycling sessions. There are lunchtime programmes which cater exclusively for Faculty and Staff. The indoor facility is currently opened from 6:00am – 10:00pm. A conditioning and weight control programme have been introduced for athletes.

Staff and Students also have use of the outdoor fields mainly for cricket, football, rugby, track & field, hockey and sporting festivals.

Coaching programmes, led by our part-time coaches, in excess of ten disciplines, have also continued. These disciplines include Abs, Aerobics, Aqua Aerobics, Badminton, Basketball, Cricket, Football (Men & Women), Futsal, Gym, Hockey, Karate, Martial Arts, Massages, Netball, Rugby, Stretch Classes, Spin Classes, Table Tennis, Taekwondo, Track & Field, Volleyball.

Students continue to be awarded credit for participation in the **MINDING SPEC** co-curricular module and SPEC in collaboration with Human Resources is working towards a Wellness program for staff and Faculty.

In the near future the Centre aims to provide more opportunities for staff and students to participate in national competitions. We also hope to offer developmental Sport Camps (Basketball, Hockey, Volleyball, Women's Football, Netball, Cricket), co-Curricular activities for credit in Sport and Physical Education as well as opportunities for holistic development.

CONTRIBUTION TO THE OVERALL EFFICIENCY OF THE UNIVERSITY

The Sport and Physical Education Centre provides an arena for staff and students to recreate and to participate in competitive sports. The Centre hosts many of the university activities, more specifically Graduation and the World of Work programmes, thereby raising the portfolio of university. The UWI has found several uses for this multi-purpose facility, including:

- Semester examinations
- University Graduation (as well as the Open Campus and Sir Hugh Wooding Law School Graduations)
- Research Days
- Open Days
- Career Fairs
- Concerts
- Residence Halls Valedictory Function
- Seminars and Workshops

Through its academic degree programmes SPEC contributes to the goals identified in the University's Strategic Plan. It has also positioned The University of the West Indies on the international sporting calendar through the successful staging of the annual Half Marathon. The Centre intends to recruit Senior Administrative Staff to support its activities, provide training for

staff in specialised areas, and to establish alliances with key national, regional and international organisations.

DEPARTMENTAL OUTREACH

SPEC has been working with the Community on a number of initiatives, which include:

- Hosting the Protective Services of Trinidad & Tobago's Physical Training Instructors programme
- Working with several National Sporting Organisations on Administrative initiatives
- Providing technical support and a training facility for several national elite athletes
- The Trinidad and Tobago Senior Cricket Team used the Sir Frank Worrell Cricket Pitch as part of their training going into competition
- Women's football also used the facility for training both the National Under '17 and Under '21 teams

The Centre will continue to develop outreach activities for targeted communities and maintain alliances with key stakeholder groups such as:

- Australian Institute of Sport
- Trinidad & Tobago Olympic Committee
- Sport Company of Trinidad & Tobago
- University of Massachusetts – Amherst
- Kent State University, Ohio, USA
- University of Wales, Bangor, UK
- TTASPE
- University of Canberra, Australia

REVENUE GENERATION

The demand for use has been extremely high but we were unable to satisfy this demand because of the malfunctioning air condition system at the facility. However this was rectified in August 2008 in time for the re-opening of the new academic year. Some of these commercial activities include:

- Seminars and workshops
- International Sporting Tournaments
- Graduation Ceremonies
- Rental of the outdoor fields
- Dance & Creative Arts Shows
- Career Fairs

SPEC also hosted two sport developmental camps during the July/August 2008 period. These camps were cricket and girls football. The camps were sponsored by First Citizen Bank to the value of TT\$30,000.

This year the Centre generated more than 50% of its operating budget. We hope to continue generating funding through sponsorship while we ensure that operational costs stay within budget.

ANNUAL INTERNATIONAL HALF MARATHON

Sponsorship was generated for the 2008 UWI SPEC International Half Marathon. First Citizens was the presenting sponsor, having contributed over TT \$350,000 towards the event. Our other sponsors were:

Corporate Partners (\$60,000)

- The Sport Company of Trinidad & Tobago

Special Trade-off Sponsors (commitment of product)

- Blue Waters
- Gatorade

Other Sponsors

- Wanter Enterprises Ltd.
- NAAA
- Daddy Garment Company
- Building Maintenance Services Ltd.
- Unilever Caribbean Ltd.
- National Gas Company Ltd.
- UWI Credit Union
- Lease Operators Limited
- Narine Sound Company
- Trinidad and Tobago Unit Trust Corporation
- POWERGEN

Hampers

- Hadco Ltd
- Vemco Ltd
- Nestle Trinidad & Tobago Limited
- A.S. Bryden
- Sacha Cosmetics Ltd
- S.M. Jaleel & Co. Ltd
- Marketing and Distribution
- Bermudez Biscuits Limited
- National Flour Mills Ltd
- Happi Food Ltd
- Carib Brewery
- Guy and Gordon Ltd

Next year, the Half-Marathon is projected to reach a target of 1000 participants with a focus on tertiary level students

DISTINGUISHED VISITORS

These distinguished guests lectured in the BEd Physical Education - Secondary programme.

Dr. Della Fazey

University of Wales Bangor,
UK (Academic co-coordinator)

Dr. Joanne Thatcher

Aberystwyth University, UK

Dr. Judy Oslin & Dr. Connie Collier

Kent State University, USA

Dr. John Fazey

Oxford Learning Institute Oxford, UK

Dr. Margaret Gehring

Ohio State University, USA

Ms. Elizabeth Emerson

Ohio State University, USA

Dr. Sally Akehurst

University of Wales Aberystwyth

Ms. Debra Roth Doman

Dept. of Education California State University

**publications
& presentations**

Faculty of Engineering

Journal Papers

Al-Tahir, R., S.M.J Baban, and B, Ramlal (2007) Utilizing Emerging Geo-Imaging Techniques for the Management of Tropical Coastal Environments. *The West Indian Journal of Engineering* Vol. 29, No. 1, pp. 11-21.

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Maundy, B. and **S.J. Gift.** (2008) A Practical Voltage/Current Controlled Resistor with Dynamic Range Extension. *IET Circuits, Devices & Systems*, Vol. 2, No. 2: 201-206.

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Mwasha, A, 2008, Using environmentally friendly geo-textiles for soil reinforcement, *Journal of Materials and Design*, Elsevier Science (Accepted July 2008 – In Press).

Mycoo, M. (2007). Diagnosis of Trinidad's Water Problems (mid-1980s to mid-1990s). *Water Policy Journal*, Vol.9.No.1:73-85.

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J. Akingbala. *Technology and other resources available in Food Science & Technology Unit, University of the West Indies, St. Augustine, Trinidad.* New Investment Opportunities in the Agri-Business Industry in Trinidad and Tobago. Seminar organised by the Food and Beverage Industry Development Committee, Arthur Lok Jack Graduate School. May 20, 2008.

J. Akingbala, G. Baccus-Taylor and P. Titus. *Value-Added Product Development: Current and future initiatives.* Caribbean Agricultural Research and Development Institute Sweet Potato workshop on Formulation of Regional Sweet Potato Work Programme. Sunset Shores Hotel, St. Vincent, March 26 – 27, 2008.

R. Al-Tahir, *Advancing disaster mitigation capacity: The role of geo-imaging technologies.* International Workshop on Disaster Risk Reduction: CASLE., Trinidad, June 2008.

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R. Mahabir and **R. Al-Tahir,** *The Role of Spatial Data Infrastructure in the Management of Land Degradation in Small Tropical Caribbean Islands.* The 10th International Conference for Spatial Data Infrastructure, GSDI Association, Trinidad and Tobago. February 2008.

S. Gift, *The Dangers of Cell Tower Radiation.* The American Chamber of Commerce Conference on Safety. Port of Spain, Trinidad, September 2007.

T. Richardson and **R. Al-Tahir,** *Modelling Land Use and Land Cover Dynamics to Assess Sustainability in Trinidad and Tobago,* The 10th International Conference for Spatial Data Infrastructure, GSDI Association, Trinidad and Tobago. February 2008.

P. Frederick, **G. Baccus-Taylor** and **J. Akingbala.** *Studies on Pomerac (Syzygium malaccense) and its Dried Candied Slices.* International Symposium Underutilised Plants for Food, Nutrition, Income and Sustainable Development, Arusha, Tanzania, March 3-7, 2008. (Award received for best paper/invaluable contribution).

Griffith-Charles, C. 2007. *The Relative Efficacy of Deed and Title Registration Procedures for Facilitating Land Transactions.* In Proceedings of the 6th FIG Regional Conference – Coastal Areas and Land Administration – Building the Capacity. San Jose, Costa Rica. 12-15 November 2007. <http://www.fig.net/pub/costarica/index.htm>.

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C. Griffith-Charles, *Communal Land Tenure and the Land Surveyor,* ISTT CPD Seminar. Trinidad, October, 2008.

K. Mallalieu, *Integration of Technologies: Mobile Technologies for Inclusion* Caribbean Internet Governance Forum, Grenada, November 2007.

K. Mallalieu, *Caribbean ICT Policy and Regulatory Capacity: Needs Assessment and Gap Analysis,* Regional Stakeholders Meeting on Connect the Caribbean Initiative, Paramaribo, Surinam, January 2008.

B. Maundy, **S. Gift** and P. Aronhime, *Generalised CFA Filter Topology Based on Gain Blocks.* Midwest Symposium on Circuits and Systems, Montreal, Canada, August 2007.

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M. Mycoo, *Disaster Risk Management: An Examination of Flood Mitigation Measures in Valsayn and Bamboo Grove Settlements, Trinidad.* Proceedings of Second Conference on Comprehensive Disaster Management hosted by the Caribbean Disaster Emergency Response Agency, Bridgetown, Barbados, December 2007.

M. Mycoo, *Park Management Plan for the Aripo Savannas Environmentally Area*, Arima Town Hall, Trinidad, April 2008.

M. Mycoo, *Integrated Water Resources Management Plans at Economic and Financial Instruments for Integrated Water Resources Management*, A Cap-Net UNDP Training of Trainers Course; South Africa, August 2007.

M. Mycoo, *Sustainable Management of Small Coastal Communities in the Caribbean: Policy Lessons of Case Studies*, Second Meeting of the UNESCO Social and Human Sciences SIDS Strategy for the Caribbean, Brazil, May 2007.

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J. Opadeyi, *Geospatial Technologies for Managing Land & Water Resources in the Caribbean*, The 6th Meeting of the Advisory Committee on Science and Technology for ACP, CTA, Wageningen, The Netherlands: November, 2007.

J. Opadeyi, V. Cooper, S. Ali and B. Spence, *GIS-based Flood Hazard Mapping: a tool for Environmental Change Monitoring of the Caribbean Basin.* The 2nd Caribbean Conference on Comprehensive Disaster Management, CDERA Barbados, December, 2007.

J. Opadeyi and B. Spence, *Natural Disaster Risk Management Benchmarking Tool: a mechanism for mitigating disaster impact.* The 2nd Caribbean Conference on Comprehensive Disaster Management, CDERA, Barbados, December, 2007.

J. Opadeyi, B. Spence, and L. Inniss, *A GIS-based Approach to Coastal Risk Mapping and Impact Quantification.* The UNDP Regional Technical Training Workshop on Risk Mapping and Development Planning in Coastal Zones, Turks and Caicos, January, 2008.

J. Opadeyi, *Capacity Assessment of GIS Capabilities in the Caribbean.* The 16th Meeting of the Forum of Ministers of the Environment of Latin America and the Caribbean, UNDP/ROLAC; Dominica Republic, January 2008.

J. Opadeyi, *Disaster Risk Management: the Emerging Roles of Local Governments and Communities.* Meeting of Heads and Local Governments in Trinidad and Tobago, Trinidad, January, 2008.

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B. Ramlal, *The Impact of 20 years of Surveying Education in the Caribbean* URISA Caribbean Conference, Cayman Islands, August 2008.

B. Ramlal, *GIS for Securing Utilities*, Invited Presentation for Telecommunications Services of Trinidad and Tobago (TSTT), Port of Spain, July 2008.

B. Ramlal, *GIS for Planning at the Local Level*, Meeting of the Spatial Planning Committee of the Government of Trinidad and Tobago. Trinidad, June 2008.

B. Ramlal, *Using GIS for National and Local Planning purposes in Trinidad and Tobago*, Invited Presentation to the Regional Planning Unit, Ministry of Local Government, Government of Trinidad and Tobago, Trinidad May 2008.

B. Ramlal, *Using GIS in the fight against crime*, Special Anti-Crime Unit (SUATT), Ministry of National Security, Government of Trinidad and Tobago. Trinidad, February 2008.

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Faculty of Humanities and Education

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Pemberton, R. (2007) (Ed.) "The Dominant Narrative Deplumed: Revisiting Abolition of the British Slave Trade" Special Double Issue of *The Arts Journal* Vol. 3 Nos 1 and 2

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Rampaul, G. (2008) Samuel Selvon. In *Africa and the Americas*, Eds. Richard M. Juang and Noelle Morrisette, Santa Barbara: ABC-CLIO.

Rampaul, G. (2008) Calypso. In *Africa and the Americas*, Eds, Richard M. Juang and Noelle Morrisette, Santa Barbara: ABC-CLIO.

Rampaul, G. (2008) Voice as a Carnavalesque Strategy in West Indian Literature: Samuel Selvon's *The Lonely Londoners* and *Moses Ascending*. In *Bodies and Voices: The Force-Field of Representation and Discourse in Colonial and Postcolonial Studies*. Eds. Merete Fatck Borch, Eva Knudsen, Martin Leer and Bruce Clunies Ross. Amsterdam, New York: Rodopi. pp 309-319

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Reid, B., Ramlal, **B.** (April 2008) Developing an Archaeological Information System for Trinidad and Tobago. In *Archaeology and Geoinformatics: Case Studies from the Caribbean*, edited by BA Reid, University of Alabama Press, Tuscaloosa, pp.86-96

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B. Brereton, *Our cross to bear: National Heritage and Identity in Trinidad and Tobago*. Annual Conference of the Society for Caribbean Studies, Edinburgh, UK, July 2008

H. Cateau, *Freedom Road – The Empowerment of the Enslaved Population in the Eighteenth Century*. Mona Academic Conference, Mona, UWI, August 2007

H. Cateau, *The Impact of the Trade in Enslaved Africans in the British West Indies*. UNESCO Symposium, Tobago, August 2007

H. Cateau, *The Abolition Dilemma – The Caribbean Dimension*. The OMOHUNDRO Conference, Ghana, 8-12 August 2007

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