UVI faculty report 2005-2006

faculty of engineering	3
faculty of humanities and education	21
faculty of medical sciences	35
faculty of science & agriculture	51
faculty of social sciences	61
centres & units	75
publications and conference presentations	125

**education** [should be] the means by which men and women deal critically and creatively with reality and discover how to participate in the **transformation** of their world.

PAULO FREIRE - BRAZILIAN EDUCATOR, THEORIST AND ACTIVIST



# faculty of engineering



In May of this year, the Faculty of Engineering brought together key stakeholders from the Association of Professional Engineers of Trinidad & Tobago (APETT), the Board of Engineering of Trinidad & Tobago (BOETT), the Institute of Surveyors, the Society of Petroleum Engineers (SPE), the Ministry of Science, Technology and Tertiary Education, The UWI Alumni Association, several prominent engineers from the commercial and industrial sectors, as well as staff and students of the Faculty.

The Campus Principal addressed the meeting and noted that "the contribution of the Faculty of Engineering to Caribbean society, and especially to Industry, has been significant." This fact was evident, he pointed out, given that the Faculty had produced

the majority of the region's engineers. However, he highlighted the reality that institution-building is an arduous and ongoing task, particularly as The University embarks on a new strategic direction.

Therefore, in keeping with this direction, we in the Faculty of Engineering have embarked on a process of dialogue with Industry, Business and the Public Sector, in order to continue to produce well-equipped, top-quality graduates and build collaborative research links. Our aim is not only to respond effectively to our stakeholders, but to be trend setters, deepening our involvement so that we are aware of the challenges they face, and become an active part of the solution.

Professor Clement Sankat Dean, Faculty of Engineering

#### **Students**

#### **Enrolment**

One of the most selective Faculties on the St. Augustine Campus, a total of 2089 students enrolled in the Faculty of Engineering in 2005-2006, compared to 1966 in the previous academic year.

The Faculty welcomed over 350 new undergraduate Engineering students and noted a marked increase in enrolment in the Departments of Mechanical & Manufacturing Engineering and Chemical Engineering.

Graduate student enrolment increased by 5% from the previous year, accounting for 35.4% of all students in the Faculty. However, this growth did not reflect the limited enrolment in postgraduate research degrees. There were only 13 students enrolled in MPhil and PhD programmes in 2005-2006, perhaps as a result of strong opportunities for employment and attractive compensation both in Trinidad & Tobago and throughout the region, which made graduate research less attractive to prospective students.

At the same time, in the interest of advancing their professional qualifications, over 200 new students enrolled in the Faculty's taught postgraduate diploma and Master's programmes. This number is expected to increase in the following year due to the launch of the MSc in Project Management and Construction Management in Guyana through a UWI/University of Guyana (UG) collaborative agreement.

#### Graduation

The Faculty celebrated a total of 337 graduates from undergraduate programmes; a 21% increase from the previous year. They were trained in various Engineering disciplines (278 graduates), Surveying & Land Information (41 graduates) and Petroleum Geosciences (18 graduates). The highest number of graduates (92 in all) came from the Department of Mechanical & Manufacturing Engineering.

There was a 23% increase in students graduating from taught postgraduate programmes; a total of 132 students in the year under review.

Three students graduated with MPhil degrees in Agricultural Engineering, Surveying & Land Information and Electrical & Computer Engineering. One student earned a PhD in Chemical Engineering.

#### **Honours & Awards**

Thirty-four (34) students received first class honours degrees, distributed as follows:

•	Chemical Engineering	13
•	Civil & Environmental Engineering	2
•	Electrical & Computer Engineering	8
•	Mechanical & Manufacturing Engineering	8
•	Surveying & Land Information	3

'The Role of Engineers and Related Professionals in National Development' was the topic of choice for the EOG Resources/ Faculty of Engineering 2005 Technical Essay Writing and Technical Presentation Competitions. The Guest Speaker at the Awards Ceremony was Mrs. Elitha Rocke-Maharaj, Senior Human Resource Officer, EOG Resources Trinidad Limited, who shared concerning the industry's expectations of Engineering graduates. The winner of the \$10,000 prize for 1st place in the Essay Writing competition was Ms. Tegun Medina. Mr. Kirby Sinanan took home the \$2,000 prize for 1st place in the Technical Essay Presentation category.

Outstanding graduates and students were recognized at the Annual Prize Awards Ceremony. Thirty-four (34) students were placed on the Dean's Honour Roll. Mr. Ralph S. Williams, founder of Williams Industries of Barbados and one of the Faculty's first graduates, delivered the feature address on successfully combining Engineering and entrepreneurship.

Two Mechanical Engineering students, Mr. Narvin Andy Ramkissoon and Mr. Kevin Mohan, secured the top awards in the 3<sup>rd</sup> Engineering Management Final-Year Students' Project Competition, held on Friday June 2, 2006. The Faculty hosted the competition forum, which was sponsored by the Phoenix Park Gas Processors Limited in collaboration with the Engineering Management Society (EMS) Chapter, the Institute of Electrical & Electronics Engineers (IEEE) Trinidad & Tobago Section.

The competition's theme was "Building Engineering and Management Competence" and its primary aim was to recognise the excellent projects done by UWI graduates in their respective disciplines. This intiative also sought to foster the application of concepts, techniques and skills in Building Engineering and Management, to meet the Caribbean's diverse challenges. The forum provided an avenue for students to demonstrate their projects to industry stakeholders and the university community.

#### Staff

#### **Honours & Awards**

*Professor Richard A. Dawe*, TTMC Chair in Petroleum Engineering, in the Department of Chemical Engineering, received the Vice Chancellor's Award for Excellence in the area of University Science and Research.

*Dr. Chandrabhan Sharma* of the Department of Electrical & Computer Engineering, and *Dr. Winston Lewis* of the Department of Mechanical & Manufacturing Engineering, were made Fellows of the Association of Professional Engineers of Trinidad and Tobago (APETT).

*Professor Stephan Gift* was given an Individual of the Year Award (2006) from the Friends of Tobago Library Committee for Outstanding Contribution in the Field of Science.

In 2006, *Mr. Ronald De Four* was awarded an International Preliminary Examination Report (IPER) from the Austrian Patent Office under the Patent Cooperation Treaty (PCT).

#### **Public and Professional Service**

Many members of staff continued to provide valuable public, professional and academic service, as well as service to the community. Several served on State Boards, on Government Appointed Committees and on Technical Committees of the Trinidad & Tobago Bureau of Standards (TTBS). They worked as reviewers for local, regional, and international journals and provided service to professional and academic societies. The following are some noteworthy examples:

#### **Professor Winston Mellowes**

President of the Caribbean Academy of Sciences (CAS)

#### Mr. Alvin Lutchman

Chairman of the IEEE Trinidad & Tobago Sub-Section

#### Dr. Brian Copeland

Chairman of the Trinidad & Tobago National Training Academy

#### **Professor Stephan Gift**

President of the Rotary Club of St. Augustine West

#### Professor C.A.C. Imbert

Chairman of Metal Industries Company (MIC)

#### Dr. C. Griffith-Charles

Vice President of the Fulbright Alumni Association of Trinidad & Tobago

#### Professor Anil K. Sharma

Editor of the West Indian Journal of Engineering

#### Professor Clement K. Sankat

Chairman of the Cabinet Appointed Committee on the Establishment of a Council on Science, Technology and Innovation.

#### **Appointments**

Deputy Deans

Professor Stephan Gift
Undergraduate Student Affairs

Professor Clement Imbert
Physical Facilities & ATS Staff

Professor T.M. Lewis

Distance Education & Outreach

Professor Kit-Fai Pun

Research & Postgraduate Student Affairs

Office of the Dean

Dr. Neil Ramsamooi

Lecturer in Engineering Mathematics

#### Mrs. Carol Sergeant

Administrative Officer/Secretary to Faculty Board

Office of the Dean and the

Department of Chemical Engineering

Professor Mukesh Khare (IIT, India)

Atlantic LNG Chair in Environmental Engineering

Department of Mechanical & Manufacturing Engineering

Dr. C. Syan (University of Warwick, UK)

Professor of Production Engineering and Management

Dr. Nagathan Anantharaman

Senior Lecturer

Dr. Jeliffe Jackson

**Temporary Lecturer** 

# Department of Civil & Environmental Engineering Dr. Gyan Shrivastava (Senior Lecturer)

Head of the Department of Civil & Environmental Engineering

## *Dr. Abrahams Mwasha*Lecturer

West Indian Journal of Engineering (WIJE)
Professor Winston Mellowes
Editor

#### **Promotions**

Crossed the Bar in the Senior Lecturer's Scale Dr. Edwin Ekwue

Department of Mechanical & Manufacturing Engineering

Promoted to Senior Lecturer
Dr. Raid Al-Tahir
Department of Surveying & Land Information

Dr. Carmen Riverol
Department of Chemical Engineering

Dr. Bhopanna Chowdary
Department of Mechanical & Manufacturing Engineering

Crossed the Bar in the Lecturer's Scale
Dr. Albert Kong, Mr. Ronald De Four, Mr. Fasil Muddeen
Department of Electrical & Computer Engineering

Dr. Richard Clarke, Dr. Everson Peters
Department of Civil & Environmental Engineering

Dr. Subhas Haldar

Department of Mechanical & Manufacturing Engineering

#### **Retirement & Resignations**

Professor Winston Mellowes, Professor of Chemical Engineering, resigned after 35 years of dedicated, sterling service. Professor Mellowes served as Head of the Department of Chemical Engineering and also as Deputy Dean for both Undergraduate Students Affairs and Postgraduate and Research Matters. Professor Mellowes was one of the first graduates of the Faculty of Engineering, entering as a student in 1962 and graduating in 1965.

*Mr. Stanley Lau*, Senior Lecturer in the Department of Mechanical & Manufacturing Engineering and a former Head of Department, retired after 22 years of meritorious service to The University.

*Professor A.K. Sharma* retired as Editor of the West Indian Journal of Engineering (WIJE) after several years of service and Professor Mellowes was appointed the new Editor of WIJE up to July 2009.

*Dr. Ian Lambert*, Lecturer in the Department of Chemical Engineering and *Dr. Jagat Tripathi*, Senior Lecturer in the Department of Electrical & Computer Engineering both resigned after 19 years of service.

#### **Benefactors**

Six undergraduate scholarships in Petroleum Geoscience were donated by bpTT during the 2005-2006 academic year. The following gifts were also of significant importance to the Faculty:

Benefactor	Gift	Amount (USD)
bpTT	Lectureship in Petroleum Geoscience	\$ 60,000 per annum
bpTT	Grant to the Petroleum Geoscience programme	\$100,000
EOG Resources	Grant for the Technical Essay Writing Competition	\$6,825
WASA	Sponsorship of the Industrial Engineering	\$3,175
	& Management Conference	

## **Programmes**

Through its Petroleum Engineering Unit, the Department of Chemical Engineering developed a new MSc in Reservoir Engineering to meet the growing demands of its stakeholders in the Oil and Gas Sector. This programme received the approval of the Board for Graduate Studies and Research (BGS&R) in October 2006.

A Memorandum of Understanding (MOU) was signed by the Vice-Chancellor of The University of the West Indies, Professor E. Nigel Harris, and the Vice-Chancellor of the University of Guyana, Dr. James G. Rose, in January of 2006. Thereafter The UWI Vice-Chancellor led a small team, which included the Dean of the Faculty of Engineering, to the University of Guyana. As a result of this, the Faculty of Engineering

developed a proposal to teach the MSc programmes in Project Management, Construction Management and Engineering Management at the University of Guyana, through intensive, face-to-face delivery on weekends. The BGS&R approved this proposal in May 2006.

#### **Infrastructure**

Construction began in February 2006 on the physical expansion of Block 13 of the Chemical Engineering Building. This project is being done by contractor Kee Chanona Limited of St. Augustine, for the sum of \$22 million and is estimated to take at least 14 months to complete. This major infrastructural expansion in the Faculty, the first for many years, will include a 450-seat auditorium, new lecture theatres, class and seminar rooms, increased office space for staff,

additional washrooms, and a departmental conference room. The building's upper floors will be accessible via an elevator.

Laboratory upgrades also continued apace. For example, two major pieces of equipment were purchased for the CAD/CAM lab of the Department of Mechanical & Manufacturing Engineering. These were a Boxford CNC 300 Vertical Milling Centre and a Boxford CNC 250 Slant Bed Lathe, at a cost of TT\$680,000. Both will be used in our undergraduate and postgraduate programmes in Manufacturing Engineering.

#### Research

Some of the significant research underway in the Faculty includes:

# Department of Chemical Engineering Food Science & Technology

Production Processes (Relishes, Juices, Condiments); Food Characterisation/Utilisation (Coconut Water, Yogurt, etc); Food Safety (Chicken Industry, Water).

## Chemical and Process Engineering

Materials including Polymers; Natural Gas Hydrates; Control Systems; Process Optimisation; Bio-processing; Waste Treatment.

#### Petroleum Engineering

Heavy Oils; Hydrates; Permeability and Wettability on Reservoir Flow; Environmental Considerations; Knowledge Management; Prediction Models; Mixing; Multiphase Flow; Hydraulic Fracturing; Steam Injection; Gas Condensate Reservoirs; Gravel Packing; Hydratable Clays; Closed Loop Drilling System; Fluid Physical Properties; Petrophysical Models.

#### Petroleum Geoscience

Neo-tectonics; Land Information and Seismic Research; Micocene Foraminiferal; Sedimentology.

## Department of Civil & Environmental Engineering

Earthquake Structural Dynamics; Disaster Resistant Housing; Pre-cast, Pre-stressed Flooring Systems; Hydrologic Modeling; Solid Waste Management; Hydraulic Designs; The Construction Sector - Labour, Costs, Competitiveness and Databases; Materials - Concrete, High-strength Mortars, Composite Materials; Vegetable Fibre Geo-textiles for Ground Improvement; Rainfall Estimation; Climate Change; Water Resources; Circulation in the Caroni Swamp; Wind Loading on Housing; Road Safety & Transportation; Soil Modeling for Design & Analysis of Foundations and Earthworks.



### Department of Electrical & Computer Engineering

Control of Processes; Wind Energy; Applications of Linear Integrated Circuits; Theory of Space and Time Detection of the Ether; Research and Development on the Steelpan and its Derivatives; Vector Control of Electric Machines.

## Department of Mechanical & Manufacturing Engineering Manufacturing & Industrial Engineering

Computer Integrated Manufacture; CAD/CAM for New Product Design; Abrasive Grinding Process; Comparative Studies on Different Layouts/Manufacturing Systems; Quality Management Systems; Performance Measurement and Knowledge Management in Manufacturing; Decision Support Systems; Science, Technology and Innovation in Trinidad & Tobago.

## Mechanical Engineering

Heat Transfer; Solar Engineering

## Food and Agricultural Engineering

Drying of Agricultural Materials; Post-harvest Technology; Soil Moisture Measurements and Thermal Conductivity.

### **Surveying & Land Information**

Remote Sensing and Map Data; Sustainability and Land Use; Land Degradation; Landslide Susceptibility and Hazard Mapping; Natural Habitat Loss and Mapping Biodiversity; Global Climate Change and the Environment; Sea Level Rise; Disaster Risk Assessment; Water Demand Management; Land Tenure; Land Registration; Cadastral Survey Specifications; Housing Policy and Low Income Housing; Planning in the Coastal Zone of Small Island Development States; Infrastructure for Tourism in Tobago; National Spatial Data and GIS; National Land Information Systems Development; Crime Analysis using Spatial Analysis Tools.

#### **Outreach**

## **Promotion of Programmes**

Dr. Keith Miller and Professor Winston Suite participated in College Fairs held in St. Kitts-Nevis and Antigua in November 2005. Dr. Edwin Ekwue, Senior Lecturer in Agricultural Engineering, accompanied the Vice-Chancellor's Team on their visit to Belize in June 2006.

#### 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 A.K. Sharma. The technical papers from UWI staff published in Vol. 28 No. 1 and Vol. 28. No. 2 of this journal were as follows:

*T.M. Lewis* 'The Economics of the Construction Sector of Trinidad and Tobago'

K. Ramesh and W.G. Lewis 'Nanotechnology Advances around the World and its Relevance to the CARICOM Region'

B.V. Chowdary, J. Slomp and N.C. Suresh 'New Concept of Virtual Cellular Manufacturing'

K. Manohar, G.S. Kochhar, D. Ramlakhan and S.C. Haldar 'Thermal Conductivity Measurement of Wood by means of a Water-activated Guarded-Hot-Plate Apparatus'

R.A. Dawe and J. Marcelle-De Silva 'Viscous and Permeability Effects on Miscible Displacement in Heterogeneous Porous Media'

J.A. Babwah, R.A. Dawe and W. Mellowes 'Foamy Oil Production in Trinidad'

C.K. Sankat, K-F. Pun and C.B. Motilal 'Science, Technology and Innovation in Caribbean Countries: Performance Indicators of a Generic Model'

*E.I. Ekwue, D.Z. Lall and R.J. Stone* 'Engineering Properties of Major Soils used in Cricket Pitches in Trinidad'

B. Wilson 'The Environmental Significance of some Microscopic Organisms around Nevis, West Indies'

R.P. Clarke '13<sup>th</sup> World Conference in Earthquake Engineering 2004 - Caribbean Implications and Recommendations'

# petroleum pioneers

The Petroleum Geoscience programmes at The UWI St. Augustine Campus have the potential to be recognised globally as an ideal setting for the recruitment of quality geoscientists for petroleum exploration and engineering."

This is according to Professor Richard Dawe, The Head of Petroleum Studies, Programme Leader in Petroleum Engineering and Acting Programme Leader in Petroleum Geoscience at The University.

And he should know. Before taking up his current position in the Petroleum Geosciences Unit in the Department of Chemical Engineering, Prof. Dawe served at the University of Manchester's Institute of

Science and Technology, Leeds University (1969-75), Imperial College, London (1975-97) and the University of Qatar. In this country with the largest gas field in the world, bordering Saudi Arabia, he held the Occidental Chair in Petroleum Engineering.

Professor Dawe, the Trinidad & Tobago Methanol Company (TTMC) Chair in Petroleum Engineering, is one of the pioneers of the St. Augustine Campus' BSc in Petroleum Geoscience and MSc in Petroleum Engineering. The undergraduate programme represents a unique point of convergence for Trinidad's political, corporate and education sectors. It was asked for by principal players in the petroleum industry,

particularly the Geological Society of Trinidad and Tobago. The programme is supported by the Government of T&T accredited by the Geological Society of London. A Joint Industry/Academic Advisory Committee directs the programme in order to maintain its quality and relevance. This Committee also helps students obtain scholarships, work placements and project funding.

It is no wonder therefore, that in recognition of his contribution to this historic programme, The University of the West Indies honoured Professor Dawe with the 2005 Vice Chancellor's Award for Excellence, for research accomplishments and service to the university community.

#### Conferences

The Industrial Engineering and Management (IEM 2006) Conference, held in June 2006, focused on the theme, "Building industrial engineering competence and leveraging best management practices that meet the diverse needs and foster industry competitiveness in the Caribbean region".

The Conference was hosted by the Faculty in collaboration with the Engineering Management Society (EMS) Chapter, the IEEE Trinidad & Tobago Section, the Association of Professional Engineers of Trinidad & Tobago (APETT), and the Council of Caribbean Engineering Organisations (CCEO). It was sponsored by the Water and Sewerage Authority (WASA) of Trinidad & Tobago, Phoenix Park Gas Processors Limited and the Campus Research and Publication Fund.

The goal of this year's Conference was to facilitate a region-wide awareness of industrial engineering competence, along with the increased use and development of best management practices in the emerging CARICOM context and today's knowledge-oriented, global economy. The Conference offered a platform for academics, engineers, government officials and industry practitioners to share experiences, present research results, and review recent applications and developments in the areas of Industrial Engineering and Management.

Professor Emeritus Compton Bourne, President of the Caribbean Development Bank and Mr. Kenneth Valley, Minister of Trade & Industry of Trinidad and Tobago, were feature speakers. Mr. Valley noted that, "For all its gas and oil resources Trinidad & Tobago, in the face of globalisation, continues to be challenged with implementing a process of economic transformation. A critical mandate for us is the sustainable development of the non-energy sector."

The Industrial Engineering and Management Conference demonstrated that The UWI Faculty of Engineering has a key role to play in this process.

## **Revenue Generating Activities**

The Faculty's Engineering Institute (EI), led by Ag. Manager Dr. Edwin Ekwue, continues to contribute to regional development through outreach activities in research, training and consultancy. A few of these projects are highlighted below:

Projects Locally grown timber species (Mexican Cedar)	Clients Forestry Division	Subject Areas Environmental/Civil Engineering	Staff Coordinators
Princes Town to Mayaro Highway Feasibility Study - Surface Geological and Geomorphological Review	GEOTECH Associates Ltd.	Chemical Engineering	Mr. Martin Andrews and Mr. W. Rajpaulsingh
Electrical studies of Point Lisas Plant Expansion	POWERGEN	Electrical Engineering	Dr. Chandrabhan Sharma
Jamaican Investment Fund (subcontracted to Centre for Geospatial Studies)	EQECAT Contract, ABS Contracting	Geospatial Studies/Surveying and Land Information	Dr. Jacob Opadeyi
Steelpan Initiative Project	Ministry of Science, Technology and Tertiary Education	Electrical and Computer Engineering	Dr. Brian Copeland
Consultancy, Needs Analysis/ Quality Service Plan	Environmental Management Authority	Environmental/Civil Engineering	
Wastewater Testing	Alpha Engineering and Design Ltd.	Environmental/Civil Engineering	
Caroni River Basin Study	Institute of Marine Affairs	Environmental/Civil Engineering	Mr. Paul Gabbadon and Dr. Joanna Ibrahim
Alicia's House	Automatic Meter Reading Chart	Electrical Engineering	Professor Stephan Gift



# Training Programmes offered by Faculty

CORS-MACC Workshop

Dr. Keith Miller

Structural Provisions of the IBC 2003

Dr. Richard Clarke

Physical Asset Management Certification Programme Mr. N.S. Arumugadasan

Advanced Workshop in Agricultural Water Management
Dr. Edwin Ekwue and Professor C.K. Sankat

Automated Design and Manufacturing for the Caribbean Dr. B. Chowdary and Professor U. Rao

Computerised Piping Drawing
Mr. Eric Jones

## **Distinguished Visitors**

#### Jonathan Ling

Director of Professional Development, Institution of Incorporated Engineers (IIE), UK

#### Stuart Poole

Education Consultant Institution of Incorporated Engineers (IIE), UK

#### Edward P. Salek

**Executive Director** 

Society of Tribologists and Lubrication Engineers (STLE), Illinois, USA

#### William E. Wimbach

President

Society of Tribologists and Lubrication Engineers (STLE), UK

#### Satpal S. Sidhu

Dean of Professional Technical Education Bellingham Technical College, Washington, USA

#### Clive Neil Sturgess

Head, Dept. of Mechanical Engineering University of Birmingham, UK

#### Katy Hayday

Executive Membership, Accreditation and Professional Development Institution of Mechanical Engineers (IMechE), London, UK

#### Mr. Daniel Hague

Innovations Manager Balfour Beatty Rail Plant Ltd., Derby, UK

#### Ken Strafford

Accreditation Executive The Institute of Material, Minerals and Mining, London, UK

#### Frank R. Sale

Professor of Chemical Metallurgy and Materials Science University of Manchester, UK

#### **David Collier**

Energy & Transport Business Manager Lloyd's Register, Houston, USA

#### **Devdas Shetty**

Dean of Research University of Hartford, USA

#### **Colin Grant**

Professor of Chemical Engineering University of Stratclyde, Scotland, UK

#### **Brian Smart**

Deputy Principal, Petroleum Engineering Herriot-Watt University, UK

#### **Donald Mullings**

President

Incorporated Masterbuilders Association of Jamaica

## Hugh D. Burton, Jassel H. Deinstan, Ruthlyn Villiers, Raymond H. Cooper

Incorporated Masterbuilders Association of Jamaica

#### **Stanley Ming**

CEO, Ming Products & Services Ltd., Guyana

#### Charles C. Li

Assistant Director General Ministry of Foreign Affairs, Taiwan

#### Mark M.H. Lin

Section Chief, 3<sup>rd</sup> Section, Department of Central and South American Affairs Ministry of Foreign Affairs, Taiwan

#### Garie A. Fordyce

Programme Manager National Science Foundation, Washington, USA

#### Aaron P. Lewis

Dean, Faculty of Science & Technology University of Belize

#### Richard Ruey-Shang Ju

Faculty of Science & Technology (Eng. Dept.) University of Belize

#### Colin Ledsome

Department of Mechanical Engineering Imperial College, London, UK

#### Tadaomi Nakai

Associate Expert, Oceania Team, Regional Department II Japan International Co-operation Agency, Japan

#### Divine Njie

Food & Agriculture Organisation (FAO), Rome, Italy

#### **Genardo Maloney**

Ambassador of the Republic of Panama

#### Enrique E. Sanchez

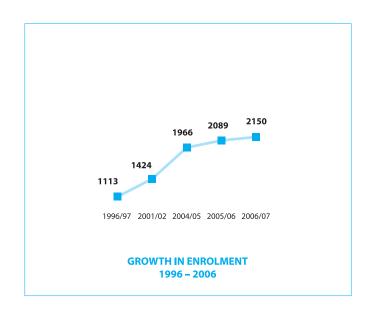
Manager of the Contracting Division Panama Canal Authority, Panama

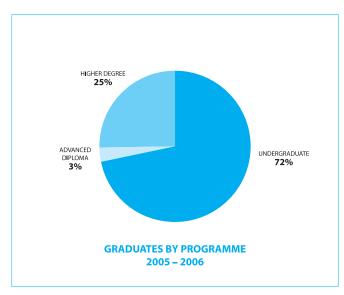
#### Henry N. Anderson

University of Belize

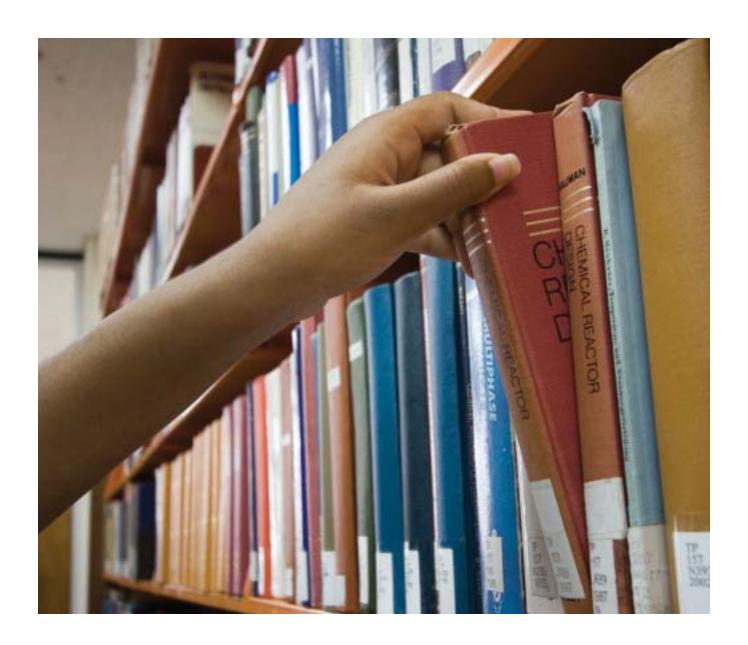
#### M.G. Satish

Associate Dean of Graduate Studies/Research, International Relations, Dalhousie Tech, Canada





Based on data available as of Jan. 2007



## faculty of humanities & education



In the academic year 2005-2006, the Faculty of Humanities and Education sought to revise our curriculum offerings to bring them more in line with our vision and mission developed in January 2005. We streamlined curriculum offerings, removing courses that no longer seemed relevant and mounted new programmes in line with current societal needs.

Curriculum reform was initiated largely by internal assessment and was further driven by the recommendations of the several Quality Assurance Reviews (QARs) in Linguistics, Creative Arts, and the Centre for Language Learning. QARs conducted in the previous academic year also helped to inform this process.

In keeping with this commitment to relevance to the wider society, we increased our efforts to strengthen relationships with our main stakeholders. Despite the increased teaching load, academic staff continued to manage a robust research and publications profile, with extensive regional and international links. Several interesting and informative projects were also conducted by MPhil/PhD students. Faculty also widened the range of their outreach activities.

Our summer programme was expanded, facilitating students' completion of their degree programmes in a timely fashion. In order to cope with growing student numbers, we encouraged and facilitated the use of technology in the delivery of our programmes.

Dr. Ian Robertson
Dean, Faculty of Humanities & Education

#### **Students**

#### **Enrolment**

Total student numbers continued to increase (2459 students in 2005–2006); a 12% increase from the previous year. This resulted in up to 200 students in classes which had formerly held a maximum of 20. The Faculty maximised its limited human resource capacity by offering courses in alternate years and by alternating day and evening delivery. Lecturers also began experimenting with interactive teaching methodologies for large classes. Staff-Student Liaison Committees were established and met across the board. Academic Advising was fine-tuned and both academic staff and postgraduate students effectively delivered this service to students.

Graduate Seminars were held almost every week during the academic year, in order to cater to students across the Faculty, particularly in the Literatures in English and Cultural Studies programmes, which have over 100 postgraduate students. In the Department of History, 29 students were enrolled in MPhil and PhD programmes, with research topics ranging from the Petroleum Industry in Trinidad & Tobago, to Public Health.

#### Graduation

A total of 597 students graduated from the Faculty – 52% with undergraduate degrees, 13% with certificates and diplomas, 26% with advanced diplomas, 10% with taught and research postgraduate degrees. Two PhD Cultural Studies candidates received their doctorates during this period.

- Dr. Marina Omowale Maxwell
   (with high commendation)

   Television Theatre for Trinidad: A Theory of Multi-Cultural TV Theatre in a Caribbean and Black Diaspora Context
- Dr. Bruce Paddington
   Caribbean Cinema: Cultural Articulations, Historical

   Formation, and Film Practices

Two PhDs were awarded in History.

- Dr. Sherry-Ann Singh
   The Ramayana Tradition and Socio-Religious
   Change in Trinidad, 1917-1990
- Dr. Ron Sookram
   East Indians in Grenada: Their History and Culture,
   1857 to 2000

#### **Honours & Awards**

Several students in the Faculty received first and second class honours, as well as distinctions at the postgraduate level. The award for the most outstanding doctoral thesis at the St. Augustine Campus went to a student from the Department of History.

The Faculty also received the Julien Fédon Memorial Prize from The UWI School of Continuing Studies (Grenada Centre) and the Institute for People's Enlightenment, for outstanding work by students in the Department of History.

#### Staff

Academic staff faced severe challenges due to large classes, lack of sufficient staff and infrastructural constraints. Under these circumstances, however, many of them continued to do tremendous work.

#### **Honours & Awards**

*Mr. Carol Keller*, former Head of the School of Education, was awarded one of the national community's highest honours, the Chaconia Medal (Gold), for his service to education.

*Dr. Marina Omowale Maxwell* was awarded a PhD with high commendation.

*Ms. Marsha Pearce*, Graduate Assistant in the Office of the Dean, was awarded the Rhodes Trust Rex Nettleford Fellowship for Cultural Studies.

*Dr. Sherry Ann Singh* was commended for producing the Most Outstanding PhD Dissertation in the Department of History.

#### **Public & Professional Service**

Members of staff continued to serve The University and the wider Caribbean community in a variety of ways, including:

*Prof. Bridget Brereton* - Chair of the Cabinet-appointed Committee on the Trinity Cross and other National Symbols, and The UWI representative on a Cabinet-appointed Government Scholarship Committee.

*Dr. Maria Byron -* Chair of the National Curriculum Council and Member of the National Textbook Committee.

*Dr. June George -* Member of the National Textbook Committee, the Textbook Development and Research Committee and an Advisor to the Committee for the National Science Centre NIHERST/NGC.

*Dr. Kusha Haraksingh* - Personal Representative of the CARICOM Secretary-General on a CARICOM mission to selected European Community capitals, and Conciliator/Arbitrator to CARICOM under Article 8 and 10A of Protocol IX to the treaty establishing CARICOM.

*Dr. Winford James -* Member of the National Textbook Committee, the Textbook Development and Research Committee and the Textbook Evaluation Committee.

*Dr. Vena Jules -* Member of the Textbook Development and Research Committee.

*Prof. Barbara Lalla* - Public Orator, The UWI St. Augustine Campus.

*Prof. David Plummer* - Delegate/Presenter to the World Meeting of the 'Education for All' Working Group, UNESCO, Paris.

Mrs. Joycelyn Rampersad - Member of the CARICOM/UNICEF Working Group for Regional Health and Family Life Education, the Curriculum Advisory Committee and Facilitator of the PAHO/CARICOM/PANCAP Training Workshop for Health and Family Life Education (HFLE) tutors of Teachers' Colleges.

## **Appointments**

#### **Professor David Plummer**

Commonwealth/UNESCO Regional Chair in AIDS Education for The University

#### Dr. Beverly-Anne Carter

Ag. Director, Centre for Language Learning (formerly French Coordinator, Dept of Liberal Arts)

#### Dr. Jerome DeLisle

Lecturer, Educational Administration

#### **Dr. Lionel Douglas**

Lecturer, Information and Communications Technology

#### Dr. Samuel Lochan

Lecturer, Teaching of Social Studies

#### Dr. Jerome Teelucksingh Lecturer, History

### **Promotions**

Dr. Funso Aiyejina

Professor, Liberal Arts

#### Dr. Martin Munro

Senior Lecturer, Liberal Arts

#### **Retirement & Resignations**

Professor Kelvin Singh, Dr. Walton Look Lai and Dr. Jeannette Morris (former Head of the School of Education) went into retirement.

*Mr. Vernon Gobin* of the Printery at the Multi-Media Production Centre, School of Education, retired after more than forty years of service.

*Dr. Lionel Douglas* and *Dr. Sheila Rampersad* resigned from their positions at The University.

#### **Obituaries**

The Faculty mourns the passing of *Dr. Patricia Ismond* and *Dr. Kenneth Parmasad*, both longstanding members of staff. Dr. Ismond was a former Head of the English Department and is credited with, among other achievements, the establishment of the Centre for Creative and Festival Arts. Dr. Parmasad gave many years of service to the History Department.

#### **Programmes**

New programmes were implemented and existing programmes rationalised, in keeping with the Faculty's vision and mission.

#### **Creative Arts**

The curricula in Music, Visual Arts, and Theatre Arts were restructured for implementation in 2006-2007.

## Languages

Course offerings at the Centre for Language Learning (CLL) for which very few students registered, were suspended. The status of all such courses will be reviewed on an ongoing basis.

The Teaching of English as a Foreign Language (TESOL) programme was shifted from the Liberal Arts Department to the CLL. This helped to relieve the burden of an already complex structure in the Liberal Arts Department.

## **Speech Pathology**

The Certificate Programme in Speech and Language Pathology began and the first cohort completed the programme at the end of the academic year in review. This programme is offered with the cooperation of the Faculty of Medical Sciences at St. Augustine and Florida International University. It is the forerunner to a more specialised set of offerings in Speech Pathology, an area of critical need in all Caribbean societies.

#### **Cultural Studies**

A new Master's programme in Cultural Studies commenced. This programme benefited from the presence of Dr. Nalini Persram who, during her brief stay with the Faculty, helped to streamline our offerings in this area. Proposals for expanded implementation of the Cultural Studies Programme were designed by Regional Co-chair for Cultural Studies, Professor Barbara Lalla, in consultation with a Faculty-wide committee. Implementation of the expanded proposal awaits the identification of the necessary resources.

#### Education

A Postgraduate Diploma in Educational Technology (Dip Ed Tech) began under a contract with the new Secondary Education Modernisation Programme (SEMP) of the Ministry of Education. Teaching in the Dip Ed Tech began during this year, with an intake of 37 students. This programme seeks to equip classroom teachers with the capacity to enhance teaching and learning through the use of advanced technologies.

New Master's programmes by coursework were also approved in Health Promotion and Science Education. Teaching in both Master's programmes will commence in 2006-2007. The former is a natural outgrowth of the Faculty's programme in Health Visiting. The latter addresses an area of chronic short supply in the secondary school system.

#### **Infrastructure**

The Faculty boasts a growing use of technology in the delivery of its programmes. Most significantly, there is the use of IT to deliver the Foundation Course in Caribbean Civilisation.

Both the School of Humanities and School of Education now make use of up-to-date technical facilities that have been established over the past five years. These investments have been critical to the Faculty's ability to cope with a chronic shortage of space and the rapid increase in student numbers.

#### Research

In addition to many books, more than fifty monographs, teaching and research videos, journal articles and encyclopaedia entries were published by academic staff in the last academic year.

#### Department of History

Some of the research underway in this Department includes:

- Contesting the Past: Narratives of Trinidad & Tobago's History. (B. Brereton)
- Completion of manuscript: "Management of the Caribbean Sugar Industry". (H. Cateau)
- History of Cricket in the Southern Caribbean. (C. Fergus)
- The Haitian Link in the First Chinese Immigration Experiment 1802-1806. (C. Fergus)
- Law in Plural Societies; The Caribbean and International Trade; Globalization in Theory and Practice. (K. Haraksingh)
- A History of Health in Caribbean. (R. Pemberton)
- Labour Relations and Trade Unions in Trinidad. (J. Teelucksingh)
- The Ramayana and Women in Trinidad. (S.A. Singh)
- Archaeology and Geo-informatics: Case Studies from the Caribbean. (B. Reid)

## **Department of Liberal Arts**

Research in this Department included topics ranging from the endangered languages of the region (with a focus on their description and preservation), to the literatures and cultures of the region, and into applied discourse areas such as the representation of violence and gender in literature, media and the law. Communication Studies and Linguistics also held very successful Research/Open Days featuring both faculty members' and students' work.

## scribal artists

"To celebrate Earl Lovelace is to celebrate the people among whom he has played, danced, loved, and who he has challenged to dare to dream..."

In sharp contrast to the optimism of this assertion by Prof. Funso Aiyejina, UWI Lecturer in Liberal Arts, on the Monday that began Lovelace Week (July 11-15, 2005), two bombs were detonated in the heart of Trinidad's capital city. Yet the week went on, not out of disregard for these events, but as a way of honouring the precarious and precious truth of our collective humanity, summed up in one man's creative work.

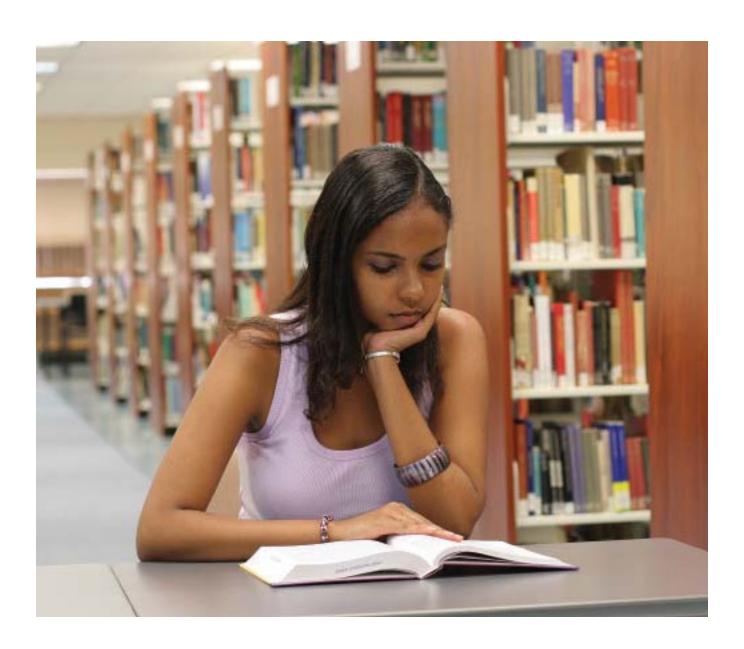
So when Earl Lovelace took the stage at his 70<sup>th</sup> Birthday Celebration at the Queen's Park Savannah and announced that, "This was a very special week for me," it indeed was. The world-renowned author was able to celebrate his 70<sup>th</sup> Birthday alongside a large cross-section of the very people on whom he has focused his life's work.

The festivities, coordinated by Prof. Aiyejina with the full support of the Dean of the Faculty, included a performance of Lovelace's play Jestina's Calypso, and a conference at The UWI Learning Resource Centre. There was also a night when Lovelace, surrounded by his family and well-wishers, was regaled with performances by Mavis John, Len "Boogsie" Sharpe, the Shiv Shakti

Dancers and the Malick Folk Performing Company.

The week came to an end with a reading tour of the areas where Lovelace has lived and written, from Valencia to Toco. However, if his stick fighting form as he took to the Savannah stage is any indication, it is far from the end for this artist whom Senator the Hon. Joan Yuille-Williams, Minister of Community Development, Culture and Gender Affairs, has aptly called "a man of the people".

\*The term "scribal artists" was used by Professor Maureen Warner-Lewis in her Open Lecture on African (Linguistic) Tradition in the Caribbean Diaspora (UWI St. Augustine, 2005).



#### School of Education

A joint research project with the Centre for Gender Studies explored the perceived disparity in achievement between male and female students in Trinidad & Tobago.

(Dr. J. George, Dr. J. Morris, Ms. P. Worrell, Dr. J. Mohammed and Mr. C. Keller)

Other research being done in Education includes:

- Reforming Science Education in Context (RESEC)
   Project; a three-year action research project in rural secondary schools. (Dr. J. George, Dr. S. Herbert, and Mrs. J. Rampersad, in collaboration with science teachers from the schools)
- Taboo and Obligation: The Pressures of Modern Manhood in the Caribbean – Funded by the Commonwealth Secretariat. (Prof. D. Plummer)
- The Everyday Impact of HIV on Jamaican Schools Funded by UNESCO. (Prof. D. Plummer)
- Family Development and Children's Research Centre (FDCRC). (Dr. C. Logie)

#### **Outreach**

#### **Carnival Studies**

Creative Source Project was introduced in January 2006. Through this project, the Centre for Creative and Festival Arts (CCFA) sourced graduates and current students with the requisite skills and qualifications to work on either a volunteer or part-time basis with arts and cultural enterprises. In the case of Machel Montano's Xtatik, one graduate and a current student continue to assist the organisation, particularly with its archiving project.

Kaiso Dialogues II was held at Gordon Street, St. Augustine. Awards were given to Iwer George, Rikki Jai, Ataklan, Karega Mandela, Brother Valentino and Gypsy for their contribution to the artform.

The CCFA also hosted a Carnival Studies Colloquium - "Carnival Arts as Education: Challenging the Traditional Perceptions of Learning".

#### **Dance**

CCFA put on its first ever dance production entitled "Sole to Sole", which featured dance presentations by the students of the Elements of Choreography course.

### **Foreign Languages**

The Caribbean Interpreting and Translation Bureau (CITB) began operations at the Centre for Language Learning (CLL), providing interpreting services at a number of high profile events in the business/public sector. The CITB also translated marketing and promotional material for several state and private sector organisations.

The UWI "French-based Creole Day" was as vibrant as ever and Dr. Jo-Anne Ferreira was a guest speaker at the "First Meeting of Creole-speaking Elders and/or Patois Speakers of Venezuela and the Caribbean in honour of Jorge Logan Delcine" in Venezuela, in October 2005.

Both the French and Spanish Language Units were once again well represented at the Inter-Campus Foreign Language Drama Festival, held at the Cave Hill Campus. Upon their return, they also put on repeat performances at the St. Augustine Campus.

In today's world, one critical distinguishing feature of graduates is their language expertise. The Faculty reviewed its foreign language exchange programmes in 2005-2006 and began setting in place new measures to ensure more contexts for cultural immersion and study abroad for students.

#### History

The high point of the year was hosting the 38th Annual Conference of the Association of Caribbean Historians. The Conference was attended by over 150 scholars from around the world. Special panels were dedicated to the Chinese Presence in the Caribbean in recognition of the first arrival of the Chinese in Trinidad in 1806.

The Year of Abolition was also launched, to mark the 200<sup>th</sup> anniversary of the abolition of the slave trade to Trinidad.

Another major initiative was a special workshop for History teachers on the CAPE syllabus, which the Department plans to make an annual event.

#### Music

Dr. Mike Alleyne, Assistant Professor at Tennessee State University was invited by the Faculty to give a lecture entitled "Remixed Vision: Globalization, Cultural Commerce and Authenticity in Caribbean Popular Music."

Mr. Jessel Murray, Lecturer at the Centre for Creative & Festival Arts (CCFA), conducted The UWI Festival Steel Ensemble in a recording for a CD of 6 new Ray Holman compositions. Dr. Jeannine Remy and Dr. Satanand Sharma of the CCFA transcribed and edited the recording, respectively.

Mr. Murray directed The UWI "Festival of Nine Lessons with Carols", involving the Festival Arts Chorale, Steelband Ensemble and Brass. He also conducted the Chorale and Ensemble during several concerts and performances throughout the country, such as CCFA's 11<sup>th</sup> Annual "Voices and Steel", "Fiddler on the Roof" (with the National Sinfonia) at Queen's Hall, and "Mozart 250 and Music Festival Winners" at the Central Bank Auditorium in Port-of-Spain.

## Speech Pathology

A significant offshoot of the new Speech Language Pathology programme established in collaboration with the Faculty of Medical Sciences, was a Speech Language Pathology Clinic located at Campus House, just outside of The University's main campus. The Clinic helped to assist a number of young children with language and learning disabilities.

#### West Indian Literature

Prof. Barbara Lalla (Coordinator, Literatures in English) and Dr. Jennifer Rahim coordinated the outstanding 25<sup>th</sup> West Indian Literature Conference. Students benefited from interaction with a diverse range of Caribbean writers and critics including Lorna Goodison, Merle Hodge, Shani Mootoo, Elizabeth Nunez, Prof. Edward Baugh, Prof. Carolyn Cooper, Prof. Mervyn Morris, Prof. Evelyn O'Callaghan, Prof. Gordon Rohlehr and Prof. Kenneth Ramchand. The conference coincided with the visit of Writer-in-Residence Dr. Erna Brodber, and included Writers' Interactive Sessions and Poetry Readings, as well as the presentation of academic papers.

Professor Funso Aiyejina also organised the Sixth Conference of the Society for Oral Literatures in Africa, which received great praise from the President of the Society.

#### Theatre

Pundit Ravi Ji was invited to give a public lecture on "Ramleela:Theatre in Motion".

Mr. Rawle Gibbons, a playwright and Senior Lecturer at the CCFA, wrote "Ogun Iyan - As in Pan", a play directed by Louis McWilliams and performed at Scherzando Pan Theatre in Curepe. Dr. Dani Lyndersay, Senior Lecturer at the CCFA, was responsible for Production Design and another Lecturer, Harold Headley, conducted and performed with a musical ensemble in the production.

Arts-in-Action is a CCFA affiliated group that enhances public education through drama. The team played a memorable role in several University programmes such as UWI Life Orientation and the HIV & AIDS Response Programme (HARP). They also continued to be engaged in social development programmes in secondary schools, government ministries and the private sector. Among other awards, the Arts-in-Action team has received a bpTT Spirit of Community Award. Longstanding members Marvin George, Camille George and Patrice Briggs, attended international conferences on theatre education with the group's advisor, Dr. Dani Lyndersay.

The Storytelling for Early Childhood Parenting Support (STEPS) continued to have an important impact on children, teachers and parents, expanding into an organised approach to Early Childhood Development. In September 2005, two representatives from Arts-in-Action, Brendan Lacaille and Deon Green, visited Dominica for seven days to facilitate "Tim Tim" (Storytelling) Workshops. In August 2006, Regional Coordinator Samantha Pierre, accompanied by Project Evaluator Dawn Marshall, made a four-day visit to Dominica to meet that island's STEPS Coordinator Nisbertha Buffong and the Head of the Children's National Christian Fund, Francis Joseph. Additional funding was received for an intern and increased technical support for the projects in the form of two theatre consultants from Trinidad. The consultants will help create storytelling performances using the Theatre in Education (TiE) Concept.

#### Visual Arts

CCFA lecturers and artists Steve Ouditt and Kenwyn Crichlow both had exhibitions of their work. Mr. Ouditt also curated the Visual Arts Students' Exhibition.

#### Other issues related to Culture

Author and cultural critic George Lamming, Professor Ashok Mathur, Canada Research Chair in Cultural and Artistic Inquiry, Thompson Rivers University, and Professor Aisha Khan of New York University, delivered lectures on Commodity Culture, Concepts of Culture, and Multiculturalism, respectively.

## **Distinguished Visitors**

During the year in review, the Faculty was fortunate to have the following visitors:

#### Dr. Erna Brodber

Writer-in-Residence, Jamaica

#### **Prof. James Coleman**

Open University

#### Mr. Alvin Daniel

Host, Calypso Showcase

### Mr. George Lamming

Distinguished Caribbean Novelist

## Prof. Sandra Pouchet Pacquet

University of Florida

#### Ms. Gloria Rolando

Cuban Film Maker

### Mr. Liam Teague

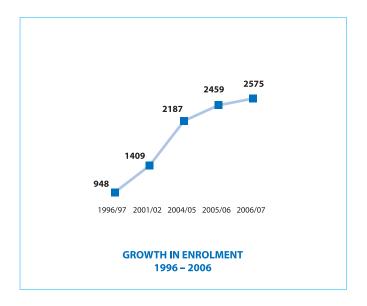
**Pannist** 

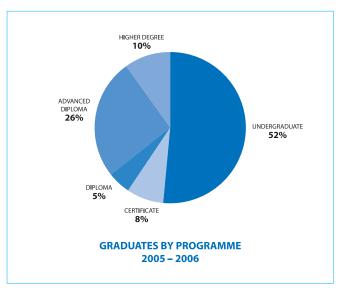
#### Mr. Bill Trotman

Artiste and Entertainer

#### Prof. Maureen Warner-Lewis

Professor Emeritus, UWI Mona





Based on data available as of Jan. 2007



## faculty of medical sciences



Our Faculty has consistently produced competent professionals in the fields of Dentistry, Medicine, Nursing, Pharmacy and Veterinary Medicine. In 2005-2006, we focused on being accredited by the Caribbean Accreditation Authority for Education in Medicine and other Health Professions (CAAM-HP), through a nine-month process of review.

I am pleased to report that the Medical Programme was given full Accreditation. Although there are areas that need to be addressed, the Assessors expressed great satisfaction with the quality of our students, the abundant clinical material and our Medical Library. The Centre for Medical Sciences Education received special mention.

They also commended our efforts to harmonise the Medical Programme across The University. In late April, a Curriculum Workshop was hosted at St. Augustine to continue the harmonisation process that began in the previous year. All Medical Faculty Deans, along with members of the Basic Sciences, Paraclinical Sciences and Clinical Departments, attended the workshop to discuss differences in the curricula across campuses. Several action committees were formed with the mandate to report to the next meeting of the Committee of Medical Faculty Deans. Consensus has already been achieved across The University on the use of the same Admissions Criteria and the introduction of the new assessment tools for the final MBBS examinations.

In keeping with the last year of assessment and growth, we look forward to the ongoing harmonisation process and to the continued delivery of top-quality medical education in the Caribbean.

Professor Phyllis Pitt-Miller Dean, Faculty of Medical Sciences

### **Accreditation**

In preparation for seeking accreditation, Dr. Brader Brathwaite, Senior Lecturer in Curriculum Development, was appointed the St. Augustine Coordinator for the review process and a small Secretariat was established consisting of Mrs. Gail Deane and Ms. Angela Garcia.

The Faculty's self-study report was drafted and sent to the University Coordinator, Professor Michael Branday, for editing and completion. Cross-campus meetings were scheduled and the Vice-Chancellor kindly arranged for the services of Dr. Angela Franklin as a consultant to assist the Faculty with this process. The President of the Trinidad & Tobago Medical Students' Association, Mr. Virin Ramoutar, produced a report which gave students' views on the MBBS programme. Reports from all the campuses were collated and the final document sent to the Accreditation Authority for Education in Medicine and other Health Professions (CAAM-HP).

The period from January to April was spent having meetings with the Faculty's stakeholders, including Government Ministries, Regional Health Authorities, Hospital Administrators, Medical Associations and the Medical Board, to ensure that they were all familiar with the review process. The CAAM-HP visit took place in late March and early April, resulting in the Medical programme being given full accreditation.

### **Students**

### **Enrolment**

The Faculty admitted 303 students (186 were enrolled in the Bachelor of Medicine/Bachelor of Surgery (MBBS) programme, 27 in Doctor of Dental Surgery (DDS), 18 in Doctor of Veterinary Medicine (DVM), 40 in the BSc Pharmacy and 32 in the BSc Nursing). This resulted in a total undergraduate student population of 1156 undergraduates and an overall enrolment of 1389, which has led to an acute need to increase the Faculty's physical infrastructure.

### Graduation

Students continued to excel in the undergraduate programmes. There were 219 graduates from these programmes in the 2005–2006 academic year. One student received The University Medal in Obstetrics and Gynaecology and three students graduated with honours from the MBBS programme. Seven students graduated with honours from the DVM programme.

The Dental School also had good results, with four of their 23 graduates receiving honours and 14 students achieving distinctions in various subjects.

The School of Advanced Nursing Education produced its first 32 graduates, 14 of whom achieved first class honours. These first graduates were honoured at a completion ceremony on December 15, 2005.

Of the 26 BSc Pharmacy students, one student graduated with first class honours and ten students graduated with upper second class degrees.

A total of 9 students earned higher degrees in the faculty. Three students were awarded MPhils in Pathology, Veterinary Pharmacology and Veterinary Public Health respectively. One student completed a DM (Anaesthetics) and two students completed the DM (Psychiatry).

### Staff

### **Honours & Awards**

*Dr. Gershwin Davis* was accepted as a Fellow of the Canadian Academy of Clinical Biochemistry.

*Ms. Riana Marie Extavour* received an MSc (Clinical Pharmacy) degree from the Robert Gordon University, Aberdeen, UK.

*Dr. Chidum E. Ezenwaka* was awarded a European Society of Diabetes Clinical Research Award in March 2006 to attend the Oxford Diabetes Centre, UK, and was elected to the Editorial Board of the International Journal "Archives of Physiology and Biochemistry".

*Dr. Karla Georges* received a Commonwealth Award to conduct research on "Molecular detection of tick-transmitted haemopathogens of companion animals and racehorses in Trinidad" at Newcastle University under Dr. Olina Sparagano.

*Dr. Wayne Mohammed* was invited to act as Clinical Consultant for the Caribbean Cervical Cancer Prevention and Control Project.

*Dr. Shivanand Nayak* was awarded an International Travel Grant from the American Association of Clinical Chemists (2006).

*Dr. Farid Youssef* was given the Third World Academy of Sciences (TWAS)/Caribbean Academy of Scientists Young Scientists Award for 2006.

Appointments

Dr. Patrick Akpaba

Lecturer, Microbiology

Dr. George Legall
Lecturer, Biostatics

*Dr. Junette Mohan*Lecturer, Physiology (Nursing)

*Dr. Paul Nunes*Lecturer, Primary Care Medicine

*Dr. Ramesh Rao*Lecturer, Anatomy (Pharmacy)

Dr. Adesh Sirjusingh
Lecturer, Obstetrics and Gynaecology



### **Promotions**

Promoted to Professor

Dr. Dinesh Ramdath

Professor, Biochemistry

Dr. Surujpal Teelucksingh

Professor, Medicine

Dr. Paluri R. Murti

Professor, Oral Pathology

Dr. Gopalkrishna Pillai

Professor, Pharmaceutics

Dr. Lexley Pinto-Pereira

Professor, Pharmacology

Dr. Gerard Hutchinson

Professor, Psychiatry

Promoted to Senior Lecturer

Dr. Brader Brathwaite

Senior Lecturer, Curriculum

Dr. Kamala Pillai

Senior Lecturer, Oral Radiology

Dr. Mervyn Campbell

Senior Lecturer, Veterinary Chemical Pathology

## **Retirement & Resignations**

The following members of staff retired from service:

**Prof. Junor Barnes** 

Professor, Biochemistry

(passed away shortly after retirement)

Prof. George N. Melville

Professor, Physiology

Dr. A. Molokow

Senior Lecturer, Veterinary Physiology

**Prof. Mohammed Omer** 

Professor, Child Health

The following members of staff submitted their resignations:

Dr. Gillian Henry

Lecturer, Paediatric Cardiology

Dr. Leandra Peters

Temporary Lecturer, Physiology (Nursing)

Dr. Clifford Thomas

Senior Lecturer, Medicine

## **Programmes**

The MSc in Clinical Psychology began in January 2006 with 16 new students.

### Research

Some of the significant research completed within the Faculty in 2005-2006 includes:

### **Pre-clinical Sciences**

Addae J., Saunders R. and Posthoff C.

Using a near infrared emitter and a sensor to record blood volume pulses in the skin.

Carrington C.V.F., Foster J.E., Pybus O.G., Bennett S.N. and Holmes E.C.

Analysis of dengue virus Type 2 and Type 4 population dynamics and migrational histories in the Americas.

Ramdath D.D., Yearwood A., Simeon D.T., Hunt N., Kennedy A.
Assessment of the National Health Research System of
Trinidad and Tobago

Ramdath D.D., Wolever T.M.S., Brand-Miller J. Glycaemic Index Inter-laboratory Study #2

Nayak S., Maharaj D., Pinto Pereira L.

Evaluation of the diabetic wound healing antimicrobial activity of *Carica papaya*.

Nayak S., Maxwell A., Ramdath D., Isitor G., Pinto Pereira L. Evaluation of the chronic wound-healing activity of selected traditional medicinal plants in Streptozotocin-induced diabetic rats.

Nayak S., Rao S., Davis E.M.

Effect of Vanda roxburghii extract on wound healing.

Nayak S., Rao S., Davis E.M.

Effect of Lawsonia inermis extract on wound healing.

Nayak S., Roberts L.

Serum acute phase inflammation markers and lipid profile status in Caribbean Type 2 diabetes patients.

Odekunle A.

Impairment of transneuronal transport in the vagal nerve supplying the stomach and the heart in chronic diabetic rats using heat germ agglutinin conjugated horseradish peroxidase neuronal tracer.

Rao S., Davis E.M.

Effect of ultrasound on learning and memory in mice.

Youssef F., Addae J. and Stone T.

Protective effect of preconditioning on the heart and brain.

Youssef F., Addae J. and Stone T.

Activation of the glutamic acid receptor, AMPA, reduces the response of neurons in the cortex when stimulated by another glutamic acid receptor, NMDA.

Pinto Pereira L.

Presence of *Chlamydia* pneumonia, mycoplasma pneumoniae and viral infections in children admitted with acute asthma in Trinidad.

### Paraclinical Sciences

Clement Y.

Ongoing research on medicinal plant extracts in animal models for asthma and anti-inflammatory properties.

## Pharmacy

Pillai G.K. and Bhagwandin C.

Formulation and in-vivo evaluation of a novel drug delivery system containing a chelating agent in an iron overload rat model.

Davis G.

Risk factors and biomarkers in Alzheimer's disease.

In collaboration with Professor Amanda McRae, Dr. N.
Baboolal et al.

Maharaj Y., Singh K. and Pillai G.K.

An evaluation of the patient-perceived adverse effects of Tamoxifen by breast cancer patients in Trinidad & Tobago.

Ezenwaka C.

Genotyping of susceptibility genes for developing Type 2 diabetes. In collaboration with Professor Allan Permutt, Washington University School of Medicine.

Ali A., Mayers N., Doolarchan R., Alexander N., Ignacio D. and Extavour R.

Complementary and alternative therapies used at medical practices in Chaguanas and Port-of-Spain, Trinidad: Treatment of medical conditions and patient demographics.

Ezenwaka C.

Genotype and phenotypic study of offspring of Caribbean subjects with Type 2 diabetes. In collaboration with Professor Jurgen Eckel of the German Diabetes Research Institute.

Townsend P., Ignacio D., Extavour R.

A study of vaginal infections diagnosed among female students at the Health Services Unit, The University of the West Indies.

Monteil M.

Epidemiology of asthma in school-aged children in Trinidad & Tobago: An ISAAC methodologic study.

Extavour R. and Edwards R.

Non-prescription medicine use by persons living with hypertension in North Trinidad and potential clinical risks.



## Nursing

Effects of steelpan music on the auditory function of secondary school students playing in a school steelband in Trinidad.

Knowledge, attitude and practices of primary school teachers in relation to the potential HIV-positive student.

Preparation of the Nursing student for effective clinical practice in the 21st Century.

Pre-entry characteristics and academic performance of student nurses of the Ministry of Health's Basic Nursing Education Programme II (Trinidad and Tobago).

Teachers' perceptions of the role of School Nurses in selected secondary schools in the Counties of St. Patrick and Victoria, South Trinidad.

## **Veterinary Medicine**

Burnett N., Mathura K., Metivier K.S., Holder R.B., Brown G. and Campbell M.

An investigation into Haematological and Serum Chemistry parameters of rabbits in Trinidad.

### Research

Some of the research in-progress in the Faculty includes:

## **Pre-clinical Sciences**

- Neuroprotection in Neurodegenerative Disorders
- Risk Factors Associated with Alzheimer's Disease
- Mosquito-borne Viruses of Public Health Importance in Trinidad & Tobago
- Molecular Epidemiology, Population Dynamics and Evolution of HIV in the Caribbean pre- and post-HAART (Highly Active Antiretroviral Therapy)
- Influence of Certain Plant Extracts on Wound Healing
- Investigation of the Metabolic Syndrome in Trinidad and its Association with Obstructive Lung Disease
- HIV/AIDS Prevention and Control Project
- Promoting Healthy Weights among Children

### Paraclinical Sciences

- Knowledge, Attitude and Practices re HIV/AIDS in Trinidad & Tobago
- The Health, Social and Economic Status of the Elderly in Trinidad
- HPV Serotypes among Women along the East-West Corridor in Trinidad
- Medicinal Plant Extracts in Animal Models for Asthma
- Breast and Prostate Cancers
- Sickle Cell Disease
- Epidemiology of Asthma in School-aged Children

### **Pharmacy**

- New Drug Delivery System for the Targeted Delivery of Selected Antibiotics for Intracellular Infections
- The Effects of Coconut Water and Mauby on Blood Pressure

### Nursing

- The Impact of Intrinsic and Extrinsic Attitudes and Opinions on Secondary School Students' Academic Performance
- Traumatic Symptomologies in Children in Communities with a High Prevalence of Violence

## **Veterinary Medicine**

 Teleimaging Diagnostic and Research Network - a regional image databank that can be readily accessed by medical and veterinary experts, clinicians and researchers

### **International Links**

### **Academic Staff**

Some of the international affiliations of staff in the Faculty of Medical Sciences include:

- American Association of Clinical Anatomists (AACA)
- Brookwood Pharmaceutical, Alabama, USA
- Council on Health for Research for Development, Geneva
- Florida International University
- Manipal Academy of Higher Education
- National University of Singapore
- Oxford University
- Pan American Health Organization
- Penn State University
- The International Academy of Ecology and Life Protection Sciences, Perm, Russia
- The Mining Institute, Ural Branch of Russian Academy of Sciences, Perm, Russia

## School of Advanced Nursing

The School has developed links with other universities and international organisations in the following areas:

- Mc Master University, Canada: Joint implementation of a BSc programme in Oncology Nursing
- Sheffield University, England: Joint programme leading to Masters Degrees in Midwifery and Nursing Education

## marine rescuers

The word "beach" is often considered synonymous with the relaxed side of Caribbean life. However, beaches and oceans are also crucial sites for the economic and environmental well-being of our islands and the planet as a whole.

It should therefore concernus all that, every year, an increasing number of marine mammals, predominantly dolphins, whales and manatees, are found stranded on Caribbean shores.

Disease, parasite infestation, algae blooms, injuries (from ships and net entanglements), exposure to pollution, trauma, starvation and unusual oceanographic events, are among the identified causes of stranding. The majority of these incidents in the

Caribbean are fatal. One contributing factor is a lack of trained responders.

For this reason, The UWI School of Veterinary Medicine, along with the Eastern Caribbean Cetacean Network (ECCN), Marine Veterinary Program (MARVET, Grenada), the Smithsonian Marine Mammal Laboratory (Washington D.C.), the United Nations Environment Programme (UNEP) and the US National Marine Fisheries Service, hosted a Marine Mammal Stranding Response Training Workshop in November 2005.

The four-day workshop included one day of on-site training at Manzanilla beach, another day of labs, and two days of indoor training at the School of Veterinary Medicine, UWI, Trinidad. The workshop brought together representatives of

governmental and nongovernmental organisations from Grenada, St. Vincent and the Grenadines, Barbados, St. Lucia and Trinidad & Tobago.

This initiative is in keeping with the draft Marine Mammal Action Plan, subject to the UNEP's Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, which outlines specific regional and national management plans for endangered, threatened or vulnerable species.

The work done by the School of Veterinary Medicine is only one example of The University's collaborative efforts with regional and international organisations, to develop efficient responses to major issues affecting the Caribbean.

- John Hopkins University, USA: Collaboration in the development and implementation of a programme in Management, using Distance Learning technologies.
- Saskatchewan University, Canada: Collaboration on research into 'Nutrition in School-aged Children'

### **Outreach**

The Faculty also spearheaded several outreach activities in the following areas:

### **Adult Medicine**

The Adult Medicine Unit hosted its second annual *Dermatology lecture* to all Clinical students in October 2005. Consultant Dermatologist, Dr. Daron Seukeran, from James Cook University Hospital in the UK, delivered the lecture. Dr. Terence Seemungal, Senior Lecturer in Adult Medicine provided guidance to fourth-year students concerning hosting the second annual Symposium in March 2006 on the theme of HIV & AIDS.

The Adult Medicine Unit also prepared an "Acute Medicine Manual" which will serve as a guide to Interns and House Officers in all the Public Hospitals in Trinidad & Tobago. The manual will be printed with funds donated by pharmaceutical companies.

Professor S. Teelucksingh played a key role, along with the Ministry of Health and the International Institute for

Healthcare and Human Development (IIHHD) of Miami, Florida, in hosting a *conference* entitled "Shoulder to Shoulder for a Healthier Trinidad and Tobago: *A Brighter Future for Persons with Chronic Disease and Disability*". The Conference, held in April 2006, was a resounding success and resulted in one of the participants pledging a grant of TT\$5 million to The University.

### Child Health

The UWI *Telehealth Programme*, linked with the Hospital for Sick Children in Toronto, is expanding its services to underprivileged children here in Trinidad & Tobago. The Telehealth Programme was initiated by Prof. Zulaika Ali, Professor of Child Health (Neonatology) and Deputy Dean, Clinical Medical Sciences, Faculty of Medical Sciences, The UWI St. Augustine.

The programme allows live consultation via a two-way videoconferencing link between local doctors and specialists at the SickKids Hospital (Toronto, Canada). This facilitates patient consultation and professional medical education without costly overseas travel. The programme is supported by the Herbie Fund, Hospital for Sick Kids International Health Programme, The Atlantic for Children Fund, Atlantic LNG Company of Trinidad & Tobago (T&T), The Ministry of Health of T&T and The University of the West Indies. The President of T&T, His Excellency, Professor George Maxwell Richards and his wife, Her Excellency Dr. Jean Ramjohn Richards, are patrons of the programme.

## **Dentistry**

The Dental School's *Internship Programme* has been recognised by the Royal College of Surgeons of Edinburgh's Dental Faculty for its Membership of the Faculty of Dental Surgery (MFDS) programme, and by the Lutheran Medical Centre of New York for its Residency programme. The School continues to provide sound dental training and its research activities have increased.

Professor S. R. Prabhu edited "HIV/AIDS in Dental Practice", an illustrated Handbook for Caribbean Dental Practitioners. This book featured messages from the President of the Republic, His Excellency Professor George Maxwell Richards, Prime Minister the Honourable Patrick Manning, Minister of Health the Honourable John Rahael, The UWI Chancellor Sir George Alleyne, The UWI Vice-Chancellor Professor E. Nigel Harris and St. Augustine Campus Principal Dr. Bhoendradatt Tewarie. The foreword was written by Professor David Plummer, Commonwealth/UNESCO Chair in HIV Education. The Handbook was printed by the Multi-Media Production Centre of the School of Education, with graphics produced by Mr. Michael Khan of the Centre for Medical Sciences Education. Editions are now being produced for the Indian subcontinent and Pakistan.

### **Government Relations**

The Ministry of Science, Technology and Tertiary Education established a committee to examine the relationship between the Faculty, the Ministry of Health and the Regional

Health Authorities. After several meetings, a decision was taken to recommend to Cabinet that a Committee be appointed to deal with the matter. The Dean of the Faculty of Medical Sciences is currently a member of this Committee.

### **Health Information**

The Medical Sciences Library (MSL) co-operated on the launch of the *Trinidad & Tobago National Virtual Health Library*. Mrs. Ernesta Greenidge, Medical Librarian, is the Chairperson of this National Project. The National Virtual Health Library, launched by the Ministry of Health with the support of the Pan-American Health Organisation (PAHO)/BIREME, will allow National Libraries direct access to Health Information. The MSL Librarian and staff served as members of the various Working Committees established for this initiative.

## Nephrology

The Unit of Pathology and Microbiology, in association with the Ministry of Health and the North Central Regional Health Authority, hosted a three day *Nephrology Seminar and Workshop* from September 30-October 2, 2005. Professor lakovina Alexopoulos of McMaster University (Canada) and three of her highly qualified and experienced technical staff trained 14 technicians in electron microscopic processing and immunofluorescent staining of renal biopsies. In addition, Professor Alexopoulos updated pathologists, nephrologists and immunologists on renal biopsy interpretation and new thinking on various renal disorders.

### Nursing

The School of Nursing hosted a *Guest Lecture* by Professor Courtney Lyder, Professor of Internal Medicine and Geriatrics at the University of Virginia (USA), entitled "*Preparing for the Aging Wave*: Do you see what I see?"

### **Pharmacy**

The Pharmacy Programme held its annual *Continuing Education Seminars* in May 2006. The seminars attracted a wide cross-section of local practicing pharmacists who benefited from presentations of the visiting external examiners on the topics "Over-the-counter Medicines and Sport", "Antimycotic Pharmacotherapy and Pharmacogenomics" and "The Development of In-Vitro Screens for Antidiabetic Agents from Botanicals".

## Radiology

The staff of the Radiology Unit provided the main support for the Government of the Republic of Trinidad & Tobago in offering *free medical imaging services* to all medical institutions under the Regional Health Authorities. This programme began in January and the resulting clinical commitments have since become too great for the lecturers' teaching and research schedules. Nevertheless, investigation of the appropriate use of new imaging modalities and studies of interesting case reports arising out of this initiative, are ongoing.

## **Veterinary Science**

The Veterinary School, while continuing its strong research agenda, hosted the first Eastern Caribbean *Marine Stranding Workshop* in November 2005, which was attended by Government and NGO representatives from Barbados, Grenada, St. Vincent, Antigua, St. Lucia and Trinidad & Tobago. A model National Response Plan was proposed for stranding, in order to address how different organisations and individuals might collaborate when a whale, dolphin, porpoise or manatee is in need of assistance.

The Veterinary School was also *involved in producing two manuals*, with the assistance of the Inter-American Institute for Cooperation on Agriculture (IICA), on Small Ruminant Health and Reproduction and on Biosecurity for Broiler Producers.

## **Distinguished Visitors**

In addition to teams from Johns Hopkins University (Baltimore, USA), the Lutheran Medical Center, and the University of Saskatchewan (Canada), here are some of the distinguished visitors to the Faculty in 2005-2006:

Prof. Lakorina Alexopoulos McMaster University, Canada

Ms. Nancy Boodhoo
Medical Protection Society

### Ms. Gloria Chebanne

Embassy of Botswana, Washington DC

## Prof. J. Cleary

School of Pharmacy, University of Mississippi, USA

### Mr. Michael Drebot

National Microbiology Lab, Canada

### Ms. Marilyn Entwhistle

Advisor in Health Services Administration, PAHO

### Dr. Martin John

University of Cambridge, UK

## Dr. Andrew Kennedy

Senior Scientist, Council on Health for Research and Development, Geneva

### Dr. Monique Konings

University of Maastricht, the Netherlands

### *Prof. Courtney Lyder*

Professor of Nursing, Internal Medicine and Geriatrics, University of Virginia

### Prof. D. Mottram

Liverpool John Moores University, UK

### Prof. K. Srivastava

University of Trinidad and Tobago

## H.E. Mr. Howard Strauss

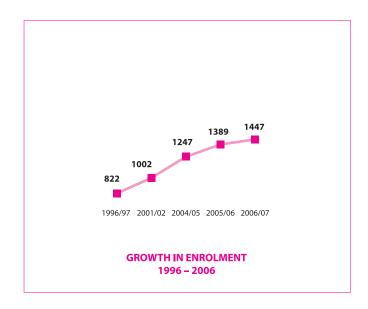
Canadian High Commissioner

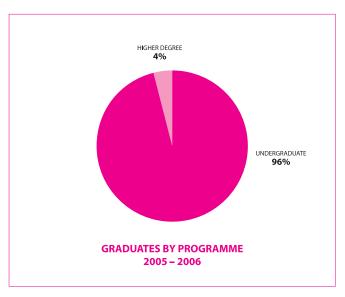
### Dr. Jay Yourist

International Institute for Healthcare & Human Development

### Prof. W. Zito

St. John's University, New York





Based on data available as of Jan. 2007



# faculty of science & agriculture



The Faculty of Science & Agriculture is rapidly expanding. We are committed to offering an educational experience that is current and geared towards satisfying national and regional development objectives. We also seek to help our students and other stakeholders to transform intellectual capital into wealth creation.

A very successful Faculty retreat was held in March 2006, during which a number of strategic imperatives were identified. Critical among these objectives was the establishment of a Faculty 'Think Tank' involving various stakeholders. Also, based on private sector participation at the retreat, we received a pledge for a grant to be used for the acquisition of a major IT facility. Also emerging out of the Faculty retreat was the

commitment of private sector funding for training secondary school teachers in Mathematics, as well as funding for a joint venture company in Bio-prospecting.

While the Faculty has seen significant positive advances in many areas, there are a number of critical areas that must be addressed as a matter of urgency. These include making more rapid progress in curriculum reform, with increased emphasis on developing students' critical thinking skills.

We are also seeking to broaden our students' practical exposure through field trips and projects done in collaboration with industry. In order to further enhance the delivery of our programmes, emphasis will be placed on developing the use of technology in course delivery. It is also imperative that we reduce the size of tutorial/laboratory classes so that students can receive the maximum benefit from these sessions. However, this will require hiring additional staff. Our physical infrastructure also needs improvement, particularly our laboratory and student facilities.

To sustain our extensive research portfolio, we must also source more external funding to supplement UWI grants and to support additional postdoctoral research fellows who can drive new research initiatives. The Faculty is also focused on intensifying our own income-generating activities, as we strive to meet the needs of our students, staff and external stakeholders.

Professor Dyer Narinesingh Dean, Faculty of Science & Agriculture

### **Students**

### **Enrolment**

The Faculty continued to witness a sustained increase in its total student population over the last five years. In 2005-2006, total enrolment stood at 2770 (over 2300 of which were undergraduates), representing an overall increase of 19% from the previous year. There were 1016 new students, of whom 956 were undergraduates and 60 postgraduate students. The rise in student intake has placed a great deal of stress on both the physical and human resources of the Faculty.

In the past few years, there has been a sustained increase in the number of students registered in the Agribusiness Management Programme. However, registration in the General Agriculture programme continued to be low.

### Graduation

At the undergraduate level, 385 students graduated with BSc (General) degrees in the various academic disciplines offered by the Faculty. Of these students, about 80% were from the School of Science and about 20% from the School of Agriculture. There was an overall increase in graduating students by 12% from the 2004-2005 academic year. Almost 10% of graduates received first class honours. At the postgraduate level, 31 students earned taught and research degrees.

### Staff

### **Honours & Awards**

A number of academic staff members received recognition for their contribution to science and technology. These included *Dr.Ivan Chang Yen* and *Prof.Julien Duncan*, who were both honoured as Icons in Science and Technology in Trinidad & Tobago by the National Institute of Higher Education, Research, Science and Technology (NIHERST).

*Prof. Harold Ramkisson* received the CARICOM Science Award for his contribution to Science and Technology.

*Prof. Ramsey Saunders* received the National Coalition on Caribbean Affairs (NCOCA) Pinnacle Award for sustained achievement in Pure and Applied Physics.

### **Public & Professional Service**

The Faculty continued to make significant contributions towards national and regional development through the varied public and professional service of its academic staff.

### They served as:

- Members on Boards of various public sector companies/organisations including the Caribbean Industrial Research Institute (CARIRI), Environmental Management Authority (EMA), College of Science, Technology and Applied Arts of T&T (COSTAATT), University of Trinidad & Tobago (UTT), National Agriculture Marketing and Development Corporation (NAMDEVCO) and the Environmental Court
- Members of the International Centre for Genetic Engineering and Biotechnology (ICGEB)
- The Secretariat for the Agro-Economic Society, CARISCIENCE and the Trinidad & Tobago Mathematics Olympiad (housed in the Faculty)
- Trainers for secondary school science teachers, in conjunction with the Ministry of Education
- Moderators/examiners/curriculum developers for CSEC and CAPE science subjects
- Leaders of training workshops for various government ministries
- Resource personnel to various NGO's and CBO's
- Resource personnel for CARICOM's regional transformation programme in Agriculture and in Science and Technology
- Reviewers and editorial staff for various international journals

## **Appointments**

Dr. Indra Haraksingh

Lecturer, Physics

*Dr. H. Missan* Lecturer, Physics

Dr. Albert Schulte

Senior Lecturer, Physical Chemistry

Dr. Robert Fowles

Temporary Lecturer, Chemistry

Prof. Ashok

Professor of Statistics, Mathematics & Computer Science

Dr. David Owen

Honorary Lecturer, Mathematics & Computer Science

Dr. Brian N. Cockburn

Head of Department, Life Sciences

Resignations

Dr. Aldwyn Tang Kai

Senior Lecturer, Physics

Dr. I.A. Mc Doom

Lecturer, Physics

Dr. Pierre Kempgens

Development Engineer, Chemistry

## **Programmes**

The Faculty, as part of an ongoing commitment to ensure the relevance of its curriculum offerings, introduced a number of new programmes and revised several existing ones. Among the new programmes/courses introduced were the long overdue BSc in Geography, an undergraduate course in Wireless and Mobile Computing, and postgraduate courses in Scientific Computing and Bioethics.

The major in Biology was re-structured, with the number of Level I credits required being reduced from 24 to 18, and a new advanced level course (Functional Design in Biology) introduced to replace Conservation Biology.

Three new courses were introduced to the BSc (Agribusiness Management) degree: Introduction to Microeconomics, Macroeconomics Fundamentals for Caribbean Agriculture and Caribbean Agriculture in Perspective: Evolution, Sociology and Contemporary Issues.

A new graduate course, Tropical Landscape Plant Identification, was introduced as part of the MSc in Landscaping.

The Human Ecology programme was completely revised through stakeholder participation. This resulted in the introduction of a BSc in Human Nutrition and Dietetics, majors in Nutritional Sciences, Food and Food Services Management, Family and Consumer Sciences and a minor in Sports Management.

Based on the recommendation of an External Review Committee, final year projects are now a compulsory part of the curriculum for all majors in Chemistry.

## Research

## **Publications**

There was a significant increase in publications from staff. There were 30 more refereed publications than in the previous year, due primarily to the output from the Departments of Life Sciences and Food Production. There were 67 published conference proceedings, 19 technical reports, 12 chapters in books, 1 monograph and 20 other publications.

The research activity of the Faculty has been somewhat curtailed due to heavy teaching loads and lack of adequate supporting resources. However, the research output is expected to increase significantly given the formation of research clusters, funding from the National Government specifically for research and funding for postdoctoral research fellows.

# flower power

Anthuriums are some of the most internationally soughtafter tropical flowers. They are also extremely susceptible to bacterial and fungal disease.

This is related to the fact that although the flower originated in tropical America, most of the elite varieties grown in the Caribbean were developed in temperate Europe. Largely as a result of these diseases and the high cost of importing plant material, the initial growth of the ornamental horticulture industry in the Caribbean in the 1980's and early 1990's, was followed by a rapid decline.

The UWI St. Augustine Campus has had a landmark role in enabling local growers to once

more take advantage of the multi-million dollar global market in flowers. Leading these developments is Dr. Pathmanathan Umaharan, whose years of genetic research into the anthurium have resulted in the production of varieties that are resistant to bacterial blight and leaf-spot diseases.

Prof. Umaharan has also spearheaded the creation of unique colour combinations that give local horticulturalists an edge over the competition and attract premium prices around the world. Other positive contributions to the local horticultural industry include the development of

production systems using low-cost structures and low-energy demanding atmospheric control systems.

As a result of this pioneering work, a commercial tissue culture facility was established at the Faculty of Science & Agriculture in St. Augustine, Trinidad. This is currently the only tissue culture laboratory in the region that supplies the industry with anthurium varieties which are resistant to bacterial blight disease. Steps are therefore being taken to expand the facilities in order to supply the entire Caribbean with the material for growing more disease resistant, beautiful and marketable flowers.

### **Grants and Postgraduate Scholarships**

The Faculty attracted a significant portion of the competitive research funds and postgraduate scholarships provided by the Campus Research Fund Committee and the Government of Trinidad & Tobago's Research Development Fund. In addition, staff members are now aggressively seeking funding from non-UWI sources, both locally and internationally. During the year in review, the Faculty was able to attract research funding to the sum of almost TT\$2.6 million locally and over TT\$3.7 million internationally. Most of this funding was obtained by staff from the Departments of Life Sciences and Chemistry.

## **Major Projects Completed**

A number of significant research projects were completed during the 2005-2006 academic year including:

The screening for estuarine toxicity test species. This work has led to the use by the Environmental Management Authority of this test species as the standard toxicity test species for assessing the impacts of chemicals and effluents in Trinidad and Tobago.

A commercial tissue culture facility was established as a result of significant work done on anthuriums, with respect to genetic resistance to bacterial leaf spot disease and the genetic control of colour formation. Currently this is the only tissue culture laboratory that supplies anthurium varieties to the industry that are resistant to bacterial blight disease.

Expansion of the facility is being actively pursued, in order to supply the entire Caribbean.

The only comprehensive book on the Science of Steelpan. This is a technical book covering the production of the instrument, the metallurgy of the processed raw form, tempering, tuning, the dynamic analysis of the complete instrument, the player's interaction during the impact phase, stick-note interactions, stability, engineering design (optimised note shapes, boundary conditions and quiescent states) and exotic phenomena. The book is expected to be launched shortly.

## 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. The projects initiated by these clusters include:

- Climate change effects on biodiversity and ecosystem services in Small Island Developing States
- Xenomonitoring of lymphatic filariasis vectors in Brazil, Costa Rica, Dominican Republic and Trinidad and Tobago
- Improving the yield potential of Capsicum chinense (hot pepper) through heterosis breeding
- Carbon sequestration in a tropical wetland (Nariva Swamp)
- Micropropagation in breadfruit and chatainge

- Ecology of PAH degrading bacteria from the pitch lake environment.
- Investigation of indigenous bacteria for control of mosquitoes
- Mathematical applications to AIDS modelling
- Biodiesel production from waste oil optimisation and viability for atmospheric protection
- Development of surfactants for specialised cements
- Polymer cracking of waste plastics using novel fluidised bed reactors
- Oligosaccharides as dengue virus inhibitors
- Preparation and management of cricket pitches on heavy clay soils to enhance ball bounce and pace
- Induction of lactation in mature heifers and open dry cows - effects on productivity and economics of dairy cow operations in the Caribbean
- Preliminary assessment of Barbados Black Belly sheep and West African ewes as maternal links for lamb production from Kathadian rams
- International competitiveness of agriculture in CARICOM and strategies to enhance competitiveness

### Outreach

Members of the Department of Agricultural Economics & Extension regularly participated in various committees/ consultations with the Ministry of Agriculture in Trinidad & Tobago.

The Department also participated in the "Open Days and Trade Show" in St Kitts and Nevis in October 2005. A display was mounted and discussions held with participants on the educational opportunities offered by the Department and The University as a whole. Discussions were held with the Resident Tutor of The UWI School of Continuing Studies as to the ways in which the Faculty could assist St Kitts' agricultural diversification efforts, through youth training in Agribusiness and Nutrition.

The Caribbean Agro-Economic Society, which has its Secretariat in the Department, held its 26<sup>th</sup> West Indies Agricultural Economics Conference and 42<sup>nd</sup> Annual Meeting of the Caribbean Food Crops Society in Puerto Rico, in July 2006. The theme of the Conference, which had wide participation from the region and beyond, was "Food Safety and Value-Added Production and Marketing of Tropical Crops". Several members of the Department attended and presented papers at this event. The Department also published the proceedings of the 25<sup>th</sup> Conference (held in 2005) on "Agricultural, Natural Resources and Environmental Challenges under Emerging Trading Regimes".

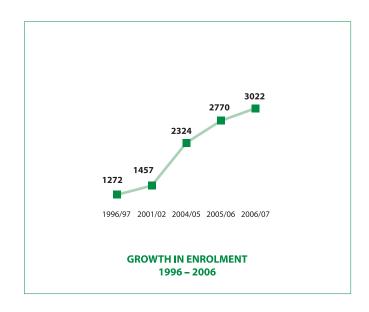
One hundred and twenty agricultural educators and extension agents from Trinidad and Tobago attended the 6<sup>th</sup> *Professional Day* hosted by the regional chapter of the *Association for International Agricultural Economics & Extension Education*. This was a joint initiative of the Department of Agricultural Economics & Extension, the Ministry of Agriculture, Land and Marine Resources of the Government of Trinidad & Tobago, and the Ministry of Education.

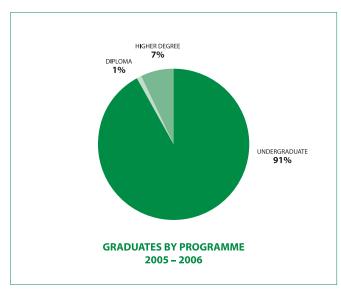
Dr. James Lindner and Kim Dooley of Texas A & M University were the main presenters at a public lecture entitled "Maximising Clientele Learning and Satisfaction through Vicarious Interactions". An additional dimension to this activity was a discussion regarding the educational imperatives related to the spread of "bird flu".

The Department coordinated the *CACHE Exchange Programme* for students and professors of the Caribbean Council of Higher Education in Agriculture institutions, held at St. Augustine from July 23-29, 2006. CACHE is a non-profit organisation consisting of 13 member institutions, that is committed to human resource development for sustainable agriculture in the region. The 16 programme participants came from Barbados, Dominican Republic, Guyana and Suriname.

Two factsheets on "Postharvest handling of golden apples" and "Postharvest handling and storage of hot peppers" were revised by staff in the Department of Food Production and put on the Department's and Ministry of Agriculture's websites.

Dr. David Dolly served as chairperson of the Multidisciplinary Committee for the advancement of the Farmer Participatory Approaches in the Ministry of Agriculture, Land and Marine Resources in Trinidad & Tobago. The committee has overseen the introduction of 14 *local Farmer Field Schools* - a new Extension methodology that uses advanced participatory approaches in the transfer of agricultural technology.





Based on data available as of Jan. 2007



# faculty of social sciences



The Faculty of Social Sciences continued to make positive strides, notwithstanding evident human and physical resource constraints.

Once again, the Faculty continued to have the largest enrolment on the St. Augustine Campus. Adding to the demands on our resources was the fact that we service hundreds of students from other Faculties who enroll in our courses. We are also responsible for the implementation of the Evening University and programmes offered at the Sir Arthur Lewis Community College (St. Lucia) and the Clarence Fitzroy Bryant College (St. Kitts). In addition to offering the Foundation course "Law, Governance, Economy and Society", we assist in the delivery of the BSc Management Studies programme, by distance, to

hundreds of students. In the last year, we also established new programmes in Criminology and Social Work.

Despite the challenges, we took steps to improve the effectiveness of our teaching. Through our revenue-generating activities, such as faculty consulting and Executive Training Programmes, we obtained funding which allowed us to hire additional staff, keeping class sizes manageable. In addition, we continued to provide individual tutoring for students in courses such as Mathematics and Statistics. Some courses were converted to an online format with the use of Web CT and we tested videoconferencing facilities between the St. Augustine Campus and regional Community Colleges. So far, these initiatives have met with success, as we seek innovative ways to improve course delivery.

Public service and community outreach have become staple elements of Faculty activity. At the same time, the pursuit of scholarship held pride of place through the research and publication efforts of staff and graduate students. However, in the coming year, one of the Faculty's main thrusts will be to reposition itself in the arena of graduate studies, particularly in terms of attracting more research students.

Our most immediate challenge will be to find space for lectures and tutorials to accommodate the growing student intake. As our new facility at Deane's House in St. Augustine illustrates, expansion is necessary. It is our duty is to facilitate this growth to the best of our ability, to ensure the widest possible delivery of quality tertiary-level education to our region.

Dr. Hamid Ghany
Dean, Faculty of Social Sciences

### **Students**

### **Enrolment**

Overall enrolment in the Faculty was an unprecedented 4000 students. The total number of students enrolled in the Department of Behavioural Sciences in 2005-2006 was 2189, which is over one-tenth of the student population at the St. Augustine Campus. Over 800 students were enrolled in the Department of Economics. Direct enrolment in the Department of Management Studies grew from 413 students in 1998-1999 to 1010 students in the 2005-2006 academic year, of which 395 were new students. Further, it is to be noted that despite the increased intake, this figure represented only a small fraction of the number of persons (1600) who applied for admission to the Department.

In addition to the direct enrolment figures given above, there continues to be an explosion in the demand for Management Studies courses from students of other Faculties, as well as from the other Departments in the Faculty of Social Sciences. As a result of this extra-departmental growth, enrolment in Management Studies undergraduate courses has grown from 4428 students in 1998-99, to 6993 in 2002-2003, and 9717 in 2005-2006 - an increase of 219% over the past 6 years.

### Graduation

Of 655 students graduating from the Faculty at the undergraduate level, over 70 students earned first class honours. Over 269 students completed their postgraduate degrees and advanced diplomas (200 of these students graduated with taught Master's degrees). About 20 of these students received distinctions.

## **Staff**

### Recruitment

The Department of Management Studies continued to encounter a major challenge in recruiting high calibre staff. As a result, of the 21 established posts in the Department, there are now seven vacancies. Although these positions were advertised locally, regionally and internationally and, in some cases, offers were made, the Department was unable to secure suitable persons due to the fact that the salaries offered were not competitive, particularly to foreign applicants, due to the immense workload staff would have to undertake because of very large classes.

## **Honours & Awards**

Mr. Simon Fraser received the "Best Paper" award for a paper presented at the proceedings of the Seventh Annual Global Information Technology Management (GITM) World Conference in Orlando, Florida, July 2006. (This paper was jointly authored with Dr. Lester Henry of the Department of Economics, The UWI St. Augustine).

Mr. Roland Baptiste was named an Honorary Member of the Human Resource Management Association of Trinidad & Tobago for his contribution to the field of Human Resource Management.

Dr. Derek Chadee was promoted to Senior Lecturer and granted a Senior Fulbright Award.

Dr. Innette Cambridge received the Leonard Cheshire Foundation Home 50<sup>th</sup> Anniversary Award 2005.

## **Appointments**

Dr. Marlene Attzs

Lecturer, Economics

*Dr. Kirk Meighoo*Lecturer, Sociology

### **Promotions**

Dr. Ann Marie Bissessar

Senior Lecturer, Behavioural Sciences

## **Programmes**

## **Undergraduate and Evening Programmes**

The Faculty continued to offer undergraduate programmes in the disciplines of Accounting, Economics, Government, Management Studies, Public Sector Management, Psychology, Social Work, Sports Management and Sociology. We also led the way in continuing to facilitate the implementation of the Evening University.

### **Distance Education**

A delegation from the Faculty of Social Sciences, led by the Dean of the Faculty, made one working visit every semester to the Sir Arthur Lewis Community College (SALCC) in St. Lucia and the Clarence Fitzroy Bryant College (CFBC) in St. Kitts, in order to interact with the Principals, staff and students of both Colleges. On these visits, the Dean was accompanied by the Deputy Dean (Distance Education and Outreach) and the relevant Administrative and Technical Service staff in the Faculty Office. These visits have led to a qualitative improvement in the nature of the delivery of the Faculty's courses through these franchise arrangements.

In March 2006 and April 2006, we piloted the use of videoconferencing facilities between the St. Augustine campus and the CFBC and SALCC. Ms. Aisha Wood-Jackson at the Campus Information Technology Services (CITS), Dr. Sonja Teelucksingh and Mr. Martin Franklin of the Department of Economics ably supported this endeavour. Both pilot tests were successful and the Faculty of Social Sciences will move to implement this technology formally in the 2006-2007 academic year.

## **Graduate Writing Assistance**

The Faculty launched the Graduate Writing Programme of the Faculty of Social Sciences in April 2006 which enabled graduate students to meet with writing experts at Deane's House, to discuss their theses, research projects and other assignments. This programme will be expanded in the 2006-2007 academic year.

### **New Courses**

A number of new courses and programmes were introduced in 2005-2006, including:

- Applied Social Psychology Seminars
- Campus-based Skills Development course replacing the Social Work Level I Practicum
- Computer Data Analysis Methods
- Critical Thinking and Practice for Social Workers
- Disability Studies
- Government Level III
- Information Systems Management
- Peoples and Culture of the Caribbean
- Psychology Level II (Evening University)
- Social Gerontology
- Sociology Level II (Evening University)

### **New Majors**

- Accounting
- International Tourism

## **New Certificate and Degree Programmes**

- Certificate Programme in Essential Mediation Skills
- BSc in Banking and Finance
- BSc in Psychology (Evening University)
- BSc in Sociology (Evening University)
- MPhil/PhD in Criminology and Criminal Justice
- MPhil/PhD in Psychology

In addition to the courses listed above, Dr. Adele Jones of the Social Work Unit, Department of Behavioural Sciences, developed a new and very timely Master in Social Work (MSW) Concentration for HIV/AIDS Prevention, Management and Treatment. The concentration involves a practicum and two courses: one in therapeutic assessment and supportbased social work and one in programme design and implementation.

Lastly, an MSc programme in Aviation Management was approved; the only programme of its kind in the Caribbean.

### **Infrastructure**

UWI Vice-Chancellor Prof.E. Nigel Harris, officially opened the Faculty's new facility (Deane's House) at #1 Deane Street, St. Augustine, in February 2006. This building will house the Mediation, Graduate Writing and Social Work Practice and Innovation programmes.

### Research

Here are only some of the research projects underway in the Faculty:

### Mr. Surendra Arjoon

- Corporate Governance and Ethics
- Emotional Intelligence and Ethics

### Dr. Dennis Brown

- The Situation of Ex-Prisoners in Trinidad & Tobago
- Feasible Alternative Natural Resource-Based Strategies for Enhancing Livelihood: Belize, St. Lucia and Grenada

### Mr. Terrence Brunton

- Data Flow Diagramming
- Relational Database Development

## Dr. Innette Cambridge

- Cognitive Behavioural Stress Management
- Disability Studies
- Gerontology
- Living Standards in Low Income Households
- Teaching Social Policy

### Dr. Derek Chadee

- Psychology of Fear (Funded by each of the participating universities - University of Central Florida, Hunter College (CUNY), Loyola University, Chicago)
- Social Psychology of Media Stereotyping and Jury Decision Making

### Mr. Martin Franklin

- Development and Poverty Reduction through Information and Communication Technology (ICT)
- Integrated Response of Health Care Systems to Rapid Population Ageing (on behalf of the Health Economics Unit - HEU)

### Dr. Hamid Ghany

- Public Perceptions of Parliament in Trinidad & Tobago, Dominica, Antigua & Barbuda and the Parliament of the Western Cape, South Africa (Commonwealth Parliamentary Association, UK and UWI, St. Augustine, Campus Research Grant)
- A Draft Constitution for Trinidad & Tobago (Discussion and research with Mr. Tajmool Hosein QC)

### Dr. Linda Hadeed

- Cultural Practices in Mediation in the Caribbean
- Conflict and its Resolution in Carnival in Trinidad & Tobago (Joint project with the University of Denver, Institute of Conflict Analysis and Resolution)

### Dr. Roger Hosein

- Relations between Wages and Prices in T&T
- Impact of Regional Economic Partnership Agreements

### Dr. Adele Jones

- SONDAI Project Addressing the Psycho-Social Implications of HIV and AIDS in the Caribbean
- Psycho-social implications of Mother to Child Transmission of HIV
- The Inter-relationship of Health, Migration, Work and Family life

### Dr. Althea La Foucade

- Statistical Report of the Working Poor in the Caribbean (with Dr. Ewan Scott)
- HIV/AIDS: Economic Prospects for the Caribbean

### Ms. Christine Laptiste

- Estimating the Economic Impact of HIV/AIDS in Saint Maarten, Suriname
- Health and Poverty and in the Caribbean (with Dr. Ralph Henry, et al)
- Impact of Gun Violence on the Economy of Trinidad
- Private Corporate Expenditure on Health Care in T&T

- Public Expenditure on Women in Jamaica (with Prof. Karl Theodore, Dr. Ewan Scott and Dr. Althea La Foucade)
- Sexual Behaviour Surveys: Guyana and Suriname (with Roger McLean)

### Dr. Acolla Lewis

 Strengthening Caribbean Tourism through Research and Human Resource Development

### Dr. Dhanayshar Mahabir

• Economic Analysis for Small Developing Economies

## Dr. Raghunath Mahabir

- CSME and Haiti
- Post-doctoral internship at the South Centre in Geneva

### Dr. Ronald Marshall

- Alcohol Studies and the Family in T&T
- Chronic Pain and 'Street Pharmaceuticals'
- Homelessness in the Caribbean and Canada
- Street Children around the world and in Canada

### Mr. Gregory McGuire

- The Making of the Gas Economy: 1991 to 2005
- Hydrogen Fuel Cells and Alternatives in the Transport Sector

### Mr. Roger Mc Lean

- Children and HIV (on behalf of the Health Economics Unit - HEU)
- Ageing in Trinidad (on behalf of the HEU)
- HIV and AIDS in the World of Work (Commissioned by the International Labour Organization)

## Mrs. Jacqueline Padmore, Dr. Kenneth Mease and Dr. Kathleen Valtonen

 Substance Use/Abuse among Primary School and Tertiary Studies in T&T (Commissioned by the National Alcohol and Drug Abuse Prevention Programme (NADAPP)

### Mr. Dennis Pantin

- Sustainable Livelihoods Approach to Poverty Eradication in the Caribbean
- Critical Review of the Cotonou Agreement from the Perspective of the African, Caribbean and Pacific Member countries (with Dr. Roger Hosein)
- Design and Structuring of the Regional Sustainability Fund (with Albert Vincent)

### Dr. Daphne Phillips

Social Problem Analysis and Policy

### Mr. Moolchand Raghunandan

The Public Service of Trinidad

## Dr. Bishnu Ragoonath

 Pursuing the Millennium Development Goals in the Caribbean

### Dr. Rajendra Ramlogan

- Judicial Review in the Commonwealth Caribbean
- Pursuing Development and Protecting the Environment (co-authored with Natalie Persadie)
- Industrial Relations in T&T and the Wider Caribbean

### Mr. Errol Simms

- Determinants of Export Performance (co-authored with Joni Jacob)
- International Entry Mode Choices of Manufacturing Firms in T&T (co-authored with Hima Singh)
- The Measurement of Service Quality

## Ms. Michele Sogren

 Children Orphaned and Vulnerable to HIV/AIDS (for the HEU, commissioned by UNICEF, Caribbean Regional Office)

### Dr. Sonja Teelucksingh

- Ecosystems, Societies, Consilience (Four-year collaborative research project, spearheaded by the Centre for the Economics and Management of Aquatic Resources (CEMARE) at the University of Portsmouth, UK)
- Assessing the Societal Cost for Best Fishing Practices and Efficient Public Policies
- Construction of Economic-Ecological Computable General Equilibrium Models

### Professor Karl Theodore

- Responding to HIV/AIDS Crisis: Towards a Determination of National and Regional Resources Mobilisation Capability
- Economic Feasibility Study of a Proposed National Health Insurance System in the British Virgin Islands

### Dr. Kathleen Valtonen

 The Societal Participation of Vietnamese Refugees: Case Studies in Finland and Canada (Paper selected by the world's largest web library Questia as No. 4 of 13 best in its own category)

### **International Links**

The extent and scope of faculty members' international linkages with universities abroad have grown to include joint research, visits, collaboration in teaching and curriculum development. Our collaborators include the State University of New York, University of Denver, Florida State University and Barry University (USA), University of Kwa-Zulu Natal (Durban, South Africa), University of Toronto, York University (Canada), and University of Helsinki (Finland), to name a few.

Mrs. Jacqueline Padmore developed a policy for the exchange of postgraduate students on international Social Work practicum placements. Two international field education placements were organized in St. Vincent and South Africa during the year in review.

Dr. Innette Cambridge hosted representatives from Leonard Cheshire International (UK) in June 2006. The visit was a forum for discussions on the further development of Disability Studies at UWI.

A visit by Monsieur Frantz Remy of AMDOR (Association Martiniquaise pour l'insertion et la promotion de L'Âge d'Or) was the first step toward establishing student and lecturer exchanges and collaboration in the mounting of common Social Policy programmes.

## sondai students

When does the bearer of bad news bring hope? When the knowledge and support they offer empowers you to overcome the darkness of your situation. As SONDAI student Marva DeFreitas-Charles put it: "Hope is the light that we bring in the midst of the darkness."

SONDAI is a project that was born out of the grim reality of the HIV and AIDS epidemic in the Caribbean. It is an initiative to improve social workers' ability to effectively address the related psycho-social issues. Dr. Adele Jones and Mrs. Jacqueline Cameron-Padmore identified this need over two years ago and set about developing it within The UWI St. Augustine's Social Work programme.

They are now members of SONDAI's management team, along with former Project Coordinator and Assistant Lecturer, Mrs. Karene-Anne Nathaniel-de Caires. "SONDAI," de Caires explains, "pulls together social work practice, teaching, research, as well as regional and international collaboration in the area of HIV and AIDS."

Students in the Social Work programme can now focus on this area through signing up for elective courses and embarking on a local, regional or international practicum. So far, these placements have included working with the St. Vincent and the Grenadines' National AIDS Secretariat and

related organizations on HIV-related child and youth services. One MPhil student, Tracie Rogers, is assisting workers at a family clinic in Durban, South Africa, through a collaborative agreement between the Faculty of Social Sciences and the University of Kwa-Zulu Natal.

Interestingly, the project's name is a South African word for "keep pushing forward", which is precisely what the SONDAI team is doing, from their new location at Deane's House and with the support of the Faculty of Social Sciences. Because in the face of all the challenges, they remember what is at stake.

### **Outreach**

Members of academic staff are involved in a plethora of outreach activities. Only some of these are highlighted on the following pages:

### Alcohol Use

Dr. Steve Rollocks delivered a presentation on "Alcohol use and attitudes towards alcohol use among adolescents in Trinidad" at the Psychiatric Association of Trinidad & Tobago Conference in October 2005 and at the Sir Arthur Lewis Institute of Social and Economic Studies (SALISES) Conference in Barbados in 2006.

### Caribbean Studies

The Faculty, led by Dean Hamid Ghany, facilitated the return of the Caribbean Studies Association (CSA) from North America by providing office space in the Faculty of Social Sciences Building. The Faculty also provided financial support for hosting of the 31<sup>st</sup> Annual CSA Conference in Trinidad from May 29-June 2, 2006.

## Counseling

Guest lecturer Dr. Roy Moodley of the University of Toronto facilitated a seminar/workshop in April 2006, on "Multicultural Counseling and Psychotherapy: Locating 'psychological distress' and formulating a 'treatment' plan". The workshop, organised by Dr. Ronald Marshall, is part of an ongoing project to establish a Multicultural Health Education and Health Promotion Centre on the St. Augustine Campus.

### Cricket

The Third Sonny Ramadhin Distinguished Cricket Lecture was hosted on May 31, 2006. Mr. Sunil Gavaskar, the renowned former Indian test cricketer and captain, was the feature speaker. There was wide local, regional and international media coverage of the event. As with the previous year, the lecture was recorded and put on DVD as part of the Faculty's archival and promotional material.

## **Democracy**

At a Seminar hosted by the Department of Behavioural Sciences, Dr. Kirk Meighoo delivered a feature presentation on "Why Democratic Institutions Don't Work in Trinidad & Tobago, and Some Possible Solutions" (with Supreme Court Justice Peter Jamadar). The presentation was based on his new book with Justice Jamadar: Democracy and Constitution Reform in Trinidad and Tobago. Kingston: Ian Randle Publishers (2006).

### Disabled Children

A Christmas party for 1000 children was organised by Dr. Ann Marie Bissessar and her team of staff and students, in December 2005. This is part of her wider plan to establish a home for disabled children in the St. Augustine/Tunapuna area.

### **Finance and Development**

Spearheaded by Dean Ghany, a Graduate Student Forum was held for students of the Institute of International Relations (IIR) on the topic of "Development". The Faculty funded the event and invited Professor Neville Duncan of The UWI Mona and Professor Kari Levitt, Professor Emerita of Economics at McGill University in Montreal, Canada, to participate in the one-day conference, which is carded to become an annual event.

The Faculty helped host the "Re-Mapping the Americas" Conference at The UWI St. Augustine campus in October 2005, in collaboration with the University of Alberta, Canada. The conference proceedings were published by the University of Alberta Press.

The Department of Management Studies hosted the 2<sup>nd</sup> Biennial Conference on "Business, Banking and Finance" from May 1-3, 2006. This conference was chaired by Mr. Errol A. Simms of Management Studies and held in partnership with Caribbean Money Market Brokers (CMMB) and the Central Bank of Trinidad & Tobago. Conference participants came from the USA, UK, India, Mexico, Jamaica, Belize, St. Kitts-Nevis, Barbados and Trinidad & Tobago. There were also several presenters and participants from the Caribbean Development Bank. The keynote speaker was Dr. Agustín Carstens, Deputy Managing Director of the International

Monetary Fund. The feature address was delivered by the Honourable Patrick Manning, Prime Minister of Trinidad & Tobago.

#### **HIV & AIDS**

The SONDAI project is a multi-pronged Social Work Response to HIV and AIDS involving teaching, research, practice, international exchange and dissemination. It embodies a multi-disciplinary, multi-agency partnership approach incorporating the disciplines of Social Work, Psychology and Health. SONDAI operates in collaboration with the University of KwaZulu-Natal, Durban, South Africa, to learn directly from the experiences of scholars and AIDS activists in Africa. As part of the programme, postgraduate Social Work students were placed in selected agencies in Trinidad, the Caribbean and South Africa, where they were instrumental in developing new services for People Living with HIV and AIDS (PLWHA).

# **Immigration**

In March 2006, a team comprising Ms. Michele Sogren, Dr. Adele Jones, Mrs. Jacqueline Padmore and Dr. Linda Hadeed, planned and conducted a joint Barry University/UWI Symposium in Miami on "Social Work Interventions with Caribbean Immigrants", with special focus on immigrants living in the Miami/Broward County area.

## **Inequality and Ethnicity**

Professor Ralph Premdas was invited to give the bi-annual Isaac Dookhan Memorial Lecture at the University of the Virgin Islands, St. Croix, in March, 2006. He is the author of a new volume *Inequality and Ethnicity* to be published by Palgrave, Macmillan, and has been appointed to the editorial board of a three-volume *Encyclopedia on Race and Racism* to be published by Harvard University Press.

### **Justice**

"A Journey in Restorative Justice" was a one-day symposium held on December 6, 2005 at The UWI Learning Resource Centre. This event was part of a collaborative educational partnership with the University of Denver and was funded by the US State Department. The symposium featured Professor Mark Umbreit, Founding Director of the Center for Restorative Justice & Peacemaking at the University of Minnesota, School of Social Work.

The Faculty also helped host the International Conference on Crime and Criminal Justice in February, 2006.

## **Social Policy**

A Social Policy seminar was organised by the Level III Social Policy students on the topic, "Social Implications of the CSME". A Round Table Discussion on Developing the Curriculum for Social Policy was held in May 2006 and included key stakeholders, as well as NGO and Government policymakers from the international and local community.

## **Revenue Generating Activities**

The Faculty continued to generate reasonable revenue flows from a variety of activities related to its expertise, research and teaching. One aspect of this was seeking after opportunities for consultancy. For instance, a training programme for the Trinidad & Tobago Regiment, due to begin in the 2006-2007 academic year, was secured through the collaboration of the Business Development Office. Here are a few additional means through which the Faculty generates revenue:

## Management Training

A Memorandum of Understanding was signed between the St. Augustine Campus and Unilever Caribbean Ltd. to deliver a Professional Certificate Programme in Leading Edge Customer Management to sales staff on an in-house basis, for a negotiated fee. The graduates from this programme were acknowledged in a ceremony held on January 10, 2006 in the Faculty Lounge.

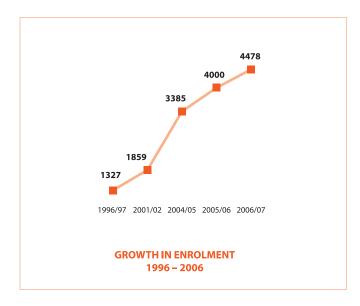
## Summer Programme

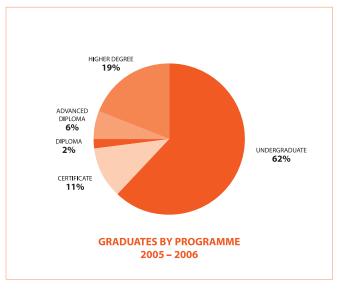
The Faculty continued to offer courses and programmes in the period from May-August, as part of its wider strategy to ensure access to these courses and programmes to a wide cross-section of the public.

# **Distinguished Visitors**

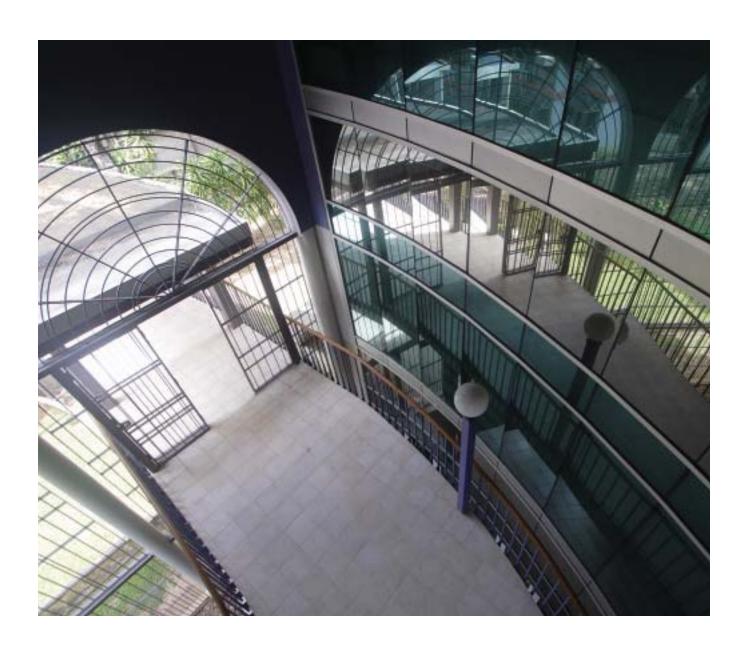
The Faculty welcomed numerous distinguished visitors over the year in review. These included a delegation from the World Bank and two members of the CARICOM Secretariat, who visited Trinidad in May to monitor and review the five implementing agencies for the World Bank Project: "The Pan Caribbean Partnership against HIV/AIDS project (PANCAP), in support of the Third Phase of the Multi-Country HIV/AIDS Prevention and Control Program for the Caribbean".

See the "Health Economics Unit" listing in the *Centres and Units* section of this Report for more information on these and other visitors to the Faculty.





Based on data available as of Jan. 2007



# centres and units

# Ansa McAL Psychological Research Centre

The Psychological Research Centre continued to further its rigorous research agenda this academic year. Work is underway in the areas of the psychology of fear of crime, media perception, stereotyping and jury decision-making. As a result, several papers have been published in well-known journals and an edited book in Social Psychology will be available to students in the academic year 2006-2007.

Also, foremost in meeting the Centre's mandate for developing the Psychology programme on campus, is the proposed introduction of a Specialisation in Psychology, as well as the creation of a Psychology Laboratory. Student support was also a key focus of the Centre and the driving force behind its workshops and training seminars.

The Research Centre has continued to strengthen and broaden its international research linkages, culminating with the establishment of a formal exchange programme between The University of the West Indies and the State University of New York at Albany. The Centre also has institutional relations with the University of Sheffield, University of Central Florida, Armstrong University and Hunter College (CUNY), among others.

A number of research projects have been undertaken which have not only generated income to support staff at the Centre, but have key academic and social significance for the national community. These include the ANSA McAL/Sunday Guardian opinion polls, telecommunications studies, media research, HIV/AIDS research, environmental awareness studies, a gambling behaviour and social norms study and attitude satisfaction surveys.

## **Students**

Eighteen students were awarded first, second and third Tatil prizes for top-quality research projects in Psychology.

## **Programmes**

The Psychological Research Centre continues to support undergraduate and postgraduate programmes in Psychology. In the 2005-2006 academic year, the graduate course in Advanced Statistics and Research Design was offered to graduate students in Psychology as well as Criminology.

Also, during this period, the Centre assisted in the development and proposal of a Specialisation in Psychology. This Specialisation allows Psychology Majors the opportunity to do more theoretical courses within the discipline.

Student workshops organised by the Centre included:

- Structural Equation Modeling (SEM) Analysis Workshop conducted by Professor Paul Dion (October 2005)
- Statistical Package for the Social Sciences (SPSS)
   Training Seminar, Faculty of Social Sciences
   Computer Laboratory (February 2006)

#### Research

# **Completed Projects**

- Phase I of the Social Psychology of Fear of Gangs study
- Attitudes towards Domestic Violence
- Phase I of the Fear and Selective Attention study

# **Ongoing Projects**

Psychology of Fear of Crime - A cross-cultural study on fear and anxiety has been completed and a longitudinal study investigating psycho-strategies for coping with fear in crime hotspots in Trinidad is underway. This is an ongoing, multidisciplinary research programme in collaboration with Hunter College (CUNY), University of Sheffield, and the University of Central Florida.

Social Psychology of Media Stereotyping - This study involves a media content analysis of twelve newspapers. The data will be triangulated with a survey data set to assist in explaining high fear of crime levels and the stereotyping of certain groups in society. Experiments will be undertaken to assess reactions to stimulus material from the media. Colleagues at Armstrong University and Hunter College (CUNY), are developing similar research projects.

Psychology of Media Perception - A content analysis of newspaper articles is being done in order to assess whether there is a stereotypical representation of ethnic groups, youth, crime and certain geographical areas. A survey and experimental study on the impact of the media on perceptions will follow.

Expansion of Study on Fear and Selective Attention - The first phase of this research has been completed, addressing an under-researched cross-cultural topic: The shaping of public perceptions by the media. It explored the implications of the hypothesis that the emotional state of "fear" serves an evolution-developed function, in automatically cueing people to focus attention on potentially life-threatening stimuli. The focus of the study was on fear of a potentially chronic threat such as crime. Two studies were each jointly conducted at Hunter College in New York City and The University of the West Indies in Trinidad.

This study has been expanded to examine the reactions of both adults and children to folk tales; those urban and cultural stories that are often told by friends and parents to convey prescribed morals and societal expectations. Most significantly, unlike the news media studies, this research enables an examination of young children to determine if the "fear implies importance" connection exists at an early age.

Social Psychology of Jury Decision Making - Transcripts and other materials from the "voir dire" jury selection in the controversial Nankissoon Boodram (Dole Chadee) case have been obtained from the Director of Public Prosecution's Office. In this court case, the "voir dire" system of jury selection was used for the first time in Trinidad & Tobago's history. In this study, a content analysis of these transcripts will be done to assess potential juror bias. Experimental studies will follow.

# **New Projects**

HIV/AIDS and the Media - Studies the impact of the media on attitudes and behaviour. This research assesses stigmatisation, discrimination, knowledge of transmission of HIV and the use of the media. A sample size of 1800 respondents will be approached in both Trinidad & Tobago.

Environmental Awareness - Assesses respondents' attitudes, cognition and behaviour towards the environment. Strategies towards change will be proposed. A survey method will be used in Trinidad & Tobago.

Social Norms - Delves into causes and effects of the breakdown of social norms and values in the community and the resulting deviant behaviour. This can provide meaningful academic insight into the way we conceptualise behaviour, as well as provide meaningful information for policy making. The Centre will be undertaking an in-depth study in this area using the survey method complemented by a number of qualitative techniques.

Gambling - The growth of legal gambling in many countries has resulted in both benefits and costs to those societies (Alberta Alcohol and Drug Abuse Commission, 2003). In particular, the workforce of many countries has been affected negatively through compulsive gambling, both after working hours at various gambling locations and during working hours through compulsive online gambling. This project utilises a host of research methods (surveys, in-depth interviews, focus groups and participant observation) to study this serious social issue.



#### **International Links**

In today's world, the ANSA McAL Psychological Research Centre believes that its research and teaching agendas should reflect global political, economic and social realities. In light of this, the Centre facilitated the establishment of a formal exchange between The University of the West Indies and the State University of New York (SUNY) at Albany. A fourmember delegation from SUNY Albany visited the Campus from January 16-20, 2006, to discuss the possibility of collaboration, including student and faculty exchanges, between the two campuses. The delegation was led by James Pasquill, Director of Study Abroad and Exchanges and included Professor Michael Ellis of the Counseling and Psychology Department, and Professors Colbert Nepaulsingh and Glyne Griffith of the Latin America and Caribbean Studies Department.

Several areas were identified for collaboration. These included student exchanges in counseling and psychology, as well as the possibility of developing a semester-long study abroad programme at The UWI St. Augustine Campus, for students from the Latin America and Caribbean Studies programme in Albany. The SUNY team also raised the possibility of sending high school teachers to undergo training at The University, in order to strengthen their diversity skills.

The Vice-Chancellor signed a Memorandum of Understanding on behalf of The University of the West Indies, for collaboration with the State University of New York (SUNY). Undergraduate and postgraduate Psychology students are currently spending semesters abroad at SUNY Albany.

The Centre's international collaborative research links include:

- Hunter College, USA
- University of Nic, Serbia
- University of Sheffield, UK
- University of Central Florida, USA
- Loyola University, USA

#### **Outreach**

Significant effort was devoted to completing a book entitled "Current Themes in Social Psychology", to be published by The UWI Press in the 2006-2007 academic year. This book presents current theoretical and empirical information on areas of social psychology. Contributors to this publication are attached to universities across the world, including universities in Great Britain, the United States, Germany, the Caribbean, Israel, Serbia and Spain. Such diversity makes for a richer understanding and appreciation of the discipline of social psychology by undergraduate and graduate students, as well as academics.

The book was edited by Dr. Derek Chadee, Head of the ANSA McAL Psychological Research Centre and Senior Lecturer in The UWI Department of Behavioural Sciences and by Dr. Jason Young, Associate Professor, Department of Psychology, Hunter College, City University of New York.

# **Revenue Generating Activities**

The following are a list of the Psychological Research Centre's revenue generating activities:

- Trinidad Guardian Polls, August 2005-July 2006
- Digicel Telecommunications Attitude Survey,
   December and January 2005
- Digicel Focus Group Study on Attitudes, January 2006
- Trinidad Guardian Newspaper Readership Survey in Trinidad, March 2006
- Trinidad Guardian Newspaper Readership Focus Group Research, May 2006
- Introduction to SPSS Training Seminar, Central Statistical Office, June 2006
- Customer Satisfaction and Attitude Survey, Ministry of Works and Transport, July 2006
- Customer Satisfaction Focus Group Research, Ministry of Works and Transport, July 2006-August 2006

# **Distinguished Visitors**

#### **Professor Jason Ditton**

Professor of Criminology Director, The Scottish Centre for Criminology, Glasgow, Scotland

#### **Professor Michael Ellis**

Professor of Psychology, State University of New York at Albany

#### Dr. Glyne Griffith

Associate Professor of English, State University of New York at Albany

#### Professor Linda Heath

Professor of Psychology, Loyola University, Chicago

#### Mr. James Pasquil

Director, International Office, State University of New York at Albany

## Dr. Jason Young

Associate Professor of Psychology, Hunter College, City University of New York

# Arthur Lok Jack Graduate School of Business

Several major initiatives were undertaken by the School of Business in 2005-2006, making it a pivotal year in its development. Much of the radical shift in operations was related to settling into a new "home" at Mt. Hope. The obvious physical changes were matched by structural and operational ones. The Academic Unit was split into Faculty and Administration Units for more effective service delivery. There was a renewed focus on Student & Alumni Services, to enhance the overall student experience. A Communications Unit now manages the School's image and reputation and there is also a department solely responsible for managing its infrastructure.

These steps were a natural offshoot of the School's growth in scale and complexity. For instance, the student population has more than doubled in the last five years to about 700 persons and open enrolment programmes now represent a significant share of student intake.

To boost revenue generation apart from student fees, incompany executive training offerings have been strengthened and two new consultancy units were established.

As a result of these developments, the Graduate School of Business is therefore now positioned to make a groundbreaking impact on the local, regional and international business landscape.

# **Programmes**

During the year in review, the Academic Unit was restructured for operational efficiency. A Unit Head was appointed, supported by two deputies for MBA programmes and Research degrees respectively. This model has been further refined resulting in a separation of the functions of the unit into Academic Faculty and Academic Administration. The Faculty Unit is led by Dr. Colin McDonald and the Administration Unit, by Ms. Claudia Drakes. The Administration Unit has been relocated to the ground floor of the building to facilitate accessibility to students.

#### Research

The Graduate School of Business has taken steps to cultivate a strong culture of research, engaging in several important research initiatives that underscore the School's relevance to the business community. These include:

- A quarterly Corporate Confidence Index (CCI) which
  provides the most up-to-date information on the
  business outlook for Trinidad & Tobago and the
  global economy. The CCI is disseminated to over 500
  CEO's and Senior Executives, as well as being
  published in the media.
- An alliance with the Fraser Institute of Canada on the annual Economic Freedom of the World Report.



 Partnership with Switzerland's World Economic Forum for the production of the annual Global Competitiveness Report (GCR). The GCR ranks more than 120 countries and is the most recognised authority on business competitiveness in the world. Its results are keenly anticipated by the local media, economists and industry observers.

## **International Links**

In the last year in particular, the focus has been on the "internationalisation" of the Business School through its academic offerings, selection of faculty and structured student experiences. Spanish and Mandarin Chinese have been added to the curriculum. The School hosted a Chinese Culture Week and plans are well underway for a Latin Week early in the following year.

Overseas study trips have been introduced to give students functional capabilities in foreign business environments. Students have been taken to Barbados on an overseas networking initiative and to Caracas, Venezuela, for language and cultural sensitisation. MBA students recently returned from two weeks in China. They will also be taken to other countries in the Far East and elsewhere, as the current business climate demands a global mindset. Moreover, the School will continue to strengthen its international student and faculty base, and promote multicultural awareness year round, making this a truly international business campus.

#### Outreach

The annual *Distinguished Leadership Series* took place in January 2006, featuring Professor Kathleen Eisenhardt from Stanford University. This was followed by the *Women in Leadership* Series in May 2006, with Shoya Zichy, author of the internationally acclaimed "Color Q" model.

Two *Ideas Forums* were hosted during the year. In May, Dr. Anirban Mukhopadhyay, Assistant Professor of Marketing, Hong Kong University of Science and Technology, facilitated a forum on "Cultural Dynamics of Consumer Behaviour: Current Research and Implications for Marketers." Then in July, a forum on "A Common Currency for the Caribbean: Implications for Individuals, Businesses and Governments" was led by Dr. D. K. Malhotra, Professor of Finance, School of Business Administration, Philadelphia University (USA).

# **Revenue Generating Activities**

The School's training and consulting services have evolved, with two new centres being introduced in the last year:

# Centre for Strategy & Competitiveness (CSC)

The newly-established CSC focuses on research-based consulting. It is part of the School's efforts toward a more integrated institution. The experiences and knowledge gained from CSC consultancies, will form the basis of research papers and case studies which can feed directly into the classroom for teaching purposes and help keep our academic offerings relevant to the business community.

The CSC's offerings include research-based consulting and training in the following areas:

### Competitiveness Studies

- National/Sectoral Strategic Plans and Reviews
- Community Competitiveness Studies
- Cluster Development
- Business Climate Studies
- National Branding

# Strategic Management and Measurement Systems Training and Consulting for both the Private and Public sectors

- Strategic Plans and Reviews
- Private Sector Strategy Mapping and Scorecard Development
- Public Sector Output-based Performance Budgeting
- Firm-level Branding

# Centre for Leadership Assessment and Development (CLA&D)

In June 2006, the Centre for Leadership Assessment and the Centre for Leadership Development merged to form a more holistic operating model called the Centre for Leadership Assessment and Development (CLA&D). The merger was as

a result of the value that assessments would lend to the consulting, training and development interventions for our clients. CLA&D now offers clients a more diagnostic/clinical approach to their business development interventions.

The Centre has relinquished responsibilities for non-leadership and soft skill interventions. The new focus has birthed a completely new product suite aimed at addressing the challenges faced by organisational and institutional leaders (Executives, Senior Managers, Middle Managers, Junior Managers and Supervisors) in their environment.

## Centre for Training and Development (CTD)

Over the last year, the CTD continued to deliver all Custom and Open Enrolment Programmes as well as Executive Education. The final formalisation of the Centre took place, with six subdivisions becoming the focus areas for all of the Centre's training programmes. These subdivisions are Executive Education, Events Management, Project Management, Finance, Professional Development and Skills Development. During the year in review, the Centre delivered a total of 93 training programmes, reaching approximately 1,891 persons from private and public sector companies.

# **Caribbean Centre for Monetary Studies**

The Caribbean Centre for Monetary Studies (CCMS) is a collaborative undertaking between The University of the West Indies and regional Central Banks. It is designed to undertake independent research of an empirical and theoretical nature, in the areas of money and finance. To this end, a revised research agenda was adopted during the course of the year in review, to place greater emphasis on issues arising from recent developments in the region and in the global economy.

In keeping with its mandate to service the regional objectives of the Central Banks, the Centre continues to monitor regional convergence indicators and to present reports at the semi-annual meetings of CARICOM Central Banks.

An important objective of the CCMS is to reach out to the public by providing forums for discussions and making its research available in published form. The theme of this year's 10<sup>th</sup> Senior Level Policy Seminar, held in Trinidad & Tobago, was "Financial Stability in the Caribbean Single Market and Economy (CSME): Opportunities and Challenges".

The Centre's 37<sup>th</sup> annual Conference on "Regional Economic Integration: Issues and Challenges", hosted in Nassau, Bahamas, attracted a wide range of people from both the public and private sectors and has become the most important economics conference in the region.

To add to its growing stock of publications on monetary and financial issues, the Centre distributed some additional material during the course of the year. As an outlet for academic research, the Centre took the lead, in collaboration with other Departments at the St. Augustine Campus, in producing the new *Journal of Business*, *Finance and Economics in Emerging Economies*.

The CCMS is being restructured to include a larger number of stakeholders and will assume a more explicit training component to meet the needs of the region's growing financial sector. Its revenue earning capacity will also be enhanced. The new structure is expected to take form in the early part of 2007.

#### **Students**

Anthony Birchwood (CCMS) supervised two MSc Economics Candidates in 2005-2006. They completed the following projects:

# Kester Guy: A Comparison of Liquidity and returns in Trinidad & Tobago

The main focus of this paper was to determine the impact of market-wide liquidity on stock market returns in Trinidad & Tobago; assessing the importance of liquidity on the pricing of companies. Although the conclusion that there is an inverse relationship between liquidity and stock returns is well accepted in developed stock markets, the relationship



in emerging markets is not so apparent. Using time series data obtained from the Trinidad & Tobago Stock Exchange (TTSE), along with macroeconomic data, suitable proxies were employed in order to identify this relationship.

# Michelle Campbell Gill: Price Discovery in the Trinidad & Tobago Fixed-Rate Government Bond Market

This study reviewed the underlying Price Discovery (PD) process in the Trinidad & Tobago fixed-rate government bond market, with an empirical examination of the market, the efficacy of the single-price auction system and the factors which influence bids. Using closed and open-ended questions, interviews were conducted with representatives of key supervisory/management entities in the government securities market and Government Securities Intermediaries (GSIs). The findings pointed to weaknesses in the existing institutional framework, factors which influence GSI's bid prices, and the inefficiencies of the dual underwriting and single-price auction trading mechanisms that currently exist.

## **Staff**

On December 31, 2005, *Dr. Clement Jackson's* contract as Executive Director of the CCMS came to an end. He was replaced by Professor Ramesh Ramsaran who is currently the Acting Executive Director of the Centre.

*Mr. Augustine Nelson* was contracted by the Centre for the period March 1-August 31, 2006, as a Research Fellow. He has not sought a renewal of his contract.

#### Research

The Centre's current major research areas focus on a range of issues that are of immediate and future concern to policy makers. These include inflation, stabilisation and the entire gamut of issues dealing with inflation targeting via rules of discretionary management. There are also questions related to the monetary transmission mechanism in the context of new monetary policy frameworks. The management of flexible exchange rate regimes and the effects of liquidity and capital flows continue to pose challenges. Convergence issues and monetary union remain under active policy consideration, while the interactions between fiscal policy, monetary policy and the current account balance are ongoing concerns for the region. Longer-term issues include the performance and regulation of pension funds, development of bond markets, efficient mortgage markets and the creation of efficient settlement mechanisms for insurance claims that include principles of fairness. Members of staff involved in active research include Mr. Anthony Birchwood and Mr. Dave Seerattan.

## Major Research Areas

- Convergence Issues
- Exchange Rate Behaviour
- Financial Markets, Institutions and Interest Rates
- Monetary and Financial Sector Issues
- Statistical Issues

#### **Outreach**

## 37th Annual Monetary Studies Conference

The CCMS held its 37<sup>th</sup> Annual Monetary Studies Conference in conjunction with the Central Bank of the Bahamas over the period November 1-4, 2005. The venue was the British Colonial Hilton in Nassau, Bahamas. The Conference theme was "Regional Economic Integration: Issues and Challenges" along with the sub-themes of Fiscal Policy, Structural Reform and Monetary and Financial Sector Policies. There were over 35 participants and a total of 27 papers were presented. The Centre presented two papers entitled: "Economic Convergence in the Caribbean Community" by Mr. Anthony Birchwood (Research Fellow) and "Managing the Risk Associated with Income Smoothening through Social Insurance: Some Challenges for the Small Island State of Trinidad & Tobago" by Mr. Leslie Charles (Junior Research Fellow).

# Report on Economic Performance and Convergence of the CARICOM Region

The CCMS continues to strengthen its relationship with the CARICOM community, and in particular the CARICOM Council of Central Bank Governors. To this end, the "Report on the Economic Performance and Convergence of the CARICOM Region" was researched and presented at the Council of Central Bank Governors meetings in Belize in December 2005 and in Guyana in May and November 2006. These reports were presented by Mr. Anthony Birchwood and Mr. Dave Seerattan respectively.

The reports cover the most current base line macroeconomic developments in the region, and examine the movement of regional economies towards the attainment of convergence targets that have been laid down by CARICOM Heads of Government. They include inflation, exchange rates, import cover, fiscal stance and debt service ratio. The report forms the basis upon which the decision is made whether the region is ready for a single currency. It is reviewed bi-annually by the CARICOM Council of Governors and the CARICOM Heads of Governments.

# A Review of Economic Convergence of CARICOM Member Countries

The Centre completed a review of the progress of the CARICOM region towards the attainment of convergence targets since 1991, when the CARICOM Single Market and Economy was established. This report was mandated by the CARICOM Council of Central Bank Governors on behalf of the CARICOM Council of Finance Ministers. It was part of a wider study done by the Centre, which made its submission in August 2005. The report was prepared and presented by Mr. Anthony Birchwood.

## Report on Regional Stock Exchange Mechanisms

Following a directive from the Prime Minister of Barbados, the CARICOM Council of Governors requested that the CCMS undertake a report exploring the choice between a Single Regional Stock Exchange and a system of inter-connectivity between the existing stock exchanges. A preliminary report was submitted by the Centre in May 2006 and presented by Mr. Anthony Birchwood at the meeting of the Committee of CARICOM Central Bank Governors.

## **Baseline Study on Mutual Funds**

In April and October 2005, respectively, the Central Bank of Trinidad & Tobago and the Trinidad & Tobago Securities and Exchange Commission (SEC) requested that the CCMS do a "Baseline Study of The Collective Investment Vehicles Industry in Trinidad & Tobago, 1993-2004." This report was an essential component shaping guidelines by the SEC to regulate the industry and for the updating of mutual funds legislation. It was completed by members of the CCMS and submitted in October 2005. In light of the request, Mr. Dave Seerattan submitted a report on "Pricing, Valuation and Performance Measurement by Collective Investment Schemes in Trinidad & Tobago", while Mr. Anthony Birchwood submitted reports on "Governance Practices of Mutual Funds by Collective Investment Schemes in Trinidad & Tobago" and "Risk and Portfolio Management Practices by Collective Investment Schemes in Trinidad & Tobago".

# **Revenue Generating Activities**

The CCMS hosted its 10<sup>th</sup> Annual Senior Level Policy Seminar on the theme "Financial Stability in the Caribbean Single Market and Economy: Opportunities and Challenges" at the Cascadia Hotel Conference facilities in Trinidad & Tobago, on Friday April 28<sup>th</sup>, 2006. This year the Seminar's main subthemes included:

- The Dynamics and Costs of Financial Instability
- Conglomeration, Financial Innovation and the Potential for Instability
- Financial Integration, Rapid Financial Development and Contagion
- Current Negotiations on BASLE II: Implications for the Growth of the Regional Financial Sector

Mr. Charles Freeland, Deputy Secretary General, Basle Committee on Banking Supervision, Bank for International Settlements, Basle Switzerland, was the main presenter. He is the lead expert on Basle II and its implications for the growth and stability of financial systems around the world.

The Seminar attracted 48 participants, predominantly from local organisations, more than 60% of whom were paying participants.

# Centre for Criminology and Criminal Justice

The Centre for Criminology & Criminal Justice (CCCJ) accomplished another successful year in terms of its academic/teaching programme, research and publications output, public policy development, expansion of its external linkages and outreach efforts.

The Graduate Programme (MSc, MPhil and PhD) in Criminology and Criminal Justice, had a successful second year of operation. The Faculty of Social Sciences met the demands of increased student intake by expanding the Centre's teaching and support staff.

The Centre continued to receive a growing number of requests from Government and related local and regional agencies, for professional advice, collaboration and services to deal with rising crime and other social issues. These requests were accommodated as far as possible given limited staff and resources.

The CCCJ continued to expand its research and policy development programme in the areas of crime prevention and management, penal reform, police practice, police reform and juvenile delinquency in schools. The full involvement of graduate students in these areas was encouraged as a means of developing their thesis work and professional skills.

From February 8-11, 2006, the highly successful 4<sup>th</sup> International Conference on Crime and Justice in the Caribbean was held in collaboration with the Ministry of the Attorney General, Government of the Republic of Trinidad & Tobago. Following the conference, over thirty of the key papers presented were published in a book entitled, *New Challenges in Crime and Justice: From Research to Policy*.

In February 2006, the Centre participated in a three-day United Nations Conference on Crime Prevention, Rehabilitation and Social Development: Enhancing the Capacity of Civic and Governmental Organisations (South-South Project) in Cape Town, South Africa. Then in June 2006, the Centre presented a panel session at the 31st Annual Meeting of the Caribbean Studies Association (CSA) in Port of Spain, Trinidad, on the theme "Crime and Public Policy: A University Dilemma."

Emphasis was placed on publication output during the 2005-2006 academic year. The Centre continued to publish the region's only international criminology journal, edited by Professor Deosaran, called the *Caribbean Journal of Criminology and Social Psychology*, (ISSN 1025 5591). The first text book on Caribbean Criminology entitled *Crime*, *Delinquency and Justice: A Caribbean Reader*, edited by Prof. Ramesh Deosaran, will be released in January 2007 by Ian Randle Publishers, Jamaica. Prof. Deosaran also completed a manuscript on *The Press, A Fair Trail and The Jailed Editor*, for publication in 2007.

#### **Students**

Efforts continued to be made to encourage and retain graduate students as Tutors, Teaching and Research Assistants and Part-Time Lecturers. Many currently enrolled students are attached to the Centre for Criminology and Criminal Justice in this capacity. They are actively involved in many of its research and policy development projects as part of their own graduate work and as a means of enhancing their professional development and capability.

## **Staff**

#### **Appointments**

Three new Faculty members were hired to teach Criminology and Criminal Justice.

#### **Honours and Awards**

Prof. Deosaran was presented with an Award of Excellence by the San Juan Business Association, in recognition of services rendered to San Juan, Barataria and the nation in the field of education. He also received the Icons (Historymakers) Recognition Award from the Hilton Trinidad, in recognition of outstanding community service, public service and contribution to education.

# **Programmes**

The Graduate Programme (MSc, MPhil and PhD) in Criminology and Criminal Justice, formally launched in November 2004, had another successful year, with enrolment once again beyond capacity. From all indications, enrolment will continue to increase in the next academic year.

#### Research

# Completed and Ongoing Projects Reducing Youth Deviance (Phase Four)

This longitudinal tracer study (2001-2007) is the first of its kind in Trinidad & Tobago and the Caribbean. It is geared toward establishing a scientific database on youth deviance using a randomly selected nationwide sample from 28 secondary schools, as students move through the school system from Form 1 (Phase One) to Form 3 (Phase Two), Form 5 (Phase Three) and two years later (Phase Four). The results of the investigation will enable teachers and school administrators to detect early signs of deviance, providing both administrators and policy makers with an indigenous prevention module known as "A Model for Healthy Schools". This module is being designed to incorporate guidance, rehabilitation, training and school management strategies for deviance reduction.

# Prisoner Recidivism in Trinidad & Tobago: Towards Reduction, Rehabilitation and Reform (Phase Three)

This project has provided benchmark data on the status of the prison population in all of the country's adult prisons (Phase One). Individual reports on each prison have also been completed (Phase Two). A module is being finalized to examine prisoners' potential for rehabilitation and civic reintegration into society. It will also provide recommendations to reduce the rate of recidivism and help guide policy makers in their penal reform efforts (Phase Three). This methodology is being prepared for comparative study throughout the Caribbean.



#### Youth in Juvenile Homes in Trinidad & Tobago

A pilot study on youths in juvenile homes was completed in 1997. This research examined the social background and psychological dispositions of the youth population in three juvenile homes in Trinidad & Tobago, and their potential for rehabilitation and reintegration into society. This pioneering work provided a scientific model for the study of youths in juvenile homes. Policy recommendations for the rehabilitation of these youth were submitted to Government.

# Youth Crime and Deviance in Schools: An Analysis by Race, Class and Gender

Based on the findings of a randomly selected nationwide survey of 30 secondary schools in Trinidad & Tobago conducted between 2002 and 2004, this research and policy development project seeks to measure the variables of youth's racial and socio-economic background, gender, and examine potential connections to their school-based values, attitudes, inclination towards school failure, drop-out, career deficiency, crime and delinquency. Appropriate interventions to help prevent and reduce the prevalence of the general problem of school failure and social marginalisation will be made and submitted to Government, in order to help guide policy makers in their delinquency and violence reduction programmes.

# Police Practice, Community Policing, Use of Force and Police Reform

Based on research completed in 2000-2001, this project includes a comparative analysis across several Caribbean countries. A methodology for examining the problem of excessive use of force by police is currently being developed. This study seeks to undertake continuous assessment of police performance and provide recommendations to policy makers for establishing more effective community-police partnerships, improving public confidence in the police and assisting with crime reduction initiatives. The work to date has been informing stakeholders, policy makers and related professionals in national security, crime management, crime prevention and security-related fields.

## Victims' Rights and Welfare

This project seeks to provide a scientific database on crime and victimisation in Trinidad & Tobago. An overview of the international literature, review of current legislation, consultations with key stakeholders and crime victims, and a nationwide survey are in progress. The Centre is also working actively with the Ministry regarding the establishment of several Crime Victims' Bureaus across Trinidad & Tobago. This project is geared toward guiding policy makers in the area of victims' rights and welfare.

#### Regional Database on Crime Statistics

This project entails compiling regional crime statistics and assisting with the preparation of annual monographs and technical papers which illustrate crime trends, as well as provide explanations and recommendations for crime reduction and management. It also involves generating crime prevention strategies for regional governments and other policy makers, as they seek to grapple with the growing crime situation across the region.

#### **International Links**

The Centre for Criminology and Criminal Justice continued to engage in *academic exchange*, *programme development and research project collaboration* with the Institute of Criminology, Cambridge University (UK), the Centre for Criminological Research and the Probation Studies Unit at Oxford University (UK). It also expanded its international links to the Centre of Criminology, University of Toronto (Canada), Florida International University (USA), the Centre for Public Safety and Justice at The UWI Mona Campus (Jamaica), John Jay College of Criminal Justice at the State University of New York (USA), the CARICOM Regional Task Force on Crime and Security, the Centre for Transnational Crime Prevention, University of Wollongong (Australia) and The UWI Vice-Chancellor's Office, Mona Campus (Jamaica).

The Centre was retained as an *International Expert by the United Nations Office for Drug Control and Crime Prevention* (UNODC) for:

- A South-South Crime Prevention Project focused on Latin America and the Caribbean region, for the development of Safer Cities and Best Practice Evaluations, based at the UNODC, Vienna, Austria (2003-present).
- An Urban Crime Prevention Manual for international distribution - a project based at the UNODC, Vienna, Austria (2003-present).

The Centre is also a member of several *International Working Groups of Experts and Scholars* including those in:

- The United Nations Interregional Crime and Justice Research Institute (UNICRI), for the development of the "World Crime and Justice Report," a project based at UNICRI, Turin, Italy (2003-present).
- Criminal Justice on the "International Violence Against Women Survey", a research project based at UNICRI, Italy (2001-present).
- Criminal Justice on Use of Force by Police, a research project based at CENIPEC, Universidad de Los Andes, Venezuela (2000-present).

#### **Outreach**

#### **Conferences and Seminars**

The CCCJ hosted a one-day *Professional Conference on Victims' Rights and Welfare*, in collaboration with the Ministry of the Attorney General, Government of the Republic of Trinidad & Tobago (T&T) on November 12, 2005.

From February 8-11, 2006, the highly successful 4<sup>th</sup> International Conference on Crime and Justice in the Caribbean was held in collaboration with the Ministry of the Attorney General (T&T), on the St. Augustine Campus and at the Mt. Irvine Bay Hotel and Golf Club in Tobago. Over 600 persons attended the Formal Opening of the four-day Conference, which included more than 100 presentations and 30 panel sessions. Participants came from as far as the United Kingdom, Canada, the United States, Panama and across the Caribbean region. The sessions were filled with lively debates and the exchange of cutting-edge ideas for addressing the issues of crime facing our region.

Following the conference, over 30 of the key papers presented were published in a book entitled *New Challenges in Crime and Justice: From Research to Policy.* This book was edited by Professor Ramesh Deosaran, Director of the Centre for Criminology and Criminal Justice, The UWI St. Augustine; Professor Jason Ditton, Director of the Scottish Centre for Criminology; and Mr. Ian K. Ramdhanie, Junior Research Fellow at the Centre for Criminology and Criminal Justice, The UWI St. Augustine.

In February 2006, the Centre participated in a three-day United Nations Conference on Crime Prevention, Rehabilitation and Social Development: Enhancing the Capacity of Civic and Governmental Organisations (South-South Project), in Cape Town, South Africa. This meeting addressed similar crime problems in southern Africa and the Caribbean. The Centre, through its Director Professor Ramesh Deosaran and Senior Research Assistants Mr. Ian K. Ramdhanie and Ms. Vidya Lall, presented reports on the ways in which ten governmental and non-governmental agencies surveyed in Trinidad & Tobago, deal with crime and various social problems. The United Nations is currently developing a Manual for Best Practice for international distribution, to assist such agencies in dealing with crime and community safety.

Out of this conference, the Centre then hosted a Seminar/ Workshop on *Crime Prevention, Rehabilitation and Social Development: Enhancing the Capacity of Civic and Governmental Organisations* for key stakeholders, in collaboration with the Ministry of Social Development, in San Fernando and Port of Spain, Trinidad, on May 27, 2006.

#### **Publications**

The Centre continued to publish the region's only international criminology journal, the *Caribbean Journal of Criminology and Social Psychology (CJCSP)*, edited by Professor Ramesh Deosaran. To date, ten volumes have been published over the period 1996-2005.

In July 2007, all volumes, including back issues of the *CJCSP*, will be available online at www.cjcsp.com. This journal aims to develop and promote research and publication in criminology and criminal justice, as well as to foster interaction among academics, policy makers and judicial administrators in the Caribbean and internationally. It includes articles with a multidisciplinary perspective, theoretical issues in criminology and cross-cultural studies in criminology and criminal justice.

# **Revenue Generating Activities**

The graduate programme (MSc, MPhil and PhD) in Criminology and Criminal Justice generates revenue for the Centre in the form of student fees.

# **Distinguished Visitors**

**Professor Jason Ditton** 

Professor of Criminology Director, The Scottish Centre for Criminology, Glasgow, Scotland

#### **Professor Michael Ellis**

Department of Clinical and Counseling Psychology State University of Albany (SUNY)

# Centre for Gender & Development Studies

In general, the Centre for Gender & Development Studies (CGDS) has accomplished the objectives outlined in its last operational plan. It is currently in the process of contributing to the new five-year strategic plan for The University. In 2005-2006, the Centre underwent a follow-up evaluation concerning implementation of the recommendations of its Quality Assurance Review, with favourable results.

Limitations of physical space continued to place a strain on the work of the Centre. Staff members were pleased, therefore, to be informed of plans for the Centre's relocation to a larger space in a building to be constructed in the near future. Unfortunately, this means that the Centre's growth will be limited for at least another two-year period. Despite this, however, the Centre has continued to be productive, particularly in the area of research and outreach.

During the year in review, Professor Rhoda Reddock went on sabbatical leave to the African Gender Institute of the University of Cape Town. Professor Patricia Mohammed served as Acting Head of the Centre during her absence.

#### **Students**

## Undergraduate

In the academic year 2005-2006, nine students completed undergraduate minors in Gender Studies and Gender and Development Studies. Five were from the Faculty of Humanities & Education, three from the Faculty of Social Sciences, and one in the Social Work (Special) programme. Continuing a trend of excellence, two of these students gained first class honours degrees. Two students earned upper second class honours and four students received lower second class degrees.

# Postgraduate

Mr. Wayne Riley graduated in October 2005 with an MPhil degree in Gender & Development Studies.

## **Staff**

Appointments

Ms. Gabrielle Hosein

Temporary Assistant Lecturer

Ms. Veronica Farrell
Temporary Assistant Lecturer

Ms. Deborah McFee
Graduate Research Assistant

Ms. Suelan Chin
Clerical Assistant

#### Research

## **Major Projects Completed**

*Gender, Schooling and Achievement in Trinidad & Tobago* - June George, Carol Keller, Jennifer Mohammed, Jeanette Morris, Patricia Worrell, Rhoda Reddock (UWI St. Augustine).

Cultural Crossings: A Gender Imagebase - Patricia Mohammed (UWI St. Augustine) and Edna Bay (Emory University).

## Research in Progress

Gender, Sexuality and the Implications for HIV and AIDS (CGDS Collaborative Research Project) - Dianne Douglas, Sandra Reid and Rhoda Reddock.

Women, Gender and Water - This multidisciplinary, collaborative research project brings together scholars in the social sciences, natural and physical sciences, and humanities, to examine the multifaceted role of water in women and men's lives and the policy implications in areas such as natural resource management, environmental management, and mitigation of the effects of natural disasters.

The Making of Feminisms in the Caribbean - This project seeks to document the history of the women's movement in Trinidad & Tobago and the Caribbean, and to archive the records and visual materials of the movement through a special collection in the Main Library, St. Augustine Campus. Over this past year discussions took place with the Caribbean Association for Feminist Research and Action (CAFRA) for the expansion of this project to the rest of the region.

Competing Victimhoods: Gender, Ethnicity and Identity in Trinidad & Tobago - Rhoda Reddock. This research examines the interplay of these three variables in Trinidad & Tobago and seeks to develop a conceptual framework relevant to other post-colonial multi-ethnic societies.

Imaging the Caribbean: Culture and Visual Translation - Patricia Mohammed. The manuscript will be published by Macmillan/Palgrave. Prof. Mohammed also produced two related documentary films called "The Colour of Darkness" and "Windows in to the Past"; segments of a series entitled "A Different Imagination".

# **Programmes**

A preliminary proposal for an MSc in Gender and Development was presented to the CGDS Board of Studies.

Over 200 students enrolled in five courses offered by the Centre. For the first time, the Introduction to Women's Studies course (GEND 1103) was taught in the summer programme of the Faculty of Humanities & Education (completed by 12 students).

#### Outreach

#### Research in other Faculties

Due to its multi/inter-disciplinary approach, CGDS research tends to be collaborative in nature. Furthermore, UWI staff involved in teaching and research in gender-related areas, have served as affiliate staff of the Centre. In some instances, the CGDS has identified funds to facilitate this research and publication. Examples of these projects are "Writing Rage: Masculinity and Violence in Literature and Discourse" by Paula Morgan and Valerie Youssef (published in 2006) and "Autobiographies of Women in Science" by Grace Sirju-Charran (to be completed in 2007).

## **Documentary Films**

"Engendering Change" is a documentary film being produced by Prof. Patricia Mohammed for use in teaching and outreach in gender and development work throughout the region.

"A Contested Wetland: Issues of Gender and Sustainability" is a video by Gabrielle Hosein (CGDS Assistant Lecturer) based on the Nariva Swamp Research Project. It was presented at the Caribbean Studies Association conference.

## **United Nations Gender Training Programme**

During this year, the CGDS (St. Augustine and Mona), on the invitation of UNIFEM, completed gender-training programmes for UN Staff in Barbados.

## Gender Mainstreaming in HIV/AIDS Programming

The Centre was contracted to manage the training aspects of this project coordinated by UNIFEM and supported by The Commonwealth Secretariat/Dalhousie University, UNAIDS, UNFPA, and project partners – Caribbean Coalition of National AIDS Programme Coordinators (CCNAPC) and the Caribbean Coalition of People Living with HIV and AIDS (CRN+). As part of this inter-agency project, a trainer of trainers workshop was held at The Normandie Hotel, Port of Spain.

# **External Links with Industry Partners**

The Dominica Gender Policy was completed by Prof. Mohammed and Deborah McFee. The document was delivered in November 2005 to the Government of Dominica and presented to the Cabinet in March 2006 by Prof. Mohammed.

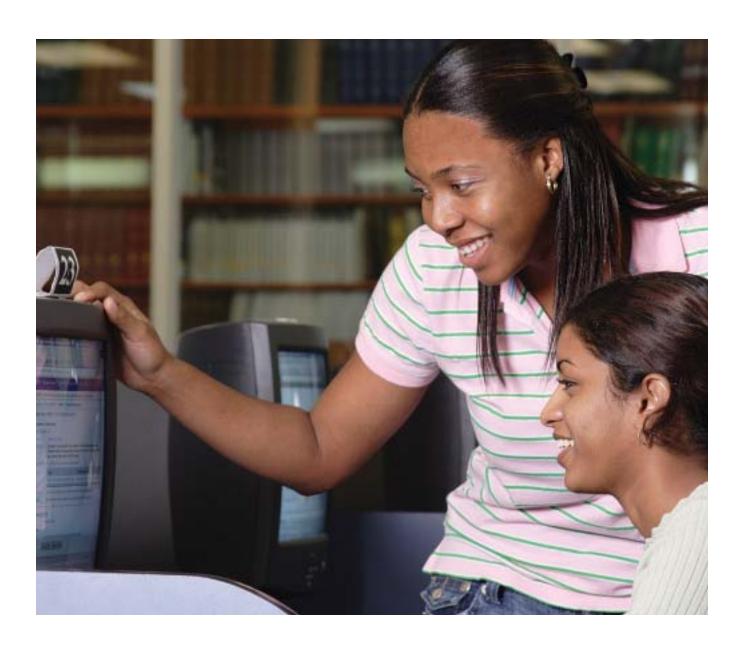
The draft Trinidad & Tobago National Gender Policy was revised by Prof. Mohammed on instruction from Minister the Hon. Joan Yuille-Williams, in the Ministry of Community Development, Culture and Gender Affairs, and delivered to the Government of Trinidad & Tobago in June 2006.

#### Conferences and Seminars

The day and frequency of the CGDS'Lunchtime Seminar Series was changed in the last academic year. Nine seminars were held on every other Thursday, featuring a wide cross-section of presenters, as well as interested attendees from both on and off-campus. A few of the presenters and topics were:

- Gloria Rolando "Eyes of the Rainbow"; a film about Black Panther activist Assata Shakur who escaped to Cuba from prison in the United States
- Lisle Waldron (School of Education) and Brianne La Bauve (CGDS Alumnus - Screening of "The A-WORD": A video documentary on abortion, funded by the Feminist Review, UK
- Cheryl Levine (University of South Florida) -Mediating the Model: Women's Microenterprise and Microcredit in Tobago

A one-day *Regional Workshop on Curriculum Development* was held on December 15, 2005 at Pax Guest House in Trinidad. This workshop aimed to bring together persons involved in gender-based teaching. Twenty-one participants took part in this workshop, including representatives of the CGDS at the Cave Hill and Mona Campuses.



On January 4, 2006, a one-day workshop on *Masculinity Research and Action Agendas* was held for visiting students and staff of the Centre for Men's Leadership and Service, Saint John's University and the College of Saint Benedict, Minnesota, USA.

An intensive one-week *Gender Policy Training Course* was held with regional and international partners during the period March 19-25, 2006 at the Chancellor Hotel, St. Ann's, Port-of-Spain. Thirty-seven (37) participants from across the Caribbean region came together for this course. The programme was funded by the Friedrich Ebert Stiftung (FES) Caribbean Office, Jamaica; UNIFEM Caribbean Office; the Canada/Caribbean Gender Equality Programme (CIDA), Barbados; and the Ministry of Community Development, Culture and Gender Affairs, Trinidad & Tobago.

The Man Package, a collaborative effort of CGDS, YMCA and the Student Activity Centre, was held on The UWI Quadrangle. This participatory workshop provided a forum where men and women could meet for open discussion on gender issues and relations.

The CGDS provided support for the 31<sup>st</sup> Annual Conference of the Caribbean Studies Association at The Crowne Plaza Hotel, Port of Spain.

# **Distinguished Visitors**

#### Kathleen A. Breazeale

Pacific Lutheran University, Tacoma, WA

#### Barbara Cruz

University of South Florida, Tampa, USA

#### Pamela Golah

International Development Research Centre, Canada

### Glyne Griffith

State University of New York at Albany, USA

#### Percy Hintzen

University of California, Berkeley

#### Kamala Kempadoo

York University, Toronto, Canada

#### Gar Kellom

Saint John's University, Minnesota, USA

#### Renny Khan

University of Alberta, Canada

#### Janet Momsen

University of California, Davis, USA

#### **Howard Nicholas**

Institute of Social Studies, The Netherlands

#### J. M. Pasquill

University of Albany, USA

#### Monique Pool

SEAS NV, Suriname

#### **Gantam Premnath**

University of California, Berkeley, USA

#### Patricia Saunders

University of Miami, USA

## **Cocoa Research Unit**

Cocoa grown in Trinidad & Tobago is used in some of the world's finest chocolates. In the academic year 2005-2006, the Cocoa Research Unit's (CRU) groundbreaking research continued to have a major impact on the international cocoa industry. For instance, 100 elite clones in the Common Fund for Commodities (CFC) Project Collection were transferred to intermediate quarantine for distribution to cacao breeders worldwide.

During the year in review, seven publications from CRU staff were included in peer reviewed journals; a 1:1 ratio of publications to staff. Training was also made available to staff through visitors from institutes such as Chokladforam, Sweden. In fact, many of the research projects underway in the Unit are being done in collaboration with international institutes including the Centro Agronómico Tropical de Investigación y Enseñaza (CATIE), Comissão Executiva do Plano da Lavoura Cacaueira (CEPLAC), Centre National de Recherche Agronomique (CNRA), and supported by funding from The UWI and external sources. The significance of this work is highlighted by the fact that the CRU is home to the International Cocoa Genebank - an invaluable global resource for the cocoa industry.

#### **Students**

Aisha Omar-Ali and Frankie Solomon were hosted as placement students by the CRU from May 23-July 22, 2005. Ms. Omar-Ali assisted with verification studies by DNA fingerprinting and Mr. Solomon assisted with work on prebreeding for resistance to Witches' Broom disease.

### Staff

#### **Honours and Awards**

David Iwaro of the Cocoa Research Unit, The UWI and Jorge T.De Souza of CEPLAC, Brazil, were selected for the 2005 JANE Research Award by the American Phytopathological Society (APS). The award entailed a US\$2,500 research grant and a US\$1,000 travel grant.

## **Training**

Three members of Chokladforam, Sweden, offered a two-week training session at the CRU. During their stay they also arranged a tasting demonstration for staff, of premium chocolate, wine and rum.

Lambert Motilal (CRU) was hosted by USDA-ARS, Beltsville, for a 6-month period, for training in molecular techniques for association mapping.

#### Research

#### **Areas of Focus**

The following are areas of research focus in the CRU, related to cacao germplasm:

#### Conservation

This involves making *new introductions* to the International Cocoa Genebank, Trinidad (ICG,T), as well as engaging in the *documentation* and *verification* of plants in the existing collection.

#### Characterisation

The morphological and molecular characterisation or "fingerprinting" of all the cacao accessions in the ICG,T is used to assess the genetic diversity within the collection and to identify off-types within plots.

#### **Evaluation**

The ICG, T collection is regularly assessed for *disease* resistance. Collected data is used to identify resistant genotypes than can be used in cacao breeding.

The collection is also evaluated for important agronomic and economic *quality traits* such as bean size, bean number, cocoa butterfat content and flavour potential.

#### Utilisation

This entails the *distribution* of selected cacao accessions to cocoa-producing countries, via the International Cocoa Quarantine Centre (ICQC) in Reading.

*Germplasm enhancement* is achieved through pre-breeding programmes to accumulate genes for resistance to Black Pod and Witches' Broom disease.

## **Major Projects**

These include:

- Cocoa Productivity and Quality Improvement: A
  Participatory Approach. This project involves
  research institutes in most cocoa-producing
  countries including CATIE, CCI, CEPLAC, CNRA, CRIG,
  CRIN, INIA, INIAP, IRAD, the Ministry of Agriculture,
  Land and Marine Resources (MALMR) of Trinidad &
  Tobago and UNAS. It is partly sponsored for 5 years
  from June 2004, by the Common Fund for
  Commodities.
- Safeguarding the International Cocoa Genebank, Trinidad. Sponsored by Begeleidengscommissie Subsidieregeling Duurzame Ontwikkeling Cacao en Chocoladesector (LNV subsidy program of sustainable development of the cacao and chocolate sector). Funding assured for 2 years from June 2005.



- Establishing the Physical, Chemical and Organoleptic Parameters to Differentiate between Fine and Bulk Cocoa. This project is a collaborative effort of INIAP, INIA, CCI and the CRU, supported by CFC, ICCO and INIAP.
- Investigation and Prevention of Heavy Metal and Ochratoxin: A Contamination of Cocoa in Trinidad & Tobago. Project approved for funding by MALMR.
- Study of the Genetic and Genomic bases of Cocoa Resistance and Quality Traits.

#### **International Links**

The CRU has links with the following international research institutes:

- Centre de cooperation Internationale en Recherche agronomique pour le Développement (CIRAD) -France
- Centre National de Recherche Agronomique (CNRA)
   Cotê d'Ivoire
- Centro Agronómico Tropical de Investigación y Enseñaza (CATIE) - Costa Rica
- Cocoa Coconut Institute (CCI) Papua New Guinea
- Cocoa Research Institute of Ghana (CRIG)
- Cocoa Research Institute of Nigeria (CRIN)
- Comissão Executiva do Plano da Lavoura Cacaueira (CEPLAC) - Brazil

- Institut de Recherches Agronomiques pour le Développement (IRAD) - Cameroon
- Instituto Nacional de Investigaciones Agricolas (INIA) - Venezuela
- Instituto Nacional de Investigaciones Agropecuarias (INIAP) - Ecuador
- International Cocoa Organisation (ICCO) UK
- International Plant Genetic Resources Institute (IPGRI) - Italy
- United States Department of Agriculture (USDA)
- Universidad Nacional de la Selva (UNAS) Peru

The CRU entered into a new 3-year General Agreement with CIRAD in 2005, which provides for the exchange of scientists and for joint research projects.

The Unit also entered into a new 5-year Cooperative Agreement with USDA-ARS, Beltsville, USA, that facilitates training for staff from the CRU, as well as specific projects on the molecular biology of cacao.

A Memorandum of Understanding was signed with the Department of Useful Plants and Plant Ecology, University of Hamburg, Germany, which will allow for the exchange of personnel for training, as well as specific projects on the quality aspects of cacao.

## **Outreach**

In addition to attending several conferences abroad, CRU staff hosted the CFC/ICCO/INIAP Flavour Project workshop "To discuss and interpret findings of combined country analyses with links to project objectives". Participants included collaborators from INIAP, Ecuador; INIA, Venezuela; and Plant Research International (PRI), Holland.

# **Distinguished Visitors**

Nicolaus Cromme

Common Fund for Commodities, Amsterdam, Holland

Roger Dehnel

Mars Inc, USA

Jan Engels

IPGRI, Rome, Italy

Bertus Eskes

IPGRI/CIRAD, Montpellier, France

#### Martin Gilmour

Masterfoods, UK

#### John Kehoe

Eco-Trade, Florida, USA

#### Claire Lanaud

CIRAD, Montpellier, France

#### Tony Lass

Biscuit, Cake, Chocolate & Confectionery Association (BCCCA) Representative, UK

## Christophe Montagno

CIRAD, Montpellier, France

#### David Preece

Cadbury International Ltd., UK

#### Hiromasa Tomita

Mitsubishi Corp., Tokyo, Japan

## Jan Vingerhoets

Executive Director, International Cocoa Organisation, UK

## **Health Economics Unit**

The Health Economics Unit (HEU) has seen some major milestones over the past academic year. The Unit was successful in accessing funding from the Ministry of Science, Technology and Tertiary Education, which facilitated the successful consolidation of the Health Economics Unit. It is envisaged that this Centre will become a major site for training research graduate students in health economics.

With Prof. Karl Theodore as team leader, the Unit formulated a proposal for the UNDP which resulted in the HEU receiving a grant of US\$140,000 for a project on HIV and Human Development in the Caribbean, designed to boost the effectiveness of HIV/AIDS response programmes in the Caribbean.

Under the World Bank International Development Association Pan-Caribbean Partnership Against HIV/AIDS (IDA PANCAP) Fund, the HEU continued to engage in a number of activities which will assist in institutional strengthening. These included improving the operational and logistical capacity of the HEU, and developing more efficient administrative systems. Also, a detailed design of the HEU's new headquarters at #25A Warner Street was completed and approved.

#### **Students**

Through the World Bank grant, the Unit was able to offer internships in Health Economics to some of its graduate students from Organisation of Eastern Caribbean States (OECS) countries. Ms. Sharon Gillard, Mr. Peter Prescod and Ms. Lauren Mathurin have successfully completed six-month internships at the Unit.

Postgraduate degrees were awarded to students on the completion of projects in Health Economics, such as:

#### MPhil/PhD degrees

 Institutional Arrangements and their Implications for the Implementation of National HIV/AIDS Policies in Trinidad, Jamaica and Barbados

#### MSc degrees

- Poverty and Poverty Alleviation Programmes: The Caribbean Experience
- Towards the Reorientation of Social Sector Spending in Trinidad & Tobago: Linking Human Development to Economic Growth
- Measuring the Macro-Economic Importance of Pension Fund Investment in Trinidad & Tobago

### Staff

The HEU was able to fund long-term staff positions. The persons appointed were engaged in research activities and the development of administrative systems.

## **Training**

Dr. Robert Greener, Economic Advisor, UNAIDS Geneva and Dr. William McGreevey, Director, Development Economics, Futures Group and adjunct Professor, Department of Global Health, George Washington University, visited the HEU from March 13-15, 2006 and conducted a staff training session in the Resource Needs Assessment Model developed by Futures Group International.

### Research

## Major projects completed

Country Implementation of the *Integrated Health Care Systems Response to Rapid Population Ageing* in Developing Countries (INTRA), for the World Health Organization (WHO) Geneva.

A Situation Analysis of *Children Orphaned and Vulnerable to HIV/AIDS* in Trinidad & Tobago, for the United Nations Children's Fund (UNICEF).

National Human Development Report (NHDR) 2003 for Trinidad & Tobago, for the United Nations Development Programme (UNDP), Trinidad.

## Research in progress

Designing and supporting the *Implementation of a National Health Insurance System* in the British Virgin Islands, for the Government of the British Virgin Islands.

Costing of Health Programs in Small Islands States, funded by the World Bank IDA PANCAP Fund and executed by the Caribbean Community through the CARICOM Secretariat, to support the Pan-Caribbean Partnership Against HIV/AIDS (PANCAP).

*Evaluation Study of the Bahamas HIV/AIDS Programme*, funded by the World Bank IDA PANCAP Fund.

*Technical Assistance & Training* to Support Country Resource Needs Assessment, for UNAIDS Geneva.

Foreign Direct Investment and Health in the Caribbean, funded by a PAHO/WHO Fellowship Grant.

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 receiving a grant from the main recipient - the Caribbean Regional Network of People Living with HIV/AIDS.

HIV and Human Development in the Caribbean, funded by the United Nations Development Programme (UNDP) under its HIV-AIDS Regional Programme for Latin America and the Caribbean.

#### Outreach

The HEU invited Dr. McGreevey, adjunct Professor, Department of Global Health, George Washington University, to be a feature presenter in the Unit's *Night Time Seminar Series*. On Tuesday March 14, 2006, he gave a presentation on the topic "Comparative Global Health Systems: Issues of Equity and Efficiency".

Dr. Diane McIntyre of the University of Cape Town, Faculty of Health Sciences, was the feature speaker at an HEU *Luncheon Seminar* held on Wednesday May 24, 2006. She presented on the topic "Health Systems in Resource-Challenged Environments: Equity Concerns".

In July 2006, the HEU participated in the *Antigua* and *Barbuda Benefits Schemes Health Week* - "Our Family's Health is Our Wealth" - at the Medical Benefits Scheme Headquarters, St. John's, Antiqua.

The Unit participated in *The UWI HARP Research Meeting*, held at the Mona Campus in Jamaica, to formulate a research agenda to inform HIV-response programmes at both the local and regional levels.

## **Distinguished Visitors**

#### Dr. McGreevey

Director, Development Economics for the Futures Group; Adjunct Professor, Department of Global Health, George Washington University

### Dr. Robert Greener

Economic Advisor, UNAIDS Geneva

## Dr. John Stephen Osilla

World Bank

## Dr. Ravi Cherukupath

World Bank

#### Dr. Emmanuel Njomo

World Bank

## Dr. Oluwole Odutolu

World Bank

#### *Mr. Charles Katende*

World Bank

#### Mr. Edward Emmanuel

PANCAP/CARICOM

#### Mr. Kenneth Williams

PANCAP/CARICOM

## **Seismic Research Unit**

The Seismic Research Unit (SRU) is the regional agency responsible for monitoring earthquakes and volcanoes for the English-speaking islands of the Eastern Caribbean. The Unit has been providing governments in the Caribbean with expert advice on geological events and associated hazards affecting these islands for over 50 years. It is one of the specialised research units of The University and its work directly impacts vulnerable island communities.

In addition to the day to day monitoring of 19 live volcanoes and a seismically active region, the Unit collaborates with local, regional and international agencies on research projects relevant to its core areas of operation (seismology, volcanology, education and outreach). All aspects of the research undertaken by the Unit are of direct importance to reducing the risk of disasters related to geological processes in the region.

In the 2005-2006 academic year, the Unit hosted a major regional meeting, was visited by a world-renowned volcanologist and successful negotiated a major grant from the USAID and the Government of Trinidad & Tobago. Planned activities for the 2006-2007 academic year include

a major upgrade of the Unit's seismic network, the hosting of one regional meeting and an international training course, finalisation of a major upgrade of the Unit's website and the implementation of various research projects for which funding has already been secured. Additional steps will be taken to formalise arrangements for postgraduate research at the Unit.

## **Staff**

*Mr.Lutchman Pollard*, the SRU's Chief Technician since the late 1980s, retired on September 1, 2005, after a total of 39 years on staff. His services were retained for an additional year as the Unit sought to fill the complement of research technicians.

*Mr. Amit Balchan* joined the SRU as a Research Technician from September 1, 2006, replacing *Mr. Barry Jordan* who resigned on July 21, 2006 during his probationary period.

Mr. Garth Mannette joined the electronics team as an Engineering Technician I on May 1, 2006 to replace Ms. Jeanine Richardson whose resignation became effective from that date.

This period also saw the departure of *Ms. Shirley Bethelmy*, the SRU's cleaner, who had served The University for over 26 years.

## **Monitoring Activities**

## Seismology

### Seismograph networks

The seismograph network operated by the Seismic Research Unit in the eastern Caribbean currently consists of over 52 instruments. All three-component stations send their data and those from associated single component stations, to an Internet server from which they are downloaded to Trinidad when required. When activity increases at any node of the system, data can be processed locally in real time.

#### Ground deformation networks

New benchmarks for monitoring ground deformation using Global Positioning Systems (GPS) were established in Saba and St. Eustatius. Existing GPS networks on St. Kitts and Nevis were reoccupied and damaged benchmarks were replaced.

Two new continuous Trimble NetRS GPS stations were installed on St Vincent and Antigua. The GPS data processing was revamped using GAMIT-GLOBK processing code for MIT, USA. This new processing method ensures (i) improved accuracy, (ii) the possibility for automation of data processing for the GPS stations and (iii) uniform ground deformation monitoring across the three Eastern Caribbean monitoring institutes (SRU, Montserrat Volcano Observatory and the Institut de Physique du Globe de Paris). Automated data retrieval and data processing will be implemented at SRU during the first quarter of 2007.



#### Seismic Activity

During the past year, the seismograph network recorded a minimum of 1043 earthquakes, of which a total of 417 events were located using the SRU's own data and the data contributions from Martinique, Guadeloupe and Puerto Rico. There were 35 events of a >4.0 magnitude and 105 in the 3.5-4.0 range. Such events may be felt if close to populated centres.

There were 21 felt reports during this period. The strongest event affecting the northern Leeward Islands for the year was the Virgin Islands magnitude 5.2 event of March 2, 2006. This event was also felt in St. Maarten. In the Eastern Caribbean, the largest events were both of magnitude 5.0. The first was located north-east of Martinique on August 30, 2005 and was felt in St. Lucia and Martinique. The second was located north-west of Trinidad on October 28, 2005. This event was strongly felt in northern Trinidad and throughout the country. It was also felt in Grenada and there were a few reports from St. Vincent.

The epicentres of these events indicate four dense clusters in the areas of Barbuda, north of Dominica, north of the Paria Peninsula and on land in Trinidad. The cluster north of Dominica reflects on-going adjustments from the magnitude 6.2 Les Saintes event of November 21,2004. The activity seen near Barbuda and north of the Paria Peninsula is usual for those areas.

On December 2, 2005, one year after the magnitude 5.5 and 5.1 events near the east coast of Trinidad, there was an aftershock of magnitude 4.1, associated with many smaller aftershocks.

## Volcanology

### Geothermal monitoring

Samples of volcanic gases and condensates were taken from existing networks on Saint Lucia and Dominica. In addition, sensors for continuously recording pressure and temperature were installed at the Boiling Lake in Dominica in collaboration with the GeoForschungsZentrum (GFZ), Potsdam, Germany.

### Volcanic Activity

Volcanic activity in the Eastern Caribbean for the reporting period was relatively low, with most of the volcanoes exhibiting background levels of activity. There were four small earthquakes associated with the Kick-'em-Jenny volcano, three of which were large enough to be located. There were five events located in the vicinity of St. Vincent's Soufrière Volcano.

#### Research

The Unit's research continued to be focused on the core areas of volcanology (numerical modelling, geochemical studies and hazard communications) and seismology (strong motion studies, application of partial b-value technique).

## Major projects

#### Chaos associated with seismic swarms

The phenomenon of chaotic time dependence of natural events has prompted some interest in the examination of seismic earthquake swarms associated with the island of Dominica. Geophysicist Ms. Mohais, is involved in this research, which is concerned with possible chaotic attractors associated with swarm activity observed over the long term period 1960-2003, as well as any attractors associated with individual swarm sequences over the period 2000-2003.

## Experimental study of magma rheology and flow

Dr. Fournier is involved in a collaborative PhD research project between the SRU, the Department of Physics (Dr. J.C. Knight) and the Department of Earth Sciences at the University of Bristol, UK (Dr. H.M. Mader). This project uses Caribbean volcanism as a natural laboratory for the investigation of multiphase magma rheology. The research will be undertaken in a number of phases and is complementary to a major project aimed at developing constitutive equations for particle-bearing magmas, headed by Dr. Mader at the University of Bristol and funded by the Natural Environment

Research Council (NERC) of the UK. Partial funding for the project has been obtained from the Trinidad & Tobago Government Research Development Fund (TT\$250,000). Additional funds are being sought from the Campus Research and Publications Fund, along with other external sources.

## Hydrogeological model of the Soufrière volcano in St. Vincent

This is a two-year multidisciplinary collaborative effort between the SRU (Dr. Fournier), the Department of Petroleum Geosciences and the Department of Surveying & Land Information at The UWI St. Augustine. The main objective of this project is to assess the lack of reformation of a crater lake at the summit of the Soufrière volcano in St. Vincent, following its ejection during the 1979 eruption. Funding was obtained from the Campus Research and Publications Fund. Two successful field campaigns were conducted in 2005 and 2006. The most recent campaign was the first resistivity survey at the bottom of Soufrière's crater and one of the only ones in the world for an explosive, active volcano. The results of the survey will be submitted as an article to *Geophysical Research Letters* in the first quarter of 2007.

## Geology and physics of pyroclastic density currents in the Lesser Antilles

This is a collaborative research project with the Université des Antilles et de la Guyane (UAG) in Guadeloupe, France. The principal scientists on this project are Dr. Nicolas Fournier of the SRU and Professor Auran Randrianasolo, Head of the Department of Earth Science at UAG. Other participants include Dr. Karim Kelfoun, of the Laboratoire Magmas et Volcans, Université Blaise Pascal, Clermont-Ferrand France and Mr. Frederic Doudin of the UAG.

The main objective of the project is to accurately model debris avalanches, dome collapses and pyroclastic flows in the Lesser Antilles in order to better assess hazards, particularly during a volcanic crisis. The project has tremendous potential for hazard mapping and improving our understanding of explosive eruptions, both terrestrial and aquatic and will assist in the assessment of potential volcanogenic sources for tsunamis. Once the numerical models are sufficiently robust, they will be applied to all volcanoes that fall under the responsibility of the SRU, which will then be able to produce numerous scenarios of dome building eruptions (the most likely type of eruption in the Caribbean) and create accurate hazard maps that are dynamic that i.e. can be adjusted as an eruption evolves.

#### Vulnerability and risk assessment of volcanic islands

Dr. Robertson is involved in a collaborative PhD project with the Benfield UCL Hazard Research Centre, the Department of Geomatic Engineering and the Department of Geography at the University College London. The project is developing a GIS-based method for risk and vulnerability assessment of volcanic islands. There are two main objectives: Firstly, to improve current volcanic risk assessments through stakeholder engagement as well as by including socioeconomic vulnerability data and traditional physical vulnerability data in a quantifiable form that can be mapped. This project will be completed in conjunction with the emergency planners in both study areas to ascertain what information they think is practical and useful. The second objective is to utilise the functions of GIS to streamline the risk assessment process, in particular, GIS's ability to store large datasets, visualise data and update maps. The study will focus on the volcanic islands of Dominica and St. Vincent in the eastern Caribbean, and is expected to be completed in 2009. This research is being funded by the Economic and Social Research Council (ESRC) of the UK.

## Multidisciplinary modelling of the activity at the Boiling Lake, Dominica

The aim of this research is to better understand the driving mechanisms for recent changes at the Boiling Lake (successive emptying and refilling of the lake). This project, led by Dr Fournier of the SRU, involves hydrological and groundwater flow modelling in collaboration with the Department of Petroleum Geosciences (The UWI, St Augustine), energy and mass balance modelling (SRU) and physical modelling of bubble-driven buoyancy (in collaboration with the University of Bristol, UK). The results of this project will be submitted as a paper to the *Journal of Geophysical Research* in the early part of 2007.

## **International Links**

A major accomplishment of the SRU has been a Memorandum of Understanding (MOU) between the University of Albany and The UWI, facilitated by the Ansa McAL Pscyhological Research Centre and the Department of Behavioural Sciences in the Faculty of Social Sciences. Two students (undergraduate and postgraduate) are currently benefiting from exchange visits to the University of Albany.

The Seismic Research Unit has also strengthened its capacity through collaborations with the following institutions:

- Aspinall & Associates, UK
- California State University, Department of Geological Sciences, USA
- Coventry University, School of Science and the Environment, UK
- Geological Survey of Canada, Pacific Division, Canada
- GeoForschungsZentrum (GFZ), Potsdam, Germany
- Indiana University, Department of Geological Sciences, USA
- International Institute of Earthquake Prediction
   Theory and Mathematical Geophysics
- Instituto Nazionale di Geofisica e Vulcanologia, Italy
- Institut de Physique du Globe de Paris, France
- Laboratoire de Physique des Géomatériaux, IPGP,
   France
- Massachusetts Institute of Technology, USA
- Montserrat Volcano Observatory, Montserrat
- National Oceanic and Atmospheric Agency, USA
- Naval Research Laboratory, USA
- Observatoire de Physique du Globe de Clermont-Ferrand, France

- Rowan University, Computer Science Department, USA
- Saudi Geological Survey, Saudi Arabia
- The University of Bristol, Department of Earth Sciences, United Kingdom
- Université des Antilles et de la Guyane, Guadeloupe
- University of East Anglia, School of Environmental Sciences, UK
- University of New Mexico, USA
- University of Miami, USA
- University of Washington, Department of Geophysics, USA

#### **Outreach**

## **Distinguished Lecture**

The Seismic Research Unit hosted world-renowned volcanologist, Professor Steve Sparks, during the period April 23-28, 2006, as a featured speaker in The UWI Distinguished Open Lecture Series. Currently the Director of the Research Centre for Environmental and Geophysical Flows at the University of Bristol in the UK, Professor Sparks has conducted field work at volcanoes in at least 16 different countries around the globe (including locations in Europe, Iceland, the Andes and the Caribbean) and has been the recipient of more than 20 honorary awards. He is internationally recognised for his work on volcanology and, in particular, his pioneering work on the physical processes that drive eruptions. The highlight of Professor Sparks' visit to Trinidad was a free public lecture at the St. Augustine Campus' Learning Resource Centre on Thursday April 27, entitled "Volcanic eruptions and their impact on societies".

During his visit Professor Sparks also conducted a short course on "Fluid Mechanics in Volcanology" and gave a seminar for Sixth Form physical science students. In addition to the science of volcanoes, students were given an opportunity to learn more about careers in earth science and the life of a volcanologist.

## Regional Seismic Networks Meeting

Senior Technical Representatives from various Seismic Networks around the Caribbean Basin attended a workshop at The University of the West Indies' St. Augustine Campus from April 4-6, 2006, to initiate plans for establishing an early warning system for Tsunami and Coastal Hazards for the Caribbean and adjacent seas. The workshop, hosted by the SRU, was one of several activities recommended at the first session of the Intergovernmental Coordination Group for the Tsunami and Coastal Hazards Warning System for the Caribbean Sea and Adjacent Regions, held in Barbados in January 2006. Twelve seismological institutions from Puerto Rico, the Eastern Caribbean (English and French-speaking islands), Venezuela, Panama, Nicaragua, Costa Rica, Dominican Republic, Jamaica and the USA, were represented. The four-day workshop provided delegates, particularly those from networks with fewer resources, with technical insights concerning the best upgrade paths to choose, and how to rapidly configure existing instruments to publish and share data via computer networks.

There was unanimous support for Puerto Rico to host the regional warning centre. Delegates also expressed the view that a number of secondary or backup warning centres should be established as soon as adequate resources become available. Another important outcome of the workshop was the consensus that the overall quantity and quality of instrumentation and communication systems among existing and planned networks is inadequate to build an efficient seismic component of the Tsunami Warning System.

#### CD version of the Volcanic Hazard Atlas

An electronic version of the Volcanic Hazard Atlas (VHA), published by the Unit in 2005, was completed. Files on the CD were organised with a web-style interfaced and selected video files were included to illustrate the main types of volcanic hazards to which the region is exposed. Complementary copies of the CD will be distributed to educational institutions throughout the Eastern Caribbean in 2007.

#### Caribbean Youth Science Forum 2006

The National Institute of Higher Education, Research, Science and Technology (NIHERST) hosted Sixth Form science students from across the region, at the 5th Session of the Caribbean Youth Science Forum (CYSF) 2006. Dr. Richard Robertson and Ms. Joan Latchman represented the SRU at this Forum.

## Student visits and public lectures

A total of 12 lectures to students and the general public were made both in-house and at off-site locations during the year.

## Caribbean tsunami early warning system

Some 250 million people in the Caribbean and adjacent areas stand to benefit from a project aimed at increasing the capacity of the Seismic Research Unit to detect, monitor and provide early warning of tsunamis and related geologic hazards in the region. Through the generous support of the United States Agency for International Development's Office of Foreign Disaster Assistance (USAID/OFDA), the Unit received a US\$249,680 grant which will be used to significantly upgrade its seismic monitoring network and facilitate the development of information-sharing policies between earthquake monitoring agencies in the Caribbean, Central America and the countries in the northern region of South America. The Government of Trinidad & Tobago has also contributed generous support in the sum of US\$140,200 to the project, through the Office of Disaster Preparedness and Management.

As part of the Caribbean Tsunami Warning System (TWS) project, earthquake monitoring (seismic) stations will be upgraded on St. Kitts, Dominica, Saint Lucia, St. Vincent, and Trinidad & Tobago, so as to improve accuracy and to reduce delays in processing earthquakes. A subset of the stations will also publish data to a regional Tsunami Warning Centre in real-time. Under a separate project, three installations have already been provided on the islands of Barbados, Grenada and Barbuda through the United States Geological Survey (USGS). When complete, each seismic station will have the ability to detect and report potential tsunami-generating earthquakes in less than 3 minutes during normal working hours.

# Sir Arthur Lewis Institute of Social and Economic Studies

SALISES enjoyed a very successful academic year. Once again staff participated in the teaching programmes of the Institute and of the wider Faculty of Social Sciences, as well as the continued supervision of Master's, MPhil and PhD students. Staff members also continued their own scholarly activity, resulting in the publication of journal articles and technical reports, and the ongoing publication of the SALISES Journal *Caribbean Dialogue*.

#### Staff

## **Appointments**

*Dr. Godfrey St Bernard* was appointed Officer-in-Charge of the Institute in the absence of the Director, Dr. Patrick Watson, who was on sabbatical.

Dr. Sandra Sookram was made a Junior Fellow.

*Dr. Eric Strobl* was appointed Visiting Senior Fellow.

#### Honours

*Dr. Roy McCree*, SALISES Fellow, was awarded a PhD in Sociology from the University of Leicester in the UK.

*Dr. Godfrey St. Bernard* was appointed by Cabinet to the Population Council of Trinidad & Tobago.

## **Programmes**

Members of staff taught courses in the MSc programme in Economics. They also supervised MSc students' research projects, as well as those of MPhil and PhD students. In the 2006-2007 academic year, three students are expected to graduate with PhD degrees and one with an MPhil degree.

Staff members were also responsible for teaching undergraduate and graduate courses in the programmes of the wider Faculty of Social Sciences.

## Research

## **Major Projects Completed**

- Social Causes and Consequences of Alcohol Consumption in Trinidad & Tobago
- Functional Literacy among Youth in Trinidad
   & Tobago

## **Research in Progress**

- Social Accounting Matrices (and Extensions) for the Caribbean, with applications to poverty, human capital formation and income distribution
- Computable General Equilibrium and System
  Dynamics Modelling of the Caribbean Economy,
  with applications to trade, poverty, income
  distribution and the environment
- Finance (including Micro-Finance) and Financial markets in the Caribbean, funded by Caribbean Money Market Brokers Ltd. (CMMB)

- Poverty, Poverty Reduction and Inequality, with special reference to the Caribbean
- Sport and Development in the Caribbean
- Social Measurement in the Caribbean
- Mortality in the Caribbean (including homicide, traffic fatalities and injuries)
- Return Migration
- Population Dynamics in the Caribbean

### **Outreach**

## Conferences, Workshops and Seminars

SALISES at the St. Augustine Campus co-hosted the 31<sup>st</sup> Annual Conference of the Caribbean Studies Association which was held in Port of Spain, Trinidad, from May 29-June 2, 2006. Dr. Godfrey St. Bernard was the Chairman of the local organising committee for the conference, and Dr. Sandra Sookram was a member of this committee. Drs. St. Bernard, Sookram, McCree and Watson chaired sessions and/or presented papers at this conference.

Members of staff also attended and presented papers at a number of other conferences, including the Annual SALISES conference in Barbados.

#### **Publications**

In addition to the Institute's existing publications, it is hoped that some of the numerous papers submitted in the 2005-2006 academic year will be published. Faculty have agreed to continue pursuing at least four journal publications per year.

## **Revenue Generating Activities**

The Institute at St. Augustine will continue its Executive and Professional Training Programmes and will continue to seek out opportunities for consultancy. The Institute has already won a consultancy with the First Caribbean Bank and will carry through with work on this project in the coming months. It has also put in bids for other contracts and hopes to secure at least two of these contracts in the coming academic year.

## **Distinguished Visitors**

Mr. Michael de la Bastide
Chief Justice, Caribbean Court of Justice (CCJ)

# **Sustainable Economic Development Unit for Small Island Developing States**

During the review year, SEDU-SIDS continued to implement a major regional project on behalf of the United Kingdom's Department for International Development (DFID), on "A Sustainable Livelihoods Approach to Poverty Eradication".

SEDU staff also undertook a number of other research projects, including the valuation of watersheds and feasibility of management plans for environmentally sensitive areas. Graduate student research projects were supervised and staff also taught at the undergraduate and postgraduate levels. SEDU also serviced the Environmental Economics module in the MSc Environmental Economics, Faculty of Engineering.

Outreach activities included training for a range of regional participants on the valuation of watersheds.

#### **Students**

In the academic year 2005-2006, 26 students enrolled in courses supported by SEDU, including Resource & Environmental Economics, The Economics of Sustainable Development and Economics for Environmental Engineering.

## **Programmes**

SEDU staff teach a module in Environmental Economics in the Faculty of Engineering's MSc Environmental Management programme as well as aspects of the Economics of Climate Change (AG39A) course in the Faculty of Science & Agriculture.

#### Research

## **Major Projects Completed**

 Data collection explaining macro-economic performance of oil exporting economies.

## Research in progress

- Literature review and draft study on macroeconomic performance of oil exporting economies.
   This research will be developed into a discussion paper on the topic.
- Second phase of DFID-funded project to communicate findings re. the feasibility of alternative sustainable livelihood options for the region (Phase I). This research will be published as "Guidelines for Sustainable Livelihoods Approach to Poverty Eradication". Some of this material has already been included in SEDU's teaching programmes and is being disseminated in regional conferences.

- Valuation of watersheds for input into a regional study on the feasibility of introducing water markets in the Caribbean: Case studies of watersheds in Jamaica, St. Lucia and Tobago. The results have been incorporated into SEDU's teaching programmes and were also shared in a workshop for regional participants in Tobago.
- Completion of the revised version of a study for the Environmental Management Authority (EMA) of Trinidad & Tobago on the feasibility of management plans for environmentally sensitive areas in T&T. The outcomes of this research will be included in SEDU's teaching programme.
- Book on the "Economics of Human Betterment and Sustainable Development in the Caribbean".

## Postgraduate Research

- Community-based Sustainable Tourism: Application to cruise-ship and "all-inclusive" tourism
- Measuring the Ecological Footprint: Case Study of Atlantic LNG, T&T
- Measuring Social Capital: Case study of sporting organisations in T&T
- Valuation of the Speyside Coral Reef, Tobago
- Feasibility of Alternative Energy in T&T: Case of Solar Water Heaters

 Alternative Options for Risk Management in Natural Disaster Management in the Caribbean: Case Study of Grenada

### **Outreach**

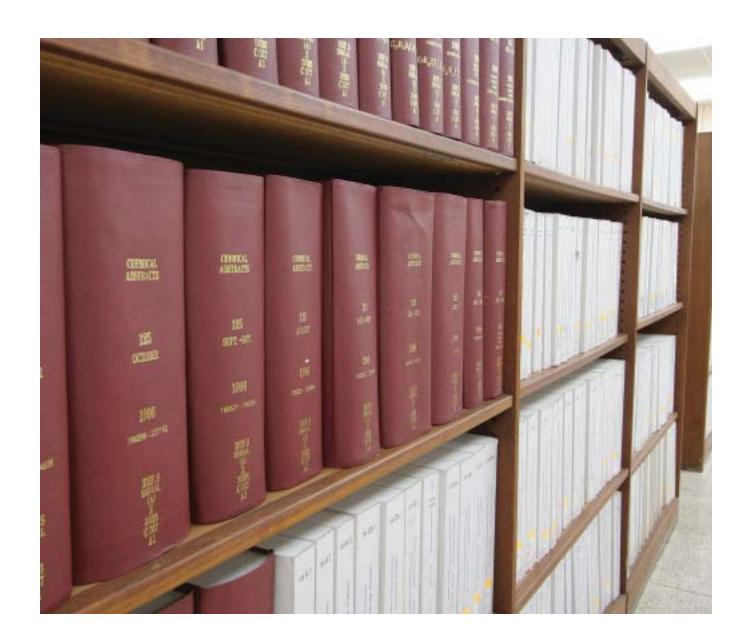
SEDU outreach activities included:

A three-day *workshop on Valuation of Watersheds* in Tobago on November, 2005, for the Caribbean Natural Resources Institute.

Participation in a *meeting of the Small Island Developing States* (SIDS) University Consortium in Mona, Jamaica, from August 29 to September 1, 2005.

Presentation of the findings of the SEDU Project on the Sustainable Livelihoods Approach to Poverty Eradication, at one-day seminars between September 9-20, 2005, in Barbados, Antigua, Jamaica and Belize.

From October 14-15, 2005, SEDU hosted its 9<sup>th</sup> Annual Conference on the theme "Realising the Millenium Development Goal of Poverty Eradication through Community-based Sustainable Livelihood Strategies and Governance Reform".



# publications and conference presentations

## FACULTY OF ENGINEERING Publications

**Babwah J.A.**, Dawe R.A. and Mellowes W.A. (2006). Foamy oil production in Trinidad. *The West Indian Journal of Engineering*, Vol. 28, No. 2, pp. 1-12.

**Castellanos F.** and Ramesar V. (2006). Characterisation and Estimation of Wind Energy Resources Using Autoregressive Modelling and Probability Density Functions. *Wind Engineering Journal*, Vol. 30, No. 1, April, pp. 1-14.

**Chowdary B.V.** (2005). Information Technology in the Caribbean Manufacturing Firms: An Industrial Survey. *Global Journal of Flexible Systems Management*, Vol. 6, No. 3 and 4, pp. 1-10.

**Chetty B.S.** and Chowdary B.V. (2005). Major Problems and Improvement Approaches in Indian Batch Manufacturing Firms: Inferences From an Exploratory Study. *Journal of Asia Pacific Business Review*, Vol.1, No. 2, pp. 42-49.

**Chetty B.S.**, Krishnaswamy, K.N., Chowdary, B.V. and Akhilesh, K.B. (2006). Manufacturing Planning and Control in Batch Manufacturing Industries: A Multidimensional Construct. *Journal of Computer Applications in Technology*, Vol. 27, No.1, pp. 51-71.

**Clarke R.** (2006). 13<sup>th</sup> World Conference in Earthquake Engineering 2004 – Caribbean Implications and Recommendations. *The West Indian Journal of Engineering*, Vol. 28, No. 2, January, pp. 88-94.

**Clarke R.** (2005). Non-Bouc Degrading Hysteresis Model for Nonlinear Dynamic Procedure Seismic Design. *Journal of Structural Engineering of the American Institute of Civil Engineers*, Vol. 131, No. 2, January, pp. 287-291.

**Cooney J.**, Riverol C. and Napolitano V. (2005). On-line Fouling Detection in Plate Heat Exchangers. *International Journal of Heat Exchangers*, Vol. VI, December, pp. 293-304.

**De Four R.** (2006). A Self-Starting Method and an Apparatus For Sensorless Commutation of Brushless DC Motors. WIPO WO/2006/073378, July 13.

**Ekwue E.I.**, Lall D.Z. and Stone R.J. (2006). Engineering Properties of Major Soils used in Cricket Pitches in Trinidad. *The West Indian Journal of Engineering*, Trinidad, Vol. 28, No. 2, pp. 27-40.

**Ekwue E.I.**, Stone R.J. and Bhagwat D. (2006). Thermal Conductivity of some compacted Trinidadian Soils as Affected by Peat Content. *Biosystems Engineering*, Vol. 94, No. 3, pp. 461-469.

**Foley M.W.**, Julien R.H. and Copeland B.R. (2005). A Comparison of PID Controller Tuning Methods. *Canadian Journal of Chemical Engineering*, Vol. 83, No. 4, Aug., pp. 712-722.

**Foley M.W.**, Ramharack N. and Copeland B.R. (2005). A Comparison of PI Controller Tuning Methods. *Industrial and Engineering Chemistry Research*, Vol. 44, No. 17, Aug. pp. 6741-6750.

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## SCHOOL OF HUMANITIES Conference Presentations

## **Department of Liberal Arts**

### F. Aiyejina

(with R. Gibbons and B.S. Phills)

The Making of Songs of the Orisha Palais

The International Society for the Oral Literatures of Africa Sixth Conference,

The UWI, St. Augustine, July 20-23, 2006.

#### T. Ali

Seeking a Safe Space: Re-Envisioning Caribbean Masculinities in an Age of Feminism

3rd Annual Conference on The College Male,
Saint John's University, Collegeville, Minnesota, USA.

#### J. Antoine-Dunne

Walcott and Ireland
The Islands-in-Between Conference,
Rovanel's Hotel, Tobago. November 2005.

The Function of Film Studies within the Academy
Caribbean Studies Association Conference, Trinidad, May 31, 2006.

Beckett, Bacon and Eisenstein Beckett Working Group, Beckett Centenary, Dublin, Republic of Ireland, April 7, 2006.

Caribbean Cinema and the Construction of Identity 25th Anniversary Conference on West Indian Literature, The UWI, St. Augustine, March 4, 2006.

#### M. Munro

Échos et miroirs: Rythme et subjectivité aux Antilles Images de soi

Université des Antilles et de la Guyane, Martinique, November 22-25, 2005.

Hatred Chérie: History, Silence and Animosity in Marie Chauvet's 'Amour' and Yanick Lahens's 'Dans La Maison du Père' West Indian Literature Conference, The UWI, St Augustine, March 2-4 2006.

#### N. Roberts

Racialised Identities: Caribbean Realities: Analyzing Black female identities in Hispanic Caribbean Poetry Gender Studies Seminar Series, CGDS, The UWI, St. Augustine, November 2005.

Vultures, vixens (villains): Women negotiating identities in Hispanic Caribbean Narrative

Where is here? Remapping the Caribbean-West Indian Literature Conference,

The UWI, St. Augustine, March 2006.

Race, Racism and Identity: Interrogating Difference in Trinidadian Society

Caribbean Studies Association Conference, Crowne Plaza Hotel, Trinidad, May 2006.

I used to think I had answers for all of this: Alternate Identities in Senel Paz's 'Fresa y chocolate'.

Rethinking Francophone and Hispanic Studies: Symposium on Foreign Language Education and Literatures in the America, The UWI, Mona.

#### E. Walcott-Hackshaw

The Price of Poetry: The Caribbean in the Age of Modernity Caribbean Studies Association, Crown Plaza, Trinidad, May 29-June 2, 2006.

Don't Cross the Border: the Upside Down World of Shani Mootoo, Hybridity or Creolization: Which model(s) for the Literature of the 'Other' America?

Department of Modern Languages and Literatures, The UWI, Mona, June 14-June 16, 2006.

#### V. Youssef

*Unmasking Ideology through Language*Eighth Annual Eastern Caribbean Islands-in-Between Conference.

Rovanel's Hotel, Tobago, November 9-12, 2005.

It's Not the What but the Why: Motivation in Acquiring Standard English in the Caribbean

Eighth Annual Eastern Caribbean Islands-in-Between Conference,

Tobago, November 9-12, 2005.

### On Judgment

Fourth International Conference on Crime and Justice in the Caribbean.

The UWI, St. Augustine, February 8-11, 2006.

The Varilingual Repertoire of Tobagonian Speakers
Sociolinguistics Symposium 16, as part of the Workshop: Variation in Creole continua: From Creole continua to individual agency,

University of Limerick, Ireland, July 6-8, 2006.

## SCHOOL OF EDUCATION Publications

Volume 13 (2006) of *Caribbean Curriculum*, a peer-reviewed journal, was published by the School.

**Herbert S.** (2006). The Challenges of Planning and Designing a Cross-cultural Unit of Work. *Educational Action Research*, 14(1), 45-64.

Rampersad J., and **Herbert S.** (2005). Reflections of Science Teachers in an in-service Teacher Education Programme. *Caribbean Curriculum*, 12, 1-25.

**James C.** (2005). From Orature to Literature in Jamaican and Trinidadian Children's Folk Traditions. *Children's Literature Association Quarterly*, 30(2), 164-78.

**James C.** (2005). Themes and Metaphors in the Autobiographical Narratives of New Sector Secondary Teachers in Trinidad and Tobago. *Caribbean Curriculum*, 12, 57-87.

**James C.** (2005). Woman Descendant. *The Oxford Book of Caribbean Verse*. UK: Oxford University Press, 233-234.

**Mohammed J.** (in press). *Caribbean Studies – An Interdisciplinary Approach*. London: Macmillan.

**Plummer D.** (2007). Homophobia, Heterosexism and Beyond. *International Encyclopedia of Men and Masculinities*, Flood M., Gardiner J.K., Pease B., Pringle K. (eds). Routledge, London. (Accepted/Forthcoming)

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**Plummer D.** and Irwin L. (2006). The Relationship between Grassroots Activities, National Initiatives and HIV Prevention: What Explains Australia's Dramatic Early Success in Controlling the HIV Epidemic? *International Journal of STI & AIDS* (Accepted Jan 2006/Forthcoming).

**Plummer D.** (2006). Sportophobia: Why Do Many Men Fear Sport? *Journal of Sport & Social Issues*. 30(2), 122-137.

Ridge D., **Plummer D.**, Peasley D. (2006). Remaking the Masculine Self and Coping in the Liminal World of the Gay 'Scene'. *Culture, Health and Sexuality*, 8(6), 1-14.

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**Plummer D.** (2006). A Plague within a Plague: How HIV-related Stigma Takes its Toll on All of Us. In: Commonwealth of Nations. *The Commonwealth Health Ministers' Yearbook* (pp 116-119). London: Henley Media Group. (ISBN: 0954657276)

Bundy D., Morrissey M., **Plummer D.** (2005). Accelerating the Education Sector Response to HIV and AIDS in the Caribbean Region. World Bank/United Nations Educational, Scientific and Cultural Organisation (UNESCO), Jamaica & Washington.

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**Plummer D.** (2006). HIV in the Caribbean: A Report from the Commonwealth/UNESCO Regional Chair in Education (HIV Health Promotion), Commonwealth Secretariat, Pall Mall.

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Peck S., **Seunarinesingh K.** et al., Assessing Adolescents' Motivation to Read. Accepted for publication in *Journal of Adolescent and Adult Literacy*. To be published in January 2007.

## SCHOOL OF EDUCATION Conference Presentations

#### Z. Francis

In Celebration of Midwives in Trinidad and Tobago
The Trinidad and Tobago Association of Midwives Conference,

Chaguanas, Trinidad, October 2005.

### J. George

Gender Differentials in Enrolment and Achievement at the CXC CSEC Examinations in Trinidad and Tobago

Research Driven Reform; Ministry of Education Research and Evaluation Conference.

Macoya, Trinidad, March 2006.

## R. Maharaj-Sharma

Solar Energy Deposition in the Thermosphere, Mesosphere and lonosphere

IAGA Conference, Toulouse, July 2005.

#### D. Plummer

Higher Education Responses to HIV UNICA,

Santo Domingo, Dominican Republic, November 2005.

HIV and Caribbean Education

Special meeting of the Caribbean Council on Human and Social Development (COHSOD),

Port of Spain, Trinidad, July 2006.

The world meeting of the 'UNESCO Education for All Working Group',

UNESCO Headquarters, Paris, July 2006.

Masculinities and HIV Caribbean Man Initiative Conference, Kingston, Jamaica, January 2006.

Sexuality, Gender and Colonialism Inaugural Conference of the Caribbean Network of HIV Coordinators in the Education Sector, Kingston, Jamaica, April 2006.

## CENTRE FOR LANGUAGE LEARNING (CLL) Publications

**Carter B.** (2006). Teacher/Student Responsibility in Foreign Language Learning. New York: Peter Lang. 217 pages.

**Carter B.** (2005). Language Learning Beyond the Classroom: The Contribution of Study Abroad. *Caribbean Journal of Education*, Special Issue on Foreign Language Teaching and Learning in the Caribbean. Eds. Marie-José Nzengou-Tayo and Hugues Péters. Vol. 27: 123-41.

**Gea-Monera M.P.** (2005). Peer Feedback in the Language Classroom. *Caribbean Journal of Education Special Issue on Foreign Language Teaching and Learning in the Caribbean* Vol. 27: 187-222.

**Luengo-Cervera E., Albornoz-Chacon R.** and **Mora-Sotomayor M.** (2006). *Preparados Workbooks 1 and 2*. Longman Primary Spanish for the Caribbean. Harlow, Essex: Pearson Education Limited.

**Moodie-Kublalsingh S.** (2005). The Teaching of Hindi in Trinidad. *Caribbean Journal of Education Special Issue on Foreign Language Teaching and Learning in the Caribbean*. Eds. Marie-José Nzengou-Tayo and Hugues Péters. Vol. 27: 245-71.

**Williams V.** and **Carter B**. (2005). Arriving at a (Self) Diagnosis of the Foreign Language Teaching Situation in Trinidad and Tobago. *Caribbean Journal of Education Special Issue on Foreign Language Teaching and Learning in the Caribbean* Vol. 27: 223-43.

## CENTRE FOR LANGUAGE LEARNING Conference Presentations

#### **B.** Carter

The CXC-UWI Nexus in Foreign Language Education: Retrospective and Prospective

CSA 31st Annual Conference, Port of Spain, May 29-June 5, 2006.

Views from the Centre: A Case-study of an Institution-wide Language Programme

Rethinking Francophone and Hispanic Studies, Symposium on foreign language education and literatures in the Americas, Mona, Jamaica, June 14-16, 2006.

### B. Carter and S. Williams

But this is not English: Setswana Speakers at a Caribbean Medical School: Challenges and Opportunities

Integrating Content and Language in Higher Education, Maastricht, the Netherlands, June 28-July 1, 2006.

## CENTRE FOR CREATIVE & FESTIVAL ARTS Publications

**Lyndersay D.** (2006). The Roots & Wings for Caribbean Storytelling, with P. Eintou Springer & H. Tjon, July.

**Ouditt S.** (2005). Texts in the Corridor, *Trinidad and Tobago Review*. Special Commemorative edition on Lloyd Best, Vol. 27 No. 12, pages 20 and 21, November.

**Ouditt S.** (2006). Digital Divise, The Caribbean in the Age of Modernity. From Exhibition Catalogue ed. Professor Mohammed, Caribbean Studies Association Conference, May/June.

**Ouditt S.** (2006). Kutiya Geometries (Part 2), *Small Axe: A Caribbean Journal of Criticism*, No. 20. Photoessay excerpted from original conference paper of May 2004, 4 pages text and 8 photos, June.

**Ouditt S.** Plantation Economy and Trademark Capital, *Rethinking Nordic Colonialism*, Act 5, Nordic Institute for Contemporary Art, November 2006. DVD publication, 14 pages. Forthcoming.

**Remy J.** African Creation in *Teaching Percussion* by Gary Cook, University of Arizona, Ch. 11, page 470.

**Remy J.** Internet publication for Pan on the net. http://www.panonthenet.com/woman/2006/woman-of-gold.html

**Sharma S.** and **Remy J.** A manual of Technical Studies for Tenor and Double Second/Double Tenor Pans.

**Sharma S.** Graded Examinations in Steelpan Performance, Grades 1-8, for Tenor and Double Second/Double Tenor pans (a total of 16 booklets).

**Sharma S.** Solo Steelband Compositions, Canboulay Productions.

**Sharma S.** Editing and Scored Music for CD of six original compositions of Ray Holman - *Changing Times*, November 2005.

**Sharma S.** Assessment Materials for the Republic Bank Pan Minors Scholarship Programme, July 2006.

**Sharma S.** Trinidad and Tobago National Steel Symphony: A Proposal for the Ministry of Community Development, Culture and Gender Affairs, December 2005.

## CENTRE FOR CREATIVE & FESTIVAL ARTS Conference Presentations

#### K. Crichlow

Carnival - A Medium for Advertising Reflections on Carnival 2006, Port of Spain, May 2006.

#### R. Gibbons

Presented at UNESCO World Conference on Arts Education, Lisbon, Portugal, March 6-9, 2006.

## R. Gibbons and F. Aiyejina

Presented at International Society for Oral Literature in Africa

(ISOLA) Conference, July 17-22, 2006.

## D. Lyndersay

From Stage to Street: Fourth World Arts Education in the Caribbean

UNESCO World Conference on Arts Education, Lisbon, Portugal, March 2006.

#### S. Ouditt

Curating as Critical Practice 2<sup>nd</sup> Caribbean International Symposium in Arts Education, CCFA, The UWI, St. Augustine, June 2005.

Annotations of a Signfield; Plantation Economy and Trademark Capital Rethinking Nordic Colonialism Conference, Reykjavik, Iceland, April 2006.

#### S. Sharma

Steelpan in Education Workshop; Mini-Carnival Presentation UNESCO World Conference on Arts Education, Lisbon, Portugal, March 6-9, 2006.

## CENTRE FOR CREATIVE & FESTIVAL ARTS Selected Exhibitions

#### K. Crichlow

Paintings at the Chelsea Galleria Miami, Florida, March 2006.

#### S. Ouditt

Trademark Capital
An installation measuring 8m x 8m x 4m.
The Living Art Museum,
Reykjavic, Iceland, April 2006.

#### Kutiva Photos

Photographs of early 20<sup>th</sup> century Hindu shrines for "The Caribbean in the Age of Modernity", Photo exhibition curated by Prof. P. Mohammed and Artist Rex Dixon,

31st Annual Conference of the Caribbean Studies Association, Trinidad and Tobago, May 2006.

#### **FACULTY OF MEDICAL SCIENCES**

## SCHOOL OF MEDICINE Publications

## Department of Pre-clinical Sciences (Books)

**Nayak B.S.** (2006). Manipal Manual of Clinical Biochemistry (3rd Edition), Jaypee Medical Publishers, India.

**Nayak B.S.** (2006). Introduction to Biochemistry, Manipal Academy of Higher Education (MAHE), Manipal.

**Nayak B.S.** (2006). Basic Laboratory Techniques, Manipal Academy of Higher Education (MAHE), Manipal.

**Nayak B.S.** (2006). Carbohydrates, Lipids, Proteins and Enzymes, BMLT 203 and 204, Manipal Academy of Higher Education (MAHE), Manipal.

**Nayak B.S.** (2006). LFT, RFT, Tumor Markers and Hormones. BMLT 207, Manipal Academy of Higher Education (MAHE), Manipal.

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involved in its Synthesis. BMLT 208, Manipal Academy of Higher Education (MAHE), Manipal.

**Nayak B.S.** (2006). Manipal Handbook of Biochemistry for Dental students, Manipal Academy of Higher Education (MAHE), Manipal.

Hennis, A., Maynard, G., Goddard, C., **Ramdath D.**, **Simeon D.**, eds (2006). Managing Diabetes in Primary Care in the Caribbean. CHRC/PAHO Publication.

Robinson S., Dawson S., **Ramdath D.D.** (2006). Nutrition and Oral Health in *HIV/AIDS in Dental Practice: An Illustrated Handbook for Caribbean Dental Practitioners*. S.R. Prabhu (ed). Multi Media Centre, The UWI, St. Augustine.

## Department of Pre-clinical Sciences (Journal Articles)

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**McRae A.**, Martins R.N., Fonte J., Kraftsik R., Hirt L., Miklossy J. Cerebrospinal fluid anti-microglial antibodies in Alzheimer Disease: An early biological marker for an ongoing inflammatory process? Experimental Gerontology.

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Nayak B.S., Naidu M.B., Ravikiran P.B., Kamath S.U., Shetty
P.C., Reddy D.S. (2005). Antarth, a polyherbal preparation,
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compromising its antineoplastic activity. *Phytother Res.*19(9); 772-8.

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**Nayak B.S.** and Bhat R. (2005). Cerebrospinal fluid lactate dehydrogenase and glutamine in meningitis. Indian Journal of Physiology and Pharmacology 49;3-5.

Nayak B.S., Suresh R., Rao A.V.C., Pillai G.K., Davis E.M., Ramkissoon V. and McRae A. (2005). Evaluation of wound healing activity of *Vanda roxburghii R.Br (Orchidacea)* – A preclinical study in a rat model. *International Journal of Lower Extremity Wounds* 4: 200-204.

**Nayak B.S.**, Vinutha B, Geetha B., Sudha B. (2005). Experimental evaluation of *Pentas lanceolata* for wound healing activity in rats, *Fitoterapia* 76; 671-675.

**Nayak B.S.** Yashwanth S., Pinto S., Bhat V.R. and Mayya S.S. (2005). Serum copper, ceruloplasmin, protein thiols and TBARS status in liver cancer, associated with elevated AFP levels, *Indian Journal of Physiology and Pharmacology* 49.

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**Nayak B.S., Isitor G.N.**, Maxwell A., Bhogadi V. and **Ramdath D.** (2006). Wound healing activity of *Morinda citrifolia* fruit on streptozotocin-induced diabetic rats. *Journal of Wound Care. (in press)* 

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## **Department of Para-Clinical Sciences**

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**Akpaka P.E.**, Christian N., Bodonaik N.C., Smikle M.F. (2006) Epidemiology of coagulase-negative Staphylococci isolated from clinical blood specimens at the University Hospital of the West Indies. *The West Indian Medical Journal*. Jun; 55(3):170-3.

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**Akpaka P.E.**, Tulloch-Reid M., Justiz-Vaillant A., Smikle M.F. (2006) Prevalence of human immunodeficiency virus infection in patients with pulmonary tuberculosis at the National Chest Hospital in Jamaica. *Rev Panam Salud Publica*. Jan; 19(1):38-43.

**Ali Z., Ramcharan J.** (2006) The neuro-developmental abilities of very-low-birthweight children in Trinidad, West Indies. *Tropical Doctor*. Oct; 36(4):210-12.

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**Clement Y.N.**, Williams A.F. (2005) Protection against paracetamol-induced hepatic injury by prazosin pre-treatment in CD-1 mice. *Mutation Reearchs*. Nov 11;579(1-2):182-8. Epub, Jul 27.

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#### **FACULTY OF MEDICAL SCIENCES**

# SCHOOL OF MEDICINE Conference Presentations

## **Department of Pre-Clinical Sciences**

**Carrington C.V.F.**, Foster, J.E., Pybus O.G., Bennett S.E. and Holmes, E.C. *Invasion and maintenance of dengue viruses in the Americas*. Presented at the Annual Meeting of the American Society for Virology, Madison, Wisconsin, USA, July 15-18, 2005.

**Davis G.K., Baboolal N.S., McRae A.** and Ramchandani J. Total homocysteine and anti-microglia antibodies in patients with confirmed Alzheimer's disease and Alzheimer's disease with vascular dementia. 51st Annual CHRC Meeting, St. Kitts, April 2006.

**McRae A.**, Ramchandani J., Rogers A. *Windows of opportunity: Neuroprotection for inflammatory induced dopaminergic cell death.* 35<sup>th</sup> Annual Meeting Society for Neuroscience, Washington D.C., November 2005.

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**McRae A., Baboolal N.S., Davis G.K.,** Ramchandani, J. *Risk factors and Biomarkers in Alzheimer's disease in Trinidad and Tobago*. 10<sup>th</sup> International Conference on Alzheimer's Disease and Related Disorders, Madrid, Spain, July 2006.

Gayadeen H.L., **Mungrue K.**, **Carrington C.V.F.**, Singh R., **Sirjusingh A.P.** and **Ramsewak S.S.** *Prevalence of asymptomatic infection with chlamydia trachomatis among antenatal women in North Trinidad*. Presented at the 50<sup>th</sup> Annual CHRC Meeting, Tobago, April 20-23, 2005.

## **Department of Para-Clinical Sciences**

**Maharaj R.G.** Men's Health and Men's Health Seeking Behaviour. Address on the launch of a men's health awareness on the occasion of Health Promotion Month on behalf of the North West Regional Health Authority. Cascadia Hotel, April 19, 2006.

**Rawlins J.** Health, Social and Economic Situation and Disability in the Elderly in Trinidad. Paper presented at the 31st annual Caribbean Studies Association (CSA) conference. The Crown Plaza Hotel, Port of Spain, Trinidad, May 29-June 2, 2006. (16 pages)

**Rawlins J.** The Elderly in Trinidad: Health, Social and Economic Status and Issue of Loneliness. Paper presented at the 51<sup>st</sup> Annual Caribbean Research Health Council (CHRC) meeting. The Marriott Hotel, St. Kitts, West Indies, April 27-29, 2006. (14 pages)

**Rawlins J.** Research and the Future – Faculty of Medical Sciences. Highlights of Paper presented at Research Days, The University of the West Indies, St. Augustine, April 6 2006. (8 pages)

## **Department of Clinical Medical Sciences**

**Baboolal N.** Socio Demographic, Clinical Correlates and Co-Morbidity with Depression in Patients with Dementia in Trinidad: A Preliminary Study of 76 Patients. Caribbean Health Research Council, St. Kitts, April 26-29, 2006.

**Baboolal N.** *Total Homocysteine in Dementia*. Caribbean Health Research Council, St. Kitts, April 26-29, 2006.

**Hutchinson G.** Social Factors in the Aetiology of Psychoisis. World Psychiatric Congress. Cairo, Egypt, September 2005.

**Maharajh H.** Cannabis use in adolescents. APTT Psychiatric Meeting, Port of Spain, Trinidad, October 2005.

**Maharajh H.** *Culture and Suicide*. World Psychiatric Association. Vienna, April 18-20, 2006.

# SCHOOL OF ADVANCED NURSING EDUCATION Conference Presentations

Preparing for the Aging Wave: Do you see what I see? Seminar hosted by the School of Advanced Nursing Education,

The UWI, Faculty of Medical Sciences, Amphitheatre A, May 2006.

**Dyer-Regis B., Price M.** and students *Research Poster Presentation* International Nursing Midwifery Conference Jamaica, June 1-3, 2006.

# SCHOOL OF VETERINARY MEDICINE Conference Presentations

**Isitor G.** Nuclear chromatin subdomains in avian erythrocytes and mammalian lymphocytes: Visualization by digital imaging segmentation technique and fluorescence microscopy. Paper presented at the British Association of Clinical Anatomists Winter Scientific Meeting. University of Sheffield, UK, December 19, 2005.

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#### **FACULTY OF SCIENCE & AGRICULTURE**

# SCHOOL OF AGRICULTURE Publications

Department of Agricultural Economics & Extension

**Dolly D.I.** (2005)\A\Gender Perspective of Agricultural Productive Capacity: An Analysis of the 2004\Agricultural Census of Trinidad and Tobago. Food and Agicultural Organisation, Port of Spain, Trinidad and Tobago, December 2005.

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**Granderson I.** and Lopez L. (2006) Time for Counting Calories. 3<sup>rd</sup> Edition, Printex Converters, Marabella, Trinidad and Tobago.

**Nichols S.** and **Chase N.A.** Content Analysis of Health Research Reported by the daily newspapers of Trinidad and Tobago. *The West Indian Medical Journal* 2005;54 (5):308-314.

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**Pemberton C.A.** and **Ramnarine D.** The Quantifiable Impact of the Uraguay Round, Agreement on Agriculture (AOA), on Poverty in Trinidad and Tobago. *Food and Nutrition Bulletin* (of United Nations University, Tokyo, Japan), Vol. 27, No. 3, September 2006.

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## **Department of Food Production**

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# SCHOOL OF AGRICULTURE Conference Presentations

# Department of Agricultural Economics & Extension

D.I. Dolly D.I. and W. Kissonsingh (2006) "Prospects for Distance Education Training among Vegetable Producers in Trinidad and Tobago." In proceedings of the 25th Annual Conference of the Association for International Agricultural Extension and Education, May 21-25, 2006.

C.A. Pemberton and Mader-Charles L. "Factors Determining Willingness to Pay for Wetland Conservation: The Case of the Nariva Swamp in Trinidad and Tobago". In proceedings of the 25<sup>th</sup> West Indies Agricultural Economics Conference. Caribbean Agro-Economic Society, Department of Agricultural Economics and Extension, The University of the West Indies, St. Augustine, Trinidad and Tobago, pp. 111-121.

C.A. Pemberton and S. Ragbir (Eds) (2006) "Agricultural, Natural Resources and Environmental Challenges under Emerging Trading Regimes." Proceedings of the 25<sup>th</sup> West Indies Agricultural Economics Conference. Caribbean Agro-Economic Society, Department of Agricultural Economics and Extension, The University of the West Indies, St Augustine, Trinidad and Tobago.

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## Department of Food Production

Badrie N., Leith V. Serrette C. and Rousseau T.M. (2006) Factors influencing food choices among secondary school children in Trinidad, West Indies. Presented at the Caribbean Academy of Sciences (CAS) Meeting and Conference, Guadeloupe, French West Indies, May 2006.

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# SCHOOL OF SCIENCE Publications

## **Department of Chemistry**

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## Department of Life Sciences

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# SCHOOL OF SCIENCE Conference Presentations

## **Department of Chemistry**

Maxwell, A. (2005) *A New Cyclic Peptide from Crotan gossipifolius*. Presented at the 54<sup>th</sup> Natural Products Gordon Research Conference, Tilton, New Hampshire, USA.

Singh, G. (2006) *Synthesis of Carbohydrates Using Propane-1, 3-diylphosphate.* Plenary Lecture, International Meeting on Natural Products, Mona, Jamaica.

## Department of Life Sciences

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Gobin J.F. (2006) The use of an artificial substrate to determine colonization patterns and asymptotes in species diversity at different geographical sites. Paper presented at the 35<sup>th</sup> Benthic Ecology Meeting, Quebec City, Canada.

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## **Mathematics & Computer Science**

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## **Department of Economics**

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**Pantin D.** (2005) "Economic Valuation Study: Action Learning project on Incentives for the Buff Bay/Pencar Watershed, Jamaica". CANARI Who Pays for Water Project Document No. 2., April (with V. Reid).

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**Scott E.** (2005) *Trade and Wages in SIDS: The Jamaican Case.* December 2005 Issue. Social and Economic Studies Journal (SES). Mona, Jamaica.

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## **Department of Management Studies**

**Arjoon S.** (2004) A Guide to Moral and Values Education of Children, St. Augustine, Trinidad: School of Continuing Studies, The UWI, 279 pages (ISBN: 976 620 1927).

**Baptiste R.** (2004) "The Transformation of the Postal Service of Trinidad and Tobago," Public Administration and Development, Vol. 24, Issue 5, pp. 385-396.

**Baptiste R.** (2004) "Exchange Rate Pass-Through in the Caribbean: A Study of Trinidad and Tobago," The International Journal of Finance, Vol. 16, No. 1.

**Baptiste. R.** (2004) "Measuring Financial Performance through EVA: A Departure from Tradition," Apeejay Journal of Management, Vol. 1, No. 1.

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**Bowrin A.**, Raghunandan M., Williams B., Carrington D. (2005) Introduction to Cost and Management Accounting, ISBN: 976-620-209-5, St. Augustine, Trinidad: MPC, School of Education, The UWI (548 pages).

**Brunton T.** (2005) "Systems Analysis and Data Flow Diagrams," (textbook) to be tested and used with students in the course MGMT 3011.

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Wresch W. and **Fraser S.** (2005), Managerial Strategies used to Overcome Technological Hurdles: A Review of e-Commerce Efforts used by Innovative Caribbean Managers, *Journal of Global Information Management*, 14(3), 1-16.

**Fraser S.** (2005) "The possible negative impacts of the information superhighway on Caribbean companies," Encyclopedia of Developing Regional Communities, Idea Group.

**Fraser S.** (2005) "National Competitive Advantage in e-Commerce Efforts: A Report from Five Caribbean Nations," Perspectives on Global Development and Technology, Volume 4, No. 1.

**Jordan-Miller L.** (2006) Staging the Cricket World Cup 2007 in the Caribbean: Issues and Challenges for Small Island Devleoping States, in R. Martin (ed) *Sporting Events and Event Tourism: Impacts, Plans and Opportunities*, UK: Leisure Studies Association, No. 91, pp. 17-42.

Tyson B., Hayle C., Truly D., **Jordan-Miller L.** and Thame M. (2005) West Indies World Cup Cricket: Hallmark of Events as Catalysts for Community Tourism Development, *Journal of Sport Tourism*, Vol. 10, No. 4, pp. 323-334.

**Lewis A.** (2005) Rationalising a Tourism Curriculum for Sustainable Tourism Development in Small Island States: A Stakeholder Perspective, *Journal of Hospitality, Leisure, Sport and Tourism Education*, Vol. 4, No. 2.

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Moolchand R., **Bowrin A., Williams B., Carrington D.** Introduction to Cost and Management Accounting, ISBN: 976-620-209-5, St. Augustine, Trinidad: MPC, School of Education, The UWI (548 pages).

**Ramlogan R.** (2004) Commonwealth Caribbean Business Law, Cavendish Press, London, 438 pages (jointly authored with Natalie Persadie).

**Ramlogan R.** (2004) Developing Environmental Law and Policy in Trinidad and Tobago, Lexicon Press, Trinidad, 338 pages (jointly authored with Natalie Persadie).

**Ramlogan R.** (2004) The Developing World and the Environment: Making the Case for Effective Protection of the Global Environment, University Press of America, Maryland, 273 pages.

**Simms E.** "Determinants of Export Performance: The Case of Manufacturers in Trinidad and Tobago," (co-authored with J. Jacob).

**Simms E.** "An Eclectic Analysis of the International Entry Mode Choices of Manufacturing Firms in Trinidad and Tobago," (co-authored with H. Singh).

**Simms E.** "The Measurement of Service Quality: The Case of Two Service Firms in Trinidad and Tobago," (co-authored with V. Reid).

# FACULTY OF SOCIAL SCIENCES Conference Presentations

### R. Baptiste

"Organizational Change," delivered at the Caribbean Conference of Churches 7<sup>th</sup> General Assembly, Riande Continental Hotel, Panama City, Panama, June 10-15, 2005.

"Industrial Relations in the Public Sector," delivered as a panelist at a conference entitled National Conference and Consultation on Industrial Relations in Trinidad and Tobago, Cascadia Hotel, St. Anns, Trinidad, W.I., March 1-3, 2005.

#### T. Brunton

"Implications of IT Technology and Education in Trinidad and Tobago," presented at

Caribbean Academy of Sciences Seminar, October 2005.

"Policy Directions in Spectrum Allocation Reform," presented at the Caribbean

Telecommunications Union Conference, October 2005.

## I. Cambridge

"Tertiary Education: Fostering Inclusiveness for persons with Disabilities" presented at ACHEA conference on Tertiary Education, Tobago, July 2005.

"Emergent Issues in Gender and Ethnicity in Special Populations in Trinidad and Tobago: Do we prepare our male children for residential care?" presented at the Caribbean Studies Association Conference, The Dominican Republic, May 2005.

Presentation on "Education and Disability" for the Leonard Cheshire's National Seminar on Disability 'Honouring the memory of Dr. Harry Collymore'. The UWI, St. Augustine, 2005.

#### D. Chadee

Social Psychological Consequences of Ethnic Politics on Fear of Crime. Presentation to graduate students taught by Professor Darlene Defour September 21, 2004 held at Hunter College.

Application of Social Exchange Theory to an Understanding of Fear of Crime. School of Criminal Justice, State University of New York, Albany, October 6, 2004.

Cognitive, Behavioral and Affective Responses to Victimization: Moving towards a Social Psychological Criminology, Albany, October 8, 2004.

Assessing Fear of Crime Using Geographical Information Systems. John Jay College, City University of New York, October 13, 2004.

Fear of Crime in Paradise: Presentation of a Three Phase Longitudinal Study. (University of Cincinnati, November 5<sup>th</sup>, 2004).

Reassessing the Methodology to Measure Fear of Crime and Risk of Victimization. Department of Criminal Justice, UCF, November 10, 2004...

Ethnic Comparison of Research Findings on Fear of Crime: America and Trinidad, Department of Criminal Justice, UCF, November 16, 2004.

Exploring Community Efficacy and Locus of Control as Explanatory Factors to Altruistic Fear. University of Florida, November 30, 2004.

Overview of Fear of Crime Research: Developing International Research Linkages on Fear of Crime. Presentation to Faculty, Department of Criminal Justice, UCF, December 3, 2004.

#### M. Franklin

Franklin M. (2006) Pursuing Development and Poverty Reduction through Information and Communication Technology (ICT) in Trinidad and Tobago – Demas-Rampersad Seminar, April 2006.

Franklin M. (2006) Integrated Response of Health Care Systems to Rapid Population Ageing (INTRA) Trinidad &Tobago – Demas-Rampersad Seminar.

Franklin M. (2005) Meeting the Challenge of including the Poor in the National ICT Plan in Trinidad and Tobago – Symposium on Those Who will be Left Behind: A Critical Analysis of the Socio-Economic Environment Facing Caribbean Territories.

#### S. Fraser

Fraser S. and Henry L. (2006) "An Exploratory Study of Residential B2C Activity in Barbados." Paper presented at the First International Management Conference in Bridgetown, Barbados, March 2006. This paper has been submitted to the Journal of Eastern Caribbean Studies for consideration.

Fraser S. and Henry L. (2006) "An Exploratory Study of Residential B2C Activity in Trinidad and Tobago." Proceedings of the Seventh Annual Global Information Technology Management (GITM) World Conference, Orlando, Florida. This paper won the "Best Paper" award and has been submitted to the Journal of Global Information Technology Management for consideration.

## H. Ghany

"Understanding Marginality in the Electoral System of Trinidad and Tobago: The Search for a Fair Electoral Formula" presented at the Principles of Fairness Conference, The UWI, St. Augustine, July 29, 2005.

"Public Perceptions of Parliament in Trinidad and Tobago: Evidence from the Field". Paper presented at the Seventh Workshop of Parliamentary Scholars and Parliamentarians convened by the Centre for Legislative Studies at the University of Hull, U.K. and held at Wroxton College, Banbury, Oxfordshire on 29-30, July.

"Presiding Officers as Heads of State in the Commonwealth Caribbean Parliamentary Republics: The Creation of a West-minster-Washington Hybrid". Paper presented at the Seventh Workshop of Parliamentary Scholars and Parliamentarians convened by the Centre for Legislative Studies at the University of Hull, U.K. and held at Wroxton College, Banbury, Oxfordshire on 29-30, July.

#### L. Henry

"An Exploratory Study of Residential B2C Activity in Trinidad and Tobago", (with S. Fraser), presented at the annual Global Information Technology Management Association (GITMA) Conference, Orlando, Florida, June 2006.

"Preliminary Investigation into Internet Usage and Online-Shopping in the Caribbean: The Case of Barbados," (with S. Fraser), presented at the Management Conference, The UWI, Cave Hill, Barbados, March 2006.

"Liberalization and Openness: The Trinidad and Tobago Economy in the 1990s", (with S. Sookram), Central Bank of Barbados Annual Seminar, Bridgetown, Barbados, July 2005.

"Latin American and Caribbean Prospects in a Volatile World", Port-of-Spain, Central Bank Auditorium, December 2005.

#### L. Jordan-Miller

"The Tourism Industry and Financial Stability in Trinidad & Tobago", (with A. Lewis), paper presented at the 2<sup>nd</sup> Biennial International Conference on Business, Banking and Finance, The UWI, St. Augustine, Trinidad, May 1-3, 2006.

"Staging the Cricket World Cup 2007 in the Caribbean: Issues and Challenges for Small Island Developing States", paper presented at the Leisure Studies Association Festivals and Events: Beyond Economic Impact Conference 2005, Scotland.

#### A. Lewis

"Weathering the Storm: Crisis Marketing for Caribbean Tourist Destinations", (with B. Pacheco), paper presented at the Caribbean Studies Association conference on The Caribbean in the Age of Modernity: The Academy in Responding to the Challenges of the Region, Port-of-Spain, Trinidad, May 29-June 2, 2006.

"Caribbean Tourism and the FTAA: A Socio-Cultural Response", (with R. Mahon), paper presented at the conference on Re-Mapping the Americas: Globalization, Regionalization and the FTAA, St. Augustine, Trinidad, October 9-21, 2005.

"Rationalising a Tourism Curriculum for Sustainable Tourism Development in Small Island States: A Stakeholder Perspective," presented at the conference on Critical Issues in Tourism Education, Great Missenden, UK, December 1-3, 2004.

"Education for Sustainable Tourism Development in Small Island States: A Stakeholder Perspective," presented at the conference on From Turbulence to Tourism: Tobago in Transition, Scarborough, Tobago, November 15-17, 2004.

#### D. Mahabir

"Exchange Rate, Inflation and Interest Rate Determinants in a Small Economy". Director, Conference, Republic Bank, Barbados, April 2006.

#### R. Marshall

"Behaviour unto Death": Paper presented at the 3<sup>rd</sup> Critical Multicultural Counselling Conference, June 27-28, 2005, Ontario, Canada.

"The Practice of Healing: A discussion into the social, spiritual and behavioural aspects of treatment." Multicultural Counselling Conference, June 27-28, 2005, Ontario, Canada.

"Micro-entrepreneurship and Poverty alleviation. An Argument Implicating Governance and Democracy", July 21-22, 2005, Bridgetown, Barbados at the Caribbean sub-regional Civil Society Forum: Creating Employment to fight poverty and strengthen Democratic Governance.

"Changing Social Relations and the Reinterpretation of Sociological Theory. A Redefinition of the Situation." International Sociological Association Conference (ISA), Council of National Associations, Miami, Florida.

#### G. Mc Guire

"Energy Sector Performance 2005". Presented at the Petroleum Congress 2006, hosted by South Trinidad Chamber of Industry and Commerce, February 2006.

"Comparative Analysis of trends in Government Expenditure 1975-1980 and 2000-2005". Presented at Accounting for the Petro-Dollar, hosted by the Department of Economics in conjunction with the Trinidad and Tobago Institute of the West Indies and the OWTU, October 2005.

"Integration Possibilities in the Petroleum/Gas and Mining Sectors". Presented at Caribbean Connect - CARICOM High Level Symposium on CSME, June 2006.

"Review of Energy Sector Performance 2004" at the Trinidad and Tobago Petroleum Congress, hosted by the South Trinidad Chamber of Industry and Commerce, Trinidad Hilton, Feb. 25, 2005.

"Benefits of National Ownership" at the VCIP/UWI Seminar on Local Content, UWI, April 2005.

"Caribbean Energy Condition – Prospects for a Natural Gas Solution" at Public Forum on Energy hosted by the Institute of Law and Economics, Kingston Jamaica, 21 June, 2005.

#### D. Pantin

Project on Sustainable Livelihoods & Poverty Eradication in the Caribbean; Report of findings of SEDU project for DFID – Barbados, Antiqua, Jamaica and Belize. September 9-20, 2005.

Status of Trade Relations between the European Union & the Caribbean under the Cotonou Agreement, ECLAC, Trinidad, December 8-9, 2005.

Guidelines for Poverty Eradication through a Sustainable Livelihoods Approach - Case Studies from Belize, Grenada & St. Lucia. 8<sup>th</sup> Annual Sustainable Tourism Conference, San Juan, Puerto Rico, April 25-29, 2006.

"Globalization and its Impact on Workers". Presented at PSA Conference, Mandate for Constitution Reform - Nurturing the Entrepreneurial Spirit, Trinidad, May 1, 2006.

"Potential Role of a Hydrocarbon Fund in Trinidad and Tobago?" Caribbean Centre on Monetary Studies, 9<sup>th</sup> Senior Policy Level Seminar, Trinidad. May 2-3, 2005 (with Dale James).

"Environmental Governance". Panel presentation at UNSIDS Conference in Mauritius. January 12, 2005.

### M. Raghunandan

"Corporate Social Responsibility Reporting," paper presented at the University of Guyana, June 2006.

### B. Ragoonath

UWI/NCIC/High Commission of India. Third International Seminar on Indian Diaspora Issues. East Indians in the Caribbean: Reflections on the Past, Charting the Way Forward. The New Indenture: Lessons for the Descendants of Indian Indentureship. Chaguanas, Trinidad.

The New Localism: Reaching out into the Community. Commonwealth Local Government Conference Deepening Local Democracy. Aberdeen, Scotland. (2005) UN-HABITAT/ROLAC Regional Seminar on Capitalizing City. Strategic Requirements for Localizing the MDGs in the Caribbean. Consultations for Localizing the Millennium Development Goals in the Caribbean. Port of Spain, Trinidad.

## R. Ramlogan

"Venture Capital Incentive Programme and the University of the West Indies," presented at a seminar entitled, At the Crossroads: Building Local Content in the Trinidad and Tobago Energy Sector, April 26, 2005.

#### S. Teelucksingh

Paper presented at the Third World Congress of Environmental and Resource Economists, July 2006, Kyoto, Japan, entitled "The Carrot or the Big Stick? A Game-Theoretic Approach to the Integration of Environmental Policy in the Caribbean Region".

"The Implications of Ecosystem Dynamics for Fisheries Management: A Case Study of Select Fisheries in the Gulf of Paria, Trinidad". Presented at the 14<sup>th</sup> Annual Meeting of the European Association of Environmental and Resource Economists (EAERE), Bremen, Germany, June 23-26, 2005.

"A Theoretical Model of Land Ocean Interactions in Caribbean Economies," The Implications of Ecosystem Dynamics for Fisheries Management: A Case Study of Select Fisheries in the Gulf of Paria, Trinidad. Presented at the Sir Arthur Lewis Institute of Social and Economic Studies Conference entitled "Reflections on Arthur Lewis' Theory of Economic Growth," Kingston, Jamaica, March 16-18, 2005.

#### **CENTRES AND UNITS**

# ANSA MCAL PSYCHOLOGICAL RESEARCH CENTRE Publications

Current Themes in Social Psychology. Mona, Jamaica: The UWI Press (Forthcoming December, 2006).

Fear of crime quantitative Measurement instability revisited and qualitative consistency added: Further results from a three wave Trinidadian longitudinal study. *International Review of Victimology*, 2005, 12: 247-271.

Trinidadians and US citizens' attitudes towards domestic violence and their willingness to intervene: Does culture make a difference. *Journal of Cross-Cultural Psychology* 37, 6, 761-778.

People's perception of their likelihood future risk of criminal victimization. *British Journal of Criminology*, 2006, 46, 505-518.

Fear of Crime and the Media: Assessing the Lack of Relationship. *Crime, Media and Culture*: An International Journal, Vol. 1(3), Dec. 2005, 322-332.

The relationship between likelihood and fear of criminal victimization. *British Journal of Criminology*, 2007.

# CARIBBEAN CENTRE FOR MONETARY STUDIES Publications

(2006) Journal of Business, Finance and Economics in Emerging Economies.

**Birchwood A.** and **Seerattan D.** (Eds) (2006) Finance and Real Development in the Caribbean.

**Birchwood A.** and **Seerattan D.** (2006) "Financial Market Integration, arbitrage and Interest Rate Parity in the Caribbean". In Finance and Real Development in the Caribbean Eds. A. Birchwood and D. Seerattan, CCMS.

**Seerattan D.** (2006) "The Efficiency of Central Bank Intervention in Select Caribbean Countries". *Journal of Business, Finance and Economics in Emerging Economies*, Vol. 1, No. 1.

**Seerattan D.** (2006) "Tax Reform and Financial Development in Trinidad and Tobago". In Finance and Real Development in the Caribbean. Eds. A. Birchwood and D. Seerattan, CCMS.

# CARIBBEAN CENTRE FOR MONETARY STUDIES Conference Presentations

#### A. Birchwood

"Governance structure of the mutual funds industry in Trinidad and Tobago." Paper presented at the Central Bank of Trinidad and Tobago Review Seminar. Presented on October 2005 at the Central Bank of Trinidad and Tobago.

Report on the Economic Performance and Convergence of the CARICOM Region (January-June 2006). Presented at the CARICOM Central Bank Governors Meeting, held at the Bank of Guyana Building, Georgetown Guyana, November 17, 2006.

"Economic Convergence in the Caribbean Community". Presented at the 37<sup>th</sup> Annual Monetary Studies Conference held at The Central Bank of the Bahamas over the period November 1-4, 2005.

"Price Discovery in The Trinidad and Tobago Fixed-Rate Government Bond Market" (with M. Campbell-Gill). Presented at the 38<sup>th</sup> Annual Monetary Studies Conference, held at Accra Beach Hotel and Resort over the period October 31-November 3, 2006.

### D. Seerattan

"Mutual Fund Performance in Trinidad and Tobago". Presented at the Central Bank of Barbados Annual Research Review Seminar, held at the Central Bank of Barbados over the period July 26-29, 2005.

"Market Microstructure, Central Bank Intervention and Regime Switching in Exchange Rates" (with N. Spagnolo). Presented at the 38<sup>th</sup> Annual Monetary Studies Conference, held at Accra Beach Hotel and Resort over the period October 31-November 3, 2006.

Report on the Economic Performance and Convergence of the CARICOM Region (January-June 2006). Presented at the CARICOM Central Bank Governors Meeting, held at the Bank of Guyana Building, Georgetown Guyana, November 17, 2006.

#### M.V. Williams

"Foreign Exchange Reserves: How Much is Enough?" The Twentieth Adlith Brown Memorial Lecture, CCMS, The UWI St. Augustine, 2005.

# CENTRE FOR CRIMINOLOGY AND CRIMINAL JUSTICE Publications

Deosaran R. (2006). Benchmarking Violence and Delinquency in the Secondary

School:Towards a Culture of Peace and Civility. Research and Policy Report. (400

pages). Trinidad: The University of the West Indies, St. Augustine Campus, Centre for

Criminology and Criminal Justice.

\

Deosaran R., Ditton J. and Ramdhanie I. (Eds). (2006) New Challenges in Crime and

Justice: From Research to Policy. Trinidad: The University of the West Indies, St.

Augustine Campus, Centre for Criminology and Criminal Justice.

Ramdhanie I.and Lall V.(Eds). (2005) The Deosaran Files: Crime, Justice and Society (Vol. 1); The Deosaran Files: Race, Politics and Democracy (Vol. 2); The Deosaran Files: Education, Youth and Society (Vol. 3). The University of the West Indies, School of Continuing Studies, Trinidad (in collaboration with the Centre for Criminology and Criminal Justice).

## CENTRE FOR CRIMINOLOGY AND CRIMINAL JUSTICE Conference Presentations

#### K. Belmar

An Examination of Delinquency Rates among Secondary School Students in Trinidad and Tobago

 $4^{th}$  International Conference on Crime and Justice in the Caribbean,

Learning Resource Centre, The UWI St. Augustine, February 8, 2006.

#### R. Deosaran

Police Service – Public Expectation: Recommendations to Transform the Police Service

Roundtable Conference of Chairmen of Police Service Commissions,

Crowne Plaza, Port-of-Spain, Trinidad, October 17, 2005.

\
Crime in the Caribbean Region

National Conference and Launch of Anti-Crime Strategy for Grenada,

Trade Centre, St. George's, Grenada, November 4, 2005.

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Victims' Rights and Welfare: Directions for Research and Policy Development

One-Day Professional Conference on Victims' Rights and Welfare.

Conference Room 101, The UWI, St. Augustine Campus, November 12, 2005.

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Community Violence Prevention Initiatives

Workshop on Crime Prevention hosted by the Centre for Public Safety and Justice,

The UWI, Mona Campus, Jamaica, December 14, 2005.

\

Juvenile Delinquency in Secondary Schools: An Analysis of Home-School Interventions

 $4^{th}$  International Conference on Crime and Justice in the Caribbean,

Learning Resource Centre, The UWI St. Augustine Campus, February 8, 2006.

Crime Prevention, Capacity Building and the Role of Civil Society

Professional Exchange Seminar/Workshop on Crime Prevention, hosted by the United Nations Office for Drug Control and Crime Prevention (UNODC),

Cape Town, South Africa, February 20-22, 2006.

The New Dynamics in the Police-Citizen Alliance

Community Policing Conference hosted by the Government of Grenada,

Trade Centre, St. George's, Grenada, March 9, 2006.

\\\

Crime Prevention, Rehabilitation and Social Development: Enhancing the Capacity of Civic and Governmental Organisations Seminar/Workshop for Key Stakeholders hosted in collaboration with the Ministry of Social Development, Government of T&T,

Crowne Plaza Hotel, Port-of-Spain, Trinidad, May 27, 2006.

Crime and Public Policy: Chaos, Neglect or Rationality? 31st Annual Conference of the Caribbean Studies Association, Crowne Plaza Hotel, Port-of-Spain, Trinidad, June 2, 2006.

#### V. Lall

School Violence, Victimisation and Delinquency in Trinidad and Tobago

 $4^{th}$  International Conference on Crime and Justice in the Caribbean,

Learning Resource Centre, The UWI St. Augustine Campus, Trinidad, February 8, 2006.

School Violence and Delinquency: Implications for Public Policy 31st Annual Conference of the Caribbean Studies Association, Crowne Plaza Hotel, Port-of-Spain, Trinidad, June 2, 2006.

#### I. Ramdhanie

An Analysis of Social and Psychological Capital and Civic Attitudes among Secondary School Students in Trinidad and Tobago

 $4^{\rm th}$  International Conference on Crime and Justice in the Caribbean,

Learning Resource Centre, The UWI St. Augustine Campus, Trinidad, February 8, 2006.

Prison Recidivism: A Scientific Approach – Dilemmas for Policy 31st Annual Conference of the Caribbean Studies Association Crowne Plaza Hotel, Port-of-Spain, Trinidad, June 2, 2006.

# CENTRE FOR GENDER & DEVELOPMENT STUDIES Publications

Rethinking Common-Law Unions:Toward a Critical Re-Thinking of Caribbean Family Sociology. *IDEAZ* Vol. 4, Nos. 1-2, 2005 (Special Issue in Honour of Hermione McKenzie).

Reflections: An Interview with Peggy Antrobus. *Development and Change*, No. 37, No. 6, 2006, pp.1365-1377.

# CENTRE FOR GENDER & DEVELOPMENT STUDIES Conference Presentations

#### R. Reddock

"Feminists Doing Masculinity Studies", American Sociological Association Annual Conference, Philadelphia, USA, July 2005.

"Challenging the Tradition of Violence in the Caribbean: A Cultural Perspective on Violence Against Women", Keynote Address, International Women's Day Commemorations. University of Botswana, 8, March 2006.

"Gender, Nation and the Dilemmas of Citizenship," Global Feminisms Conference, Washington University, St. Louis, USA, 1-3, April, 2006.

"Feminists Doing Masculinity Studies", Seminar presentation, University of Western Cape, Cape Town South Africa, 18, May 2006.

"Feminism and Pan-Africanism in the British Colonial Caribbean", Public Lecture, African Gender Institute and All Africa House, University of Cape Town, 15, June 2006.

"Gender and the Negotiation of Identity and Citizenship in Multi-Ethnic Post-Colonial Societies", World Congress of Sociology, Durban, South Africa, July 2006.

#### V. Farrell

"To Speak or not to Speak: Issues of Caribbean Female Agency in Jean Rhys and Earl Lovelace", Women and Caribbean Literature Conference, University of Miami, May 30-June 2, 2006.

#### G. Hosein

"Steppin Up!: A Feminist Movement Building Game", Association for Women's Rights in Development (AWID) Conference, Bangkok., Thailand, October 24-November 2, 2005.

"Love of Mas: State Authority and Carnival Development in San Fernando", SALISES Conference on Social Policy, 31, March 2006.

"Ketch Dis", Big River International Artists Workshop, Aripo, Trinidad, March 2006

"Everybody has to Eat: Politics and Governance of Public Space in Trinidad", Caribbean Studies Association Conference (CSA), Port of Spain, May 30, 2006.

#### C. Dickson

"Trends and Imaging of Crime and Masculinity: A Media Account in Trinidad", CSA Conference, Port of Spain, May 30, 2006.

#### S. Gomes

"Trends and Imaging of Crime and Masculinity in Trinidad", CSA Conference, Port of Spain, May 30, 2006.

#### D. McFee

"A Comparison of the Haggling Experience in Trinidad and Tobago and Guyana", the Trinidad and Tobago Chamber of Industry and Commerce Conference on Small and Medium Enterprises (SMEs), Port of Spain, March 2006.

"The Economic Landscape of Trinidad and Tobago as a Facilitator of the Growth of Crime", Caribbean Studies Conference, Port of Spain, May 2006.

# COCOA RESEARCH UNIT Publications

Bekele F.L., Bekele I., Butler D.R. and Bidaisee G.G. (2006) Patterns of morphological variation in a sample of cacao (*Theobroma cacao* L.) germplasm from the International Cocoa Genebank, Trinidad. *Genetic Resources & Crop Evolution* 53 (5): 933-948.

Cryer N.C, Butler D.R. and Wilkinson M.J. (2005) High throughput, high resolution selection of polymorphic microsatellite loci for multiplex analysis. *Plant Methods* 1:3.

Iwaro A.D., Butler D.R. and Eskes A.B. (2006) Sources of resistance to Phytophthora pod rot at the International Cocoa Genebank, Trinidad. *Genetic Resources & Crop Evolution* 53 (1): 99-109.

Iwaro A.D., Thévenin J.M., Butler D.R. and Eskes A.B. (2005) Usefulness of the detached pod test for the assessment of cacao resistance to Phytophthora pod rot. *European Journal of Plant Pathology* 113:173-182.

Sounigo O., Umaharan R., Christopher Y., Sankar A. and Ramdahin S. (2005) Assessing the genetic diversity in the International Cocoa Genebank, Trinidad (ICG,T). *Genetic Resources & Crop Evolution* 52 (8): 1111-1120.

Sukha D.A. and Butler D.R. (2005) The CFC/ICCO/INIAP Cocoa Flavour Project – Investigating the spectrum of fine flavour within genotypes and between origins. *INGENIC Newsletter* 10: 22-25.

Thévenin J.M., Umaharan R., Surujdeo-Maharaj S., Latchman B., Cilas C. and Butler D.R. (2005) Relationships between Black Pod and Witches' Broom diseases in *Theobroma cacao*. *Phytopathology* 95: 1301-1307.

Zhang D., Boccara M., Mische S., Motilal L., Leamy E. and Butler D.R. (2006) Assessing genetic identity, sibship structure, and population admixture in an Upper Amazonian cacao germplasm group using microsatellite markers. *Tree Genetics and Genomes*. (in press)

# COCOA RESEARCH UNIT Conference Presentations

Adu-Ampomah Y., Amores F., Badaru K., Efron Y., Engels J., Eskes A.B., Frison E., Gonzalez V., Hadley P., Iwaro D., Lamin K., Lass T., Maharaj K., Monteiro W., N'Goran J., Nyassé S. and Paulin D. (2005) Results and benefits of the CFC/ICCO/IPGRI project on 'Cocoa germplasm utilisation and conservation, a global approach'. Pages 13-20 in: Proceedings of the 14th International Cocoa Research Conference. 13-18 October, 2003, Accra, Ghana: COPAL, Nigeria.

Boccara M. Studies on conservation of healthy pollen. Regional Meeting: CFC / ICCO / IPGRI project on Cocoa productivity and quality improvement: A participatory approach, 13-17 February, 2006, Venezuela.

Davrieux F., Assemat S., Sukha D.A., Portillo E., Boulanger R., Bastianelli D. and Cros E. (2005) Genotype characterisation of cocoa into genetic groups through caffeine and theobromine content predicted by NIRS. 12<sup>th</sup> International Conference on Near Infrared Spectroscopy. Sky City, Auckland, New Zealand. 10-15 April 2005.

Iwaro A.D. and Butler D.R. (2005) Sources of resistance to *Phytophthora* pod rot at the International Cocoa Genebank, Trinidad. Pages 375-382 in: Proceedings of the 14<sup>th</sup> International Cocoa Research Conference. 13-18 October, 2003, Accra, Ghana: COPAL, Nigeria.

Iwaro A.D., Bharath S., Bekele F.L., Butler D.R. and Eskes A.B. (2005) Germplasm enhancement for resistance to Black Pod diseases: Strategy and prospects. Pages 75-84 in: Proceedings of the 14th International Cocoa Research Conference. 13-18 October, 2003, Accra, Ghana: COPAL, Nigeria.

Iwaro A.D. and Butler D.R. Review of cocoa breeding activities in CRU, Trinidad. Regional workshop on Moniliasis, Regional Breeding and Resistance Testing Methods (Monilia, Phytophthora pod rot and Witches' broom). CATIE, Turrialba, Costa Rica. 21-25 February 2005.

Iwaro A.D. Progress report on enhancement for resistance to Black Pod disease. Regional Meeting: CFC/ICCO/IPGRI project on Cocoa productivity and quality improvement: a participatory approach, 13-17 February, 2006, Miranda, Venezuela.

Johnson E.S., O'Connor C.B., Sreenivasan T.N. and Schnell R.J. (2005) Population structure of the Witches' Broom pathogen and Trinidad and Tobago. Pages 797-802 in: Proceedings of the 14<sup>th</sup> International Cocoa Research Conference. 13-18 October, 2003, Accra, Ghana: COPAL, Nigeria.

Motilal L.A. (2005) Association mapping of agronomic and botanical traits of *T. cacao*. Presented at: Postgraduate research seminars, September 2005, Faculty of Science and Agriculture, The UWI, St. Augustine Campus.

Rohsius C. and Sukha D.A. (2005) Cocoa Seed Fermentations: Factors influencing quality – A survey. 17<sup>th</sup> International Botanical Congress. 17-23 July 2005, Austria Center Vienna, Austria.

Sounigo O.S., Bekele F., Iwaro D., Thévenin J.M., Bidaisee G., Umaharan R., Sankar A., Sukha D., Boccara M., Butler D.R., Eskes A.B. (2005) Description of the CFC/ICCO/IPGRI project collection. Pages 21-32 in: Proceedings of the 14<sup>th</sup> International Cocoa Research Conference. 13-18 October, 2003, Accra, Ghana: COPAL, Nigeria.

Sukha D.A., Butler D.R., Umaharan P., Straker S.S. and Bharath S.M. (2005) A preliminary investigation into possible processing location and growing environment influences on the flavour attributes of cocoa (*Theobroma cacao* L.). Pages 1127-1136 in: Proceedings of the 14<sup>th</sup> International Cocoa Research Conference. 13-18 October, 2003, Accra, Ghana: COPAL, Nigeria.

Sukha D.A. Anthocyanins and Flavanols in cocoa beans. Presented at: Evaluation and coordination meeting related to the chemical aspects of the CFC/ICCO/INIAP Flavour Project, Mérida, Venezuela, 15-18 March 2005.

Sukha D.A. Relationships between Thebromine and caffeine. Presented at: Evaluation and coordination meeting related to the chemical aspects of the CFC/ICCO/INIAP Flavour Project: To establish the physical, chemical and organoleptic parameters to establish the difference between fine and bulk cocoa. Mérida, Venezuela. 15-18 March 2005.

Sukha D.A. Alkyl pyrazines and other volatile compounds in cocoa beans. Presented at: Evaluation and coordination meeting related to the chemical aspects of the CFC/ICCO/INIAP Flavour Project, Mérida, Venezuela, 15-18 March 2005.

Sukha D.A. Fructose and Glucose as parameters of cocoa bean quality. Presented at: Evaluation and coordination meeting related to the chemical aspects of the CFC/ICCO/INIAP Flavour Project, Mérida, Venezuela, 15-18 March 2005.

Sukha D.A. Results from individual and combined analysis of pH, Temperature and Physical bean attributes (including cut test) in samples from Trinidad and Tobago. Presented at: Meeting to discuss and interpret findings of combined country analyses with links to objectives of the CFC/ICCO/INIAP Flavour Project, St. Augustine, Trinidad, 24-30 June 2005.

Sukha D.A. Links in results from individual and combined statistical analysis of Fermentation Index; pH, titratable and volatile acidity, volatile and non volatile organic acids and butter fat; polyphenols, anthocyanins, procyanidins and tannins; alkyl pyrazines and other volatile compounds; organoleptic results from Ecuador, Papua New Guinea, Trinidad and Venezuela.

Presented at: Meeting to discuss and interpret findings of combined country analyses with links to objectives of the CFC/ICCO/INIAP Flavour Project, St. Augustine, Trinidad, 22-30 June 2005.

Surujdeo-Maharaj S. Assessment of the agar-droplet inoculation method for screening resistance to Witches' Broom disease of cacao. Regional Meeting: CFC/ICCO/IPGRI project on Cocoa productivity and quality improvement: A participatory approach, 13-17 February, 2006, Miranda, Venezuela.

Surujdeo-Maharaj S. and Umaharan P. (2006) Genetics of resistance to Witches' Broom disease caused by Crinipellis perniciosa in cacao. Joint meeting of APS, CPS, MSA, July 29-Aug 2, 2006, Quebec City, Canada.

Umaharan P., Thévenin J.M., Surujdeo-Maharaj S. and Butler D. (2005) Identification of resistance to Witches' Broom disease in the International Cocoa Genebank, Trinidad. Pages 161-170 in: *Proceedings of the 14<sup>th</sup> International Cocoa Research Conference*. 12-18 October, 2003, Accra, Ghana: COPAL, Nigeria.

# **HEALTH ECONOMICS UNIT Publications**

\*Also see Department of Economics listing.
The Economic Impact of HIV/AIDS in the Caribbean. Chapter in HIV/AIDS in Dental Practice: An Illustrated Handbook for Caribbean Dental Practitioners, March 2006

Social Insurance and HIV/AIDS Treatment and Care: Access Challenges in the Caribbean. Chapter in *Revista CIESS*, Publicacion Semestral, Inter-American Centre on Social Security, December 2005.

# HEALTH ECONOMICS UNIT Conference Presentations

"Approaches to Health Sector Reforms vis-à-vis the Epidemiological Transition on the Caribbean - Policy Implications Challenges and Opportunities". Presented at High Level Ministerial Dialogue-Social Security and Sustainable Social Development in the Caribbean, St. John's, Antigua and Barbuda, June 14-16, 2006.

"Status of HIV/AIDS Component of the Report of the Caribbean Commission on Health and Development: Challenges and Gaps". Presented at Champions for Change II Regional Conference entitled, The Role of Faith-Based Organizations in the Reduction of Stigma and Discrimination in HIV/AIDS, Georgetown, Guyana, November 22, 2005.

# SEISMIC RESEARCH UNIT Publications

Trofimovs J., Amy L., Boudon G., Deplus C., Doyle E., **Fournier N.**, Hart M.M.B., Komorowski J.C., Le Friant A., Lock E., Pudsey C., Ryan G., Sparks R.S.J. and Talling P.J. (2006) Submarine pyroclastic deposits formed at the Soufrière Hills Volcano, Montserrat (1995-2003): What Happens When Pyroclastic Flows Enter the Ocean? *Geology*, 34 (7), 549-552.

# SIR ARTHUR LEWIS INSTITUTE OF SOCIAL AND ECONOMIC STUDIES (SALISES) Publications

#### St. Bernard G.

Episodes of Return Migration in Tobago – A Phenomenological Study. In *Returning to the Source: The Final Stage of the Caribbean Migration Circuit* edited by Frances Henry and Dwaine Plaza, 188-213, The UWI Press, Jamaica.

Return Migration in Trinidad and Tobago - Motives, Choices and Consequences. In *The Experience of Return Migration: Caribbean Perspectives* edited by Rob Potter, Dennis Conway and Joan Phillip, 157-182, Ashgate Publishers.

Responding to the Need for Social Development in Montserrat – A Demographic Study. Development Unit, The Government of Montserrat, Brades, Montserrat. 90 pages

Social Vulnerability Measurement in the Caribbean Sub-Region – A Pilot Test. United Nations ECLAC Sub-Regional Office, Port of Spain, Trinidad and Tobago, LC/CAR/R.84. 17 pages.

#### Watson P.

(with C. Pemberton and A. Stewart) Improving the effectiveness of the market for bonds in the CARICOM sub-region. *Social and Economic Studies* 54 (4): 166-201.

# SUSTAINABLE ECONOMIC DEVELOPMENT UNIT (SEDU) Publications

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"The Determinants of Market Trends in the Off-shore Oil Refining Industry in the Caribbean". In Dennis Pantin (ed). *Reader in Caribbean Economy*: (pages 223-233), 2005.

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## **Conference Presentations**

"Guidelines for Poverty Eradication through a Sustainable Livelihoods Approach: Case Studies from Belize, Grenada and St. Lucia". 8<sup>th</sup> Annual Sustainable Tourism Conference of the Caribbean Tourism Organisation. Puerto Rico, April 25-29, 2006.

"Economic Valuation: Policy Uses and Implications". World Resources Institute workshop in Saint Lucia and Tobago on economic valuation of coral reefs. March, 2006.

Global Environment Change and food systems workshops in Jamaica (September, 2005) and Trinidad (January, 2006).