

2008 Grenada Scientific Programme

Day 1: 11 October 2008 (Saturday)

Opening Ceremony(8:30 – 10:00am)

Master of Ceremony: Dr Trevor Alleyne; University of the West Indies, WI

Feature Address

CAS_001: Mathematical and Empirical Studies of English/Creole Language Variation
Professor Ewart A.C. Thomas; *Stanford University, USA*

Plenary Session I (10:25 – 12:35pm)

Session Chair: Prof. Tara Dasgupta; President, the Caribbean Academy of Science

CAS-091: Science Education and Economic Development
Professor Karl Theodore; *University of the West Indies, WI*

CAS-092: Minding the Gaps: Organizing Ignorance and Managing Development
Dr. Wesley D. Balda; *St. George's University, Grenada, WI*

CAS-093: We Know More Than We Think We Do: An Examination of Current Caribbean Climate Science
Dr. Michael A. Taylor; *The University of the West Indies, Jamaica, WI* (The TWAS/CAS-2008 Young Scientist Winner)

Presentation by Representative of CARICOM / CBD (topics to be advised)

Session 1A: (1:30 – 3:30 pm)

Sub-theme: Information and Communication Technology

Session Chair: Prof. Ramsey Saunders; University of the West Indies, WI

CAS_003: Collaborative Learning: Using DVD Presentation In Industrial Databases and Systems Design Course
Ruel L.A. Ellis; *University of the West Indies, Trinidad & Tobago, WI* (with Prakash Persad; *University of Trinidad and Tobago, WI*)

CAS_046: SAPI: Swarm-Optimization-Based Approach for Personalization of Web-Based User Interfaces
Alexander Nikov and R.T. Rambharose; *University of the West Indies, Trinidad & Tobago, WI*

CAS_071: Geo-spatial Images: Means for Sustainable Development in the Caribbean
Raid Al-Tahir; *University of the West Indies, WI*

CAS_073: ChemSpider: Building a Structure Centric Community for Chemists
Antony J. Williams; *ChemZoo Inc, NC, USA*
Robert J. Lancashire; *The University of the West Indies, Jamaica, WI*

CAS_074: Update on the Electron Microscopes of the University of the West Indies, St. Augustine, Trinidad and Tobago
David Hinds and Ramsey Saunders; *University of the West Indies, Trinidad & Tobago, WI*

CAS_078: Leveraging Education and Training for Economic Development Using CBT Technologies
Ruel L.A. Ellis; *University of the West Indies, Trinidad & Tobago, WI* (with Prakash Persad; *University of Trinidad and Tobago, WI*)

CAS_094: Discussion on the place of social sciences for alternative energy technologies projects on Caribbean islands: A comparative study of Guadeloupe and Puerto Rico
Judith Priam; *University of Antilles and French Guyana, WI*

Session 1B: (1:30 – 3:30 pm)
Sub-theme: Biodiversity – Usage of Flora and Fauna
Session Chair: Dr. Neela Badrie; *University of the West Indies, Trinidad & Tobago, WI*

CAS_004: An Evaluation of the Antibacterial and Antifungal Activity of Leaf Extracts of *Peltophorum Pterocarpum* against *Candida Albicans*, *Staphylococcus Aureus* and *Escherichia Coli*
Raymond C. Jagessar, A. Mohamed and G. Gomes; *University of Guyana, South America*

CAS_009: Antibacterial and Antifungal Activity of Leaf Extracts of *Luffa operculata* against Pathogenic *Candida albicans*, *Staphylococcus aureus* and *Escherichia coli*
Raymond C. Jagessar, A. Mohamed, and G. Gomes; *University of Guyana, South America*

CAS_013: Investigations on Unique Properties of *Calotropis*
Vishwa N. Verma and Manjula Verma; *University of Guyana, South America*

CAS_015: Foaming Properties of Proteins Extracted from Selected Tropical Plant Materials

Sheriffa Karamath, M. Lee and W.A Mellowes; *University of the West Indies, Trinidad & Tobago, WI*

CAS_033: Molecular Phylogeny of the Terebridae of the Indo-Pacific

Mandë Holford; *City University of New York-York College York College, NY, USA* (with N. Puillandre, Y. Terry, C. Cruaud, B.M. Olivera and P. Bouchet)

CAS_036: The Microbial Diversity Present in a Tropical, Circumneutral Iron Spring in Grenada

Svetlana V. Kotelnikova; *St. George's University, Grenada, WI*
(with Ravindra Naraine, T. Smith, S. Jägevall, L. Hallbeck and K. Pedersen)

CAS_061: A Preliminary Evaluation of the Anti Cancer Potential of Some Caribbean Plants

S.R. Peter; *Barbados Community College, Barbados, WI*
D. Arrindell, T. Alleyne, A. Odekunle and H. Daisley; *University of the West Indies, Trinidad & Tobago, WI*

Session 2A: (3:45 – 5:40 pm)

Sub-theme: Engineering and Food Safety

Session Chair: Prof. Winston H. E. Suite; *University of the West Indies, Trinidad & Tobago, WI*

CAS_010: Recycling of Plastic (Polyethylene Terephthalate) Bottles: A Study in Trinidad and Tobago

Surujdaye Jaggernath-Furlonge; *University of the West Indies, Trinidad & Tobago, WI*
(with Kit Fai Pun, T.R.M. Lalla, C.S. Syan, K. Ramoutar and H. Omer)

CAS_018: Design and Development of a Novel Cathode Ray Tube (CRT) Crusher

Kamel Singh; *University of Trinidad and Tobago, WI*
(with David Mangal and M.K.S. Sastry)

CAS_023: A New, Locally Engineered Hydraulic Operated Hydro Test Bench for Gate Valves

Kamel Singh; *University of Trinidad and Tobago, WI*
(with Roopnath Dial, M.K.S. Sastry and Rasif Ali)

CAS_028: Chronic Non-Communicable Diseases: Potential Risk Factors for Food Insecurity? Stacey McFarlane, G. Heraman and S. Nichols; *University of the West Indies, Trinidad & Tobago, WI*

CAS_031: The Occurrence of Ochratoxin A in Stored Cocoa (*Theobroma cacao*) Beans in Trinidad

G.S.H. Baccus-Taylor; *University of the West Indies, Trinidad & Tobago, WI*
(with Sharon Peart-Rose and I. Chang-Yen)

CAS_032: Study of the Main Phenomena Occurring in Lead Acid Batteries: Experimental Analysis

Frederic Coupan; *GRER, Guyane Française*
(with I. Marie-Joseph, A. Primerose, I. Sadli and H. Clergeot)

CAS_048: Characteristics of Casehardened Surfaces of Plain Low Carbon Steel for Tribological Properties Using an Atomic Force Microscope

Gossett D. Oliver; *University of Technology (UTech), Jamaica, WI*
(with B. Jones and R. Bulpett)

Session 2B: (3:45 – 5:40 pm)

Sub-theme: Environment, Natural Resources & Renewable Energy

Session Chair: Prof. Prakash Persad; University of Trinidad and Tobago, WI

CAS_007: Determination of Chloride Ion Content in Wastewater from Selected Areas of Coastal

Guyana Using the Mohr's Method

Raymond C. Jagessar and D. Hewitt; *University of Guyana, South America*

CAS_016: Studies of Treatment Methodologies for Rainwater and River Water for Possible Usage in Rural Communities of Trinidad

Ken Darrie Thomas and Winston A Mellowes; *University of the West Indies, Trinidad & Tobago, WI*

CAS_019: Making Technology Work for You – The SBR as an Effective Low Cost Nutrient Removal System in the Caribbean

Marsha Atherley-Ikechi; *University of the West Indies, Trinidad & Tobago, WI*
(with W.A. Mellowes and H. Farabi)

CAS_021: Fuel Cells as Future Alternative Energy Source for the Caribbean

Marisa Singh and Harinder Pal Singh Missan; *University of the West Indies, Trinidad & Tobago, WI*

- CAS_044:** Water Decontamination for Rural and Disaster Affected Areas Using Advanced Oxidative Methods
Shazaad Ali Shah; *University of the West Indies, Trinidad & Tobago, WI*
(with R. Saunders, R. Clarke and C. Davies)
- CAS_064:** Pyrene and naturally occurring pyrene-degrading bacteria adjacent to the La Brea Pitch Lake in Trinidad
Amalia Hosein; *University of Trinidad and Tobago, WI*
(with A. Ramsubhag, A. Mohammed and P. Umaharan)
- CAS_065:** Potential Application of Wave Power in the Eastern Caribbean
Prakash Persad; *University of Trinidad and Tobago, WI* (with Aneil Ramkhalawan and Aatma Maharajh)

Day 2: 12 October 2008 (Sunday)

Plenary Session II (8:30 – 10:00am)

Session Chair: Prof. Robert J. Lancashire; *University of the West Indies, Jamaica, WI*

CAS_002: Beyond Science and Technology
Dr. Rinia Veldhuizen-Doelahasori; *Anton de Kom University of Suriname, Suriname*

CAS-082: Beyond Aggregation: Social Science and Sustainable Development in the Caribbean
Dr. Leon C. Wilson, *Wayne State University, USA*

Presentation by Representative of CARICOM / CBD (topics to be advised)

Session 3A: (10:30am – 12:25 pm)

Sub-theme: Applied Mathematics and Its Applications

Session Chair: Dr. Reynold J. Stone; *University of the West Indies, Trinidad & Tobago, WI*

CAS_030: A Simple Mathematical Model for Slaking Sensitivity Assessment in Trinidadian Soils under Intense Rainfall
Mark N. Wuddivira; *University of the West Indies, Trinidad & Tobago, WI*
(with Reynold J. Stone and Edwin I. Ekwue)

CAS_056: The Alleged Surface Air Temperature Rise in Trinidad: Climate Change or

Thermometer Change?

Reynold J. Stone; *University of the West Indies, Trinidad & Tobago, WI*

CAS_059: The Impact of Increasing Food Prices on Food Security – Forecasting Food Production and Prices and Estimating Marketing Margins

Asisha Patterson; *University of the West Indies, Trinidad & Tobago, WI* (with Doolarie Singh-Knights, D. Palmer and Sharon Hutchinson)

CAS_060: Forecasting Sugarcane Production in Jamaica Using a Vector Autoregression Framework

Doolarie Singh-Knights and D. Palmer; *University of the West Indies, Trinidad & Tobago, WI*

CAS_069: Relationship Between Yield and Pod Quality Characteristics in Vegetable Pigeonpea Albertha Joseph and P. Umaharan; *University of the West Indies, Trinidad & Tobago, WI*

CAS_087: The Assessment of Flavonoids in Leading Brands of Cocoa Sold in Trinidad and Tobago

Trevor Alleyne; *University of the West Indies, Trinidad & Tobago, WI*

(with A. Alleyne, N. Balleram, D. Cozier, R. Haywood, C. Humphrey, L. Pran, K. Rampersad, D. Reyes, S. Bahall, and R. Holder)

CAS_090: Quantifying Brain Electrical EEG Changes Using Different Analytical Methods Oba Ranu; *University of the West Indies, Trinidad & Tobago, WI*

(with Ramsey Saunders, Jonas Addae and Christian Posthoff)

Session 3B: (10:30am – 12:25 pm)

Sub-theme: Other S&T Related Areas/Topics

Session Chair: Dr. M.K.S. Sastry; *University of the West Indies, Trinidad & Tobago, WI*

CAS_005: Microbiological Evaluation of Public Telephone Mouthpieces at the St. Augustine Campus, University of the West Indies

Meera M. Sirjoo; *University of the West Indies, Trinidad & Tobago, WI* (with Neela Badrie and Ranate Odwin)

CAS_042: Research on Medicinal Plants in Suriname – Promises and Challenges Jerry R. Toelsie; *Anton de Kom University, Suriname, South America* (with Dennis R.A Mans and Robbert Bipat)

CAS_043: *Moringa oleifera* – an Under Exploited Source of Crop Protein in the

Caribbean

Puran Bridgemohan; *University of Trinidad and Tobago, WI*

CAS_050: Confronting the Ethical Challenge: The Role of Caribbean Scientists

Winston H. E. Suite; *University of the West Indies, Trinidad & Tobago, WI*

CAS_058: Assessing the Current Status and Future Potential of Ecotourism in Trinidad and Tobago

Jeanelle Joseph; *University of the West Indies, Trinidad & Tobago, WI* (with Doolarie Singh-Knights and Dennis Smith)

CAS_080: Analysis of Light Curing Unit Light Intensity in Relation to LCU Type, Age and History of Monitoring/Service History in Trinidad

Vaughn Suite; *University of the West Indies, Trinidad & Tobago, WI*

Section 4A: (1:30 – 3:20 pm)

Sub-Theme: Management Practices and Industry Studies

Session Chair: Dr. Mark N. Wuddivira; *University of the West Indies, Trinidad & Tobago, WI*

CAS_017: Factors affecting knowledge management performance and practices in industrial organisations of Trinidad and Tobago

Ambika Koonj Beharry; *University of the West Indies, Trinidad & Tobago, WI*
(with Man Yin R. Yiu and K.F. Pun)

CAS_040: Lagging Entrepreneurship in the Caribbean

Therese Baptiste-Cornelis and C. Permell; *University of the West Indies, Trinidad & Tobago, WI*

CAS_051: Assessing the Impact of Different Types of Foreign Direct Investment on Sustainable Development in Jamaica

Andrew Mighty; *University of Technology, Jamaica, WI*

CAS_057: Being the Best and Sustainable Development: the New Journey of Atlantic LNG C. Sirju-Ramnarine; *Atlantic LNG of Trinidad and Tobago, WI*

CAS_062: Can Lean Production Create Competitive Advantage in SMEs? Framework for a Case Study

Cilla Benjamin; *Arthur Lok Jack GSB, UWI, Trinidad and Tobago, WI*

CAS_063: The impact of Science, Technology and Innovation on the Global Competitiveness of Trinidad and Tobago Food Processors

Cilla Benjamin; *Arthur Lok Jack GSB, UWI, Trinidad and Tobago, WI*

Denise-Margaret Thompson; *University of Trinidad and Tobago, WI*

CAS_085: A Quality Culture Approach for Quality Management Practices in Manufacturing Organisations

Surujdaye Jaggernath-Furlonge and K.F. Pun; *University of the West Indies, Trinidad & Tobago, WI*

Section 4B: (1:30 – 3:20 pm)

Sub-theme: Medical Science and Research (Part I)

Session Chair: Prof. Svetlana V. Kotelnikova; St. George's University, Grenada, WI

CAS_022: Forensic Chemistry: Spectroscopic Characteristics of Cocaine

Phillip Azore and Vishwa N. Verma; *University of Guyana, South America*

CAS_038: Beneficial microbes: probiotics derived from the skin of *Eleutherodactylus johnstonei*

Jonathan Ashcroft; *St. George's University, Grenada, WI* (with A. Qureshi, J. Rayner, S. Kotelnikova and D. Lennon)

CAS_045: Glutamate Receptors in the Brain: Role in Protection Against Diseases

Jonas Addae; *University of the West Indies, Trinidad & Tobago, WI* (with N. Ali and T.W. Stone)

CAS_070: Learning from the Past: Inferring the Evolutionary and Epidemic Histories of Emerging and Potentially Emergent Viruses

Christine V. F. Carrington; *University of the West Indies, Trinidad & Tobago, WI*

CAS_072: Use of Microvascular Resistance Obtained from Photoplethysmography (PPG) to Simulate Cardiovascular Disease and to Compare Normotensive, Hypertensive and Diabetic Subjects

Simeon Cornwall; *University of the West Indies, Trinidad & Tobago, WI*
(with Keith De Souza and Ramsey Saunders)

CAS_088: Medicinal Plants Used Traditionally in the Treatment of Diabetes and Hypertension in Barbadian Rural Communities – A systematic review

S.R. Peter; *Barbados Community College, Barbados, WI*

Chandler; *National Council for Science and Technology, Barbados, WI*

CAS-086: Morphological and Craniometrical Studies of the Agouti's (*Dasyprocta Leporena*) Skull
Abayomi Odekunle; *University of the West Indies, Trinidad & Tobago, WI*
(with Carla M. Philips and Keri Sawh)

Section 5A: (3:45 – 5:40 pm)

Sub-theme: Education and Social Science Issues

Session Chair: Prof. Vishwa N. Verma; University of Guyana, South America

CAS_006: Analyzing the Contribution of Spouses in a Dual Income Household in Relation to Child-care and Rearing Duties
Delores Richards and Neela Badrie; *University of the West Indies, Trinidad & Tobago, WI*

CAS_012: Caribbean Eco-Health Program (CEHP): Building Capacity and Capability in Public and Environmental Health
Neela Badrie; *University of the West Indies, Trinidad & Tobago, WI* (with M. Forde, É. Dewailly, K. Morrison, L. Robertson, L. Indar and J. Flint)

CAS_014: Lessons Learned from Women Involvement in Agriculture and Agro-Industry in The Republic of Trinidad and Tobago and The Philippines
Neela Badrie; *University of the West Indies, Trinidad & Tobago, WI*
(with Sonia Y. de Leon, Karen Roscom and Benelyn Dumelod)

CAS_029: A Proposition for Science and Technology in the Twenty-first Century for the Establishment of Wildlife Farming
Gail Young; *University of the West Indies, Trinidad & Tobago, WI*
(with Gary Garcia and Cicero Lallo)

CAS_041: Master Education and Research Program on Sustainable Management of Natural Resources in Suriname
Jerry R. Toelsie; *Anton de Kom University of Suriname, South America* (with Riad Nurmohamed, A. Vervoort, and R. Dewulf)

CAS_055: Contribution of Women Scientists in the Petroleum Industry
Sally Radford; *Bridgefield Observatory, Surrey, UK*
(with Neela Badrie)

CAS_084: Teaching Caribbean Archaeology as a Science: What are the Possibilities and Challenges?

Basil A. Reid; *University of the West Indies, Trinidad & Tobago, WI*

Session 5B: (3:45 – 5:40 pm)

Sub-theme: Medical Science and Research (Part II)

Session Chair: Prof. Jonas Addae; University of the West Indies, Trinidad & Tobago, WI

CAS_025: Investigation of the Possible Teratogenic Effect of Herbal Hypoglycemic Agent (Momordica Charantia) on the Sprague Dawley Rats Carol McEwen; *University of the West Indies, Trinidad & Tobago, WI*

(with Edward O. Uche-Nwachi)

CAS_026: Effect of Water Extract from Carica Payaya Seed on the Serum Testosterone and Estradiol Levels of Male Sprague Dawley Rats

Edward O. Uche-Nwachi; *University of the West Indies, Trinidad & Tobago, WI*

(with CV. Mitchell)

CAS_027: Effect of Diabetes Mellitus on Serum of Progesterone, Testosterone, Follicle Stimulating Hormone and Luteinizing Hormone of Sprague Dawley Rats

Camille V. Mitchell; *University of the West Indies, Trinidad & Tobago, WI*

(with Edward O. Uche-Nwachi)

CAS_034: Bombesin Immunoreactivity in the Stomach and Small Intestine of Vagotomized Sprague Dawley Rats

Abayomi Odekunle; *University of the West Indies, Trinidad & Tobago, WI*

(with E.O. Uche Nwachi, K. Sawh, C. M. Phillips, C.V Mitchell and C. Mc Ewen)

CAS_037: Antimicrobial Peptides: A Paradigm for Novel Chemotherapeutic Agents

Jonathan Ashcroft; *St. George's University, Grenada, WI*

(with A. Qureshi, J. Rayner, S. Kotelnikova and D. Lennon)

CAS_049: Unusual Resistance of Marine *Vibrio* from Grenada to the Solar UV Radiation

Svetlana V. Kotelnikova; *St. George's University, Grenada, WI* (with Ryan J. McDonald, and L. Martin Eugene)

***CAS_066:** Effectiveness of a Short Duration Progesterone Treatment on Synchrony of Estrus and Fertility in Barbados Blackbelly Sheep

***CAS_067:** Effect of Different Weaning Systems on Ewe Fertility, Lamb Growth and Survival in Barbados Black Belly Sheep

Marlon Knights; *University of Trinidad and Tobago, WI*
(with N. Siew and R. Ramgattie) * - Combined Presentation

***CAS_075:** Comparative Study of the Osteoblastic Activity of Two (2) Implant Systems (Endopore® Versus Entegra®) Utilizing Single Photon Emission Computerized Tomography (SPECT): Experimental Study in Pigs Model

***CAS_076:** Comparative Study of the Osteoblastic Activity of Same implants (Endopore®) in Immediate Extraction Site Utilizing Single Photon Emission Computerized Tomography (Periimplant Autogeneous Bone Grafting with Guided Tissue Regeneration Versus No Peri-implant Bone Grafting): Experimental Study in Pig Model

Christopher Ogunsalu, *University of the West Indies, Trinidad & Tobago, WI*
(with J. Watkins, C. Stoian, C. Ezeokoli, H. Daisley, S. Lorde, K. Jackson, D. Jaggernauth, A. Nelson and N. Mungal) * - Combined Presentation

Poster Session:

CAS_008: A (+) 2-hydroxymanool from a Xylopia Species
Raymond C. Jagessar and Anderson R. Maxwell; *University of Guyana, South America*

CAS_020: The Infojector: Maximising Textual Information Assimilation Using an Enhanced Information Interface
Eldon G. Marks; *University of Guyana, South America*

CAS_024: Communicating Science – The Role of Video Documentary Production in the Caribbean
Shirin Haque and Terry Sampson; *University of the West Indies, Trinidad & Tobago, WI*

CAS_068: Effect of Mammary Stimulation on Dairy Cows and Heifers Exposed to a Lactation- Induction Protocol
R. Ramgattie, N. Siew and Marlon Knights; *University of Trinidad and Tobago, WI*

CAS_077: Emerging Applications of Experimental Single Photon Emission Computerized Tomography: Analysis of 16 Area of Interest in Pig's Model
Christopher Ogunsalu, A. Archibald and C. Ezeokoli; *University of the West Indies, Trinidad & Tobago, WI*

CAS_079: Composite Usage and Light Curing Practices Amongst Dental Practitioners

in Trinidad Vaughn Suite; *University of the West Indies, Trinidad & Tobago, WI*

CAS_081: Analysis of Light Curing Unit Light Intensity in Relation to Condition of the Light Guide in Trinidad

Vaughn Suite; *University of the West Indies, Trinidad & Tobago, WI*

CAS_089: A Knowledge Management Audit on Performance in Trinidad and Tobago organizations: A Case Study

Ambika Koonj Beharry and Kit Fai Pun; *University of the West Indies, Trinidad & Tobago, WI*