



70 years of Service,
70 years of Leadership



The Caribbean Academy of Sciences

in collaboration with the Caribbean Academy Sciences Jamaica (CASJ)
and The University of the West Indies, Mona,
as part of The UWI's 70th anniversary
and CAS' 30th anniversary celebrations.

21st General Meeting and Conference
Mona Visitors' Lodge and Conference Centre,
Kingston, Jamaica
27-30 November 2018

**“Science, Technology and Innovation:
Vehicles for a
Knowledge Based Economy”**

**Presentations in all areas
of medical, natural or social sciences.**



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The UWI's 70th Anniversary and
CAS' 30th Anniversary Celebrations

9AM - 10:30 AM Tuesday, 27 November 2018

Mona Visitors' Lodge and Conference Centre, The UWI, Mona Campus

Opening Ceremony

21st General Meeting and Conference

"Science, Technology and Innovation: Vehicles for a Knowledge Based Economy"

Master of Ceremonies: Craig A. Perue

Welcome

Prof. Emeritus Tara Dasgupta, CD
President, Caribbean Academy of Sciences, Jamaica

Remarks

Prof. Emeritus Winston Mellowes
President, Caribbean Academy of Sciences

Greetings

Prof. the Most Hon. Denise Eldemire-Shearer, CD, OJ
Representing the Vice Chancellor, Prof. Sir Hillary Beckles
The UWI

Greetings

Prof. Dale Webber, CD
Pro Vice-Chancellor and Principal, The UWI, Mona

Greetings

Ms. Katherine Grigsby
Director, UNESCO Cluster Office for the Caribbean

Keynote Address

Senator The Honourable Ruel Reid, CD
Minister of Education, Youth and Information

Sponsors Session

Conrad Douglas & Associates Limited &
Sterling Asset Management

Vote of Thanks

Refreshments



Programme Schedule

Day1: Tuesday 27 November 2018

Time	Activity	Room
8:00-9:00am	Registration	Patio
9:00 -10:30am	Opening ceremony Keynote speaker	Gold Room
10:30- 11:00am	Coffee Break	Patio
11:00 -12:00am	Plenary 1 Professor John Hildebrand, FRS Rethinking STEM Higher Education in the 21st Century Session Chair: Professor Winston Mellowes Sponsor: The UWI	Gold Room
12:00- 1:00pm	Lunch	Patio
1.00-2:00pm	Plenary 2 Professor Daniel Burgos Is Transgenic Learning a Radical Boost for Innovative Education? Session Chair: Dr.Aldrin Sweeney	Gold Room
2:00 - 4:00pm	20 minute Short papers (4 parallel sessions (CAS meeting- VENUE TBA))	Gold and Blue Rooms
1:00-2.30 pm	Prof. Catlow's lecture to students	IFLT
5.00:- 8:30pm	Poster session+ reception	Patio

S.No	Session and time	Gold ROOM 1	Gold ROOM 2	Blue ROOM1	Blue ROOM2
	Session1, Tuesday 27 November	Theme 1: Innovation In Food Technology, Agriculture, Agroprocessing for Sustainable Development Session Chair: Dr Dwight Robinson	Theme 2: Novel Materials, Catalysts, Fundamental and Applied Sciences. Session Chair: Dr. Nicholus McMorris	Theme 3: Computer Science, Modeling, Information Technology, Engineering. Session Chair: Dr Gunjan Mansingh	Theme 4: Science for Sustainable Development. Session Chair: Prof Ronald Young
1	2.00-2.20pm	CAS-023: An Assessment of Host-plant Preference of <i>Aphis gossypii</i> in Jamaica <u>Desireina D.S. Delancy</u> , Tannice A. Hall and Eric Garraway	CAS-044: Catalytic Conversion of Carbon Dioxide to Methanol and Chemical Hydrogen Storage <u>Kareem Abdur-Rashid</u> ; Wenli Jia; Kamaluddin Abdur-Rashid	CAS-119: The Importance of a National Approach to Cyber Security in a Knowledge-based Economy <u>Sandra Khan</u> and Malcolm Williams	CAS-007: Lightsources for Africa, the Americas, Asia and Middle East Project (LAAAMP):An IUPAP and IUCr ICSU-Funded Project <u>Sekazi K. Mtingwa</u>
2	2.20-2.40pm	CAS-026:Evaluation of UV-absorbing Film for Management of Western Flower Thrips under Protected Cultivated in Jamaica <u>St. Sanya G.L. Morrison</u> , Camille C. Marks Kelly, Michelle Sherwood, Michael Pryce and Sheldon Elliott	CAS-014: Temperature Effect on the Cracking Healing Potential of Asphalt Concrete Mixes Lee P. Leon, <u>Rico Nurse</u> , and Shannon Noel	CAS-111: Unlearning Learned Helplessness: A Computerised Cognitive Behavioural Therapy Approach <u>Juanelle Marks</u> , Malcolm Williams, and Aurell Liddell	CAS-006: Can Caribbean Countries Ignore Scientific and Technological Knowledge and Still Prosper? <u>Arnoldo K. Ventura</u> and Sandra M. E. Wint
3	2.40-3.00pm	CAS-027: Evaluation of New Irish Potato (<i>Solanum tuberosum L.</i>) Varieties for High Yield Potential, Late Blight Tolerance and Market Suitability in Jamaica <u>Michelle A. Sherwood</u> , Michael Pryce, Lisa R. Myers Morgan, Carla Douglas, Alexi Reid, Patrice Pitter, and Christopher A. Haughton	CAS-019: Potential Use of Tropical Landfill Leachate in Manufacturing Portland Cement Concrete <u>Samantha Jagmohan</u> ; Dr. Abrahams Mwasha; Professor Emeritus Winston Mellowes	CAS-120: Using a Web-based Student Response System to Promote Active Learning in a Classroom Setting <u>Vineeta Persaud</u> and Rita Persaud	CAS-001 The Central Challenge for Caribbean Scientists, Engineers, Technologists and Economic Planners <u>Winston H.E. Suite</u>
4	3.00-3.20pm	CAS-032: A Newly Modified QuEChERS Method for the Analysis of Pesticide Residues in Select Fruit and Vegetable Matrices in Trinidad and Tobago. <u>Winnette A. Collimore</u> , and Grace-Anne E. Bent	CAS-030: Mild Steel Corrosion Inhibition in Acidic Medium by Theobroma Cacao Pod Extracts <u>Annacia K. Jeffers</u> and Ann M. Wilson	CAS-110: VisC - A Visualisation Tool for Learning Fundamental Programming Concepts <u>Dave U. Sarran</u> and Lenandlar Singh	CAS-033: A Systems-oriented Vulnerability Approach to Flooding in Cave, Westmoreland, Jamaica <u>Tracy-Ann .N. Hyman</u>
5	3.20-3.40pm	CAS-039: Theoretical Study of the Interaction of Two Chloride Pesticides with Superficial Amines of Activated Carbon Kenia Melchor-Rodríguez, Chayan Carmenate-Rodríguez, Juan J. Gamboa-Carballo, Nady Passe-Coutrin, <u>Sarra Gaspard</u> and Ulises. J. Jáuregui-Haza	CAS-60:Temperature Effects on the Relative Stability of Ultra-High-Pressure Phases of Oxygen <u>Beatriz H. Cogollo-Olivo</u> ; Sandro Scandolo, Sananda Biswas, and Javier A. Montoya	CAS-112: Promoting Computer Science Education in a Developing Country: Experiences from 'Code Camp Guyana' Juanelle Marks and <u>Lenandlar Singh</u>	CAS-117: The Perception of Electronics Waste Management and Disposal Practices in Guyana <u>Penelope G. DeFreitas</u>
6	3.40-4.00pm	CAS-050: Chemical Structure Investigation of Nutmeg (<i>Myristica Fragrans</i>) Shells and its Derived Carbon Sorbents and the Process Conditions for Producing Such Sorbents Crispin R. Andrews, Reginald Pantin, Ronald Ranguin, Christelle Yacou, <u>Jeffrey V. Smith</u> , and Sarra Gaspard	CAS-055: Assessing the Potential Impacts of Increasing Temperatures on Asphalt Binder Performance <u>Lee P. Leon</u> and Kellesia Williams-Gittens		

Poster Session
27th November 2018, 5:00 PM—8:30 PM
Moderator: Kerrie-Anne Wilson (UTech team)

CAS-004: SEM/EDAX Studies on Consolidated Volcanic Soils and Crystalline Rocks Indicating the Strong Presence of Rare Earth and Rare Elements in the Caribbean Island of Grenada

- Ramsey Saunders, Leon Radix, and [David Hinds](#)

CAS-011: Geoheritage and the Conservation of Natural Geological Sites of Interest in Guadeloupe, French West Indies

- [Yves Mazabraud](#)

CAS-021: Activated Charcoal Promotes Surgical Wound Healing Effects of *Musa sapientum* and *Citrus Limon* Peel Gel in *Rattus norvegicus*

- James Omale

CAS-024: The Efficacy of Sulphur/Insecticide Treatments for *Franlinella Occidentalis* (Western Flower Thrips) under Protected Cultivated in Jamaica

- [St. Sanya G.L. Morrison](#), Camille C. Marks Kelly, Michelle A. Sherwood, Michael Pryce and Sheldon Elliott

CAS-025: Evaluation of Isomate- Baw Mating Disruption Technology for the Management of Beet Armyworm (*Spodoptera Exigua*) in Scallion/Welsh Onion (*Allium Fistulosum*) in Todd Town, St. Elizabeth Jamaica

- [Michelle A. Sherwood](#), Marina Young, Francine Webb-Lawrence, and Michael Pryce

CAS-028: The Efficacy of Baculovirus Bio-Pesticides in the Management of Beet Armyworm, *Spodoptera Exigua* (Hübner) in Scallion, *Allium Fistulosum* L. in Jamaica

- [Christopher A. Haughton](#), Michelle A. Sherwood, Francine Webb-Lawrence, and Dwayne Henry

CAS-036: Effect of 150kHz Electromagnetic Radiation on Polycystic Ovary Development (Rat Model)

[Stephanie Mohammed](#), Nikolay Zyzuikov, Shivananda Nayak, and Venkatesan Sundaram

CAS-037: Design of a Practical, Cost-effective Real-time Surveillance System for Leptospirosis in Trinidad and Tobago

- Lisa A. Benjamin

CAS-048: Characterisation of Trace Elements and Organic Compounds in Kingston, Jamaica

[Dwight Messam](#), Novelette Sadler Mcknight, Michael Coley and Johan Boman

CAS-052: Pincer Ligands Based on Pyridylcarbo(thio)amides Backbones as Effective Ancillary Ligands in Electro- and Homogeneous-catalysis

- Mark A.W. Lawrence

CAS-057: Morphology of Third Instar Larvae of Three Species of Flies (Family: Sarcophagidae) of Potential Forensic Importance in Jamaica

- [Rochelle S.H. Daley](#), Eric Garraway, and Catherine Murphy

CAS-065: Muscadine Grape Skin Extract Decreases Proliferation of Prostate Cancer Cells by Affecting Proteins Involved with the Cell Cycle and the Androgen Receptor

[Diane N. Ignacio](#), Trevor Alleyne, Tamaro S. Hudson, and Sonia Peter

CAS-066: Components of a Leaf Extract of an Exotic Caribbean Plant Inhibits Growth of PC-3 Androgen Independent Prostate Cancer Cells

- Dunstan Arrindell, Shantelle Henry, [Diane N. Ignacio](#), Sonia Peter and Trevor Alleyne

CAS-067: Carbon Storage Change as It Relates to Land Use and Texture in a Tropical Forest Ecosystem

[Melissa A. Atwell](#), Mark N. Wuddivira, and Mike P. Oatham

CAS-068: Guyana-Suriname Energy Resources

- Sally Radford

CAS-076: Automated Pollen Recognition Using Shape, Texture Features and Logisboost Algorithm

- [Endrick Barnacin](#), Jean Luc Henry, Jack Moliné, Benoît Foucan-pérafide and Jimmy Nagau

CAS-080: Free Radical Scavenging Activity, Total Phenolics and Metabolites Identified in *Rivina Humilis* Berries

- Andrea Goldson Barnaby, [Kailesha Duffus](#), Hensleisha Virgo, and Raymond Reid

CAS-081: Producing Valuable Protein Concentrates from the Cassava Crop's Post Harvest Waste Products

- [Annaleise H.L. Aiken](#), Ian L. Thompson, Diptendu Chatterjee, and G. Harvey Anderson

CAS-084: Coffee Crop Phenology and Infestation by the Coffee Berry Borer, *Hypothenemus hampei* (Ferrari) (Coleoptera: Curculionidae) in the Highlands and Blue Mountains of Jamaica

-[Ameka N. Myrie](#) and Dwight E. Robinson

CAS-090: Synthesis, Characterisation, Luminescence and Sensing Capabilities of a New 2-Hydroxyterephthalate Lanthanide MOF

- [Christopher Hossack](#), Zeyar Min, and Marvadeen Singh-Wilmot

CAS-093: A Mechanised Cocoa Dryer Chamber

- [Robert A. Birch](#), Rodney Seepersad, Renique Murray, Cilla Pemberton, and Edwin I. Ekwue

CAS-100: Africanized Bees - The Bees of the Future

- [Jo-Anne N. Sewlal](#), Ricardo G. D'Andrade, Hayden A. Sinanan, and Gordon P. Deane

CAS-101: Food Fraud - Honey Laundering

- [Jo-Anne N. Sewlal](#), Ricardo G. D'Andrade; Hayden A. Sinanan, and Gordon P. Deane

CAS-108: Integrated Health Information Systems for Diabetics in Guyana

- [Alicia Layne](#), Malcolm Williams, and Roland Daynauth

Day2: Wednesday 28 November 2018

8:00-9:00am	Registration	Patio
9:00-10:00am	Plenary 3 Professor Richard Catlow, FRS Materials for Renewable Energy Technologies. Session Chair: Mr Martin Henry Sponsor: New Fortress Energy	Gold Room
10:00-10.30am	Coffee Break	Patio
10.30-12.30pm	20 minute Short papers (4 Themes *6=24 orals)	Gold and Blue Rooms
12:30 -1:30pm	Lunch	
1.30-2.30pm	Plenary 4 Professor Paras Prasad Convergence of Science: Linking Nanotechnology and Photonics with Chemistry and Biology, to Impact Energy, health care and Economic Development. Session Chair: Professor Tara Dasgupta	Gold Room
2.30-3.00pm	Coffee Break	Patio
3:00-4.00pm	Plenary 5 Professor Kamaluddin Abdur-Rashid New approaches for the manufacture of pharmaceutical products.	Gold Room
4:00-6:30pm	Gender Disparity Forum	Gold

7pm Public lecture (Climate related lecture) Blue Room

		Theme 1:	Theme 2:	Theme 3:	Theme 4:
	Session2, Wednesday 28 November	Innovation In Food Technology, Agriculture, Agroprocessing for Sustainable Development	Novel Materials, Catalysts, Fundamental and Applied Sciences.	Computer Science, Modeling, Information Technology, Engineering.	Science for Sustainable Development.
		Gold ROOM1 Session Chair: Dr D Minott-Kates	Gold ROOM 2 Session Chair: Dr Mark Lawrence	Blue ROOM1 Session Chair: Prof W Suite	Blue ROOM2 Session Chair: ?
7	10.30am- 10.50am	CAS-054: Residual Levels of Furan in Some Caribbean Foods Using Headspace Gas Chromatograph Mass Spectrometer (HS/GC-MS)	CAS-049: The Fatigue Resistance of RAP in Asphalt Concrete Mixes Using Two Different Binders	CAS-031: An Environmentally Friendly Solution to Realising ICT Sector Growth in Developing Countries	CAS-018: Anatomy and Histology of the Digestive Tract of the Cocrico (<i>Oratalis ruficauda</i>)
		Samantha R. Brown-Dewar, Tara P. Dasgupta and Paul T. Maragh	Lee P. Leon, Trevor Townsend; and Dale Diaz	Brandon O. Campbell; Kaycilee S. Wright; Louis-Ray O. Harris	Venkatesan Sundaram; Chantal Perryman; Kern Johnson; Avinash Lodie; Clive Folkes; and Andrew A. Adogwa
8	10.50- 11.10am	CAS-064: Rapid Propagation of Improved Cassava Varieties Using the Multiple Shoot Removal Technique (Revised Title)	CAS-038: Chiral Transition Metal Diphosphine Complexes and Their Applications in Asymmetric Catalysis	CAS-045: The Effects of Wall Thickness and Raster Resolution on the Diametric Accuracy, Cylindricity, and Concentricity of Fused Deposition Modelled Sacrificial Patterns	CAS-020: The Returns to Field of Training in Trinidad and Tobago.
		Fradian V.N. Murray, Jane E. Cohen and L. Myers-Morgan	Shannen C. Lorraine, Paul T. Maragh, Tara P. Dasgupta, Kamaluddin Abdur-Rashid	Winston Sealy	Roshnie Doon
9	11.10- 11.30am	CAS-071: Essential Oil Composition and Antimicrobial Activity of Cannabis Sativa Grown in Jamaica at Five Stages of Maturity.	CAS-005: A Story of the Accidental Formation of Novel Titanium(IV) Schiff Base Salen Complexes	CAS-061: Solving Stochastic Multi-Objective Economic Dispatch Problems Incorporating CHP and Wind Power Units Using SDP Technique	CAS-059: Assessment of Temporal Rainfall Distribution in Trinidad and Tobago Using the Annual and Seasonal Precipitation Concentration Indices
		Kellyann Clarke, Roy Porter, Petrea Facey and Camille Thoms-Rodriguez	Alvin A. Holder, Raj K. Gurung, William L. Jarrett and Colin McMillen	Kolapo Sulaimon Alli, Abimbola Muideen Jubril, and Lawrence O. Kehinde	Reynold J. Stone
10	11.30am- 11.50am	CAS-089: A Portable Modular Mechanised System for In-field Transporting of Harvested Cocoa	CAS-046: Removal of 2-Nitrophenol, 2, 4-Dinitrophenol and 2, 4, 6-Trinitrophenol from Aqueous Solution Through Adsorption on Cobalt, Nickel and Tungsten Ferrocyanides	CAS-075: Bivariate Distributions with Transmuted Conditionals: Models and Applications	CAS-083: Focusing on Interactions between Individuals and Their Learning Environment: A New Step Forward for Science Education
		Daniel Hosein, Robert A. Birch, Renique Murray and Cilla Pemberton	Tricia Grant and Brij B. Tewari	A. Vincent Raja	Alexandra Renouard, and Yves Mazabraud
11	11.50- 12.10pm	CAS-082: The Design and Fabrication of a Function Fertiliser	CAS-047: Chiral Ruthenium Aminophosphine and Phosphine Iminopyridine Complexes for Asymmetric Catalytic Transformations	CAS-010: Solving Multi-Objective Economic Dispatch Problems Incorporating Wind Units Using a Semidefinite Programming Approach	CAS-105: The Status of Surface Water in Linden and Coastal Guyana
		Robert A. Birch, Stefan Thompson and Gaius Eudoxie	Littlelet N. Scarlet-Banks, Kamaluddin Abdur-Rashid, Paul T. Maragh, and Tara Dasgupta	Kolapo Sulaimon Alli; Abimbola Muideen Jubril and Lawrence O. Kehinde	Raymond C. Jagessar, and R. Lakhan
12	12.10- 12.30pm	CAS-040: Depollution of Waters Contaminated with Chlordecone and β -hexachlorocyclohexane by Their Precipitation with Cyclodextrins	CAS-034: Transition-Metal Catalysis for the Production of Active Pharmaceutical Ingredients	CAS-118: First Time Experiences of Females Programming at the Grade 6 to 9 Level	CAS-069: Students' Conceptions about Geothermal Energy in the Caribbean
		Juan J. Gamboa-Carballo, A. Ferino-Pérez, Vijay K. Rana, Kenia Melchor-Rodríguez, Ronald Ranguin, Joëlle Levallois-Grützmaier, Sarra Gaspard, and Ulises. J. Jáuregui-Haza	Kadane O. Morris, Paul T. Maragh, Tara P. Dasgupta and Kamaluddin Abdur-Rashid	Penelope G. DeFreitas; Alicia Layne	Anjou Claire, Forissier Thomas and Mazabraud Yves

Gender Disparity Forum
Wednesday 28th November 2018
4:00 PM to 6:30 PM

Cracking the Code to Gender Disparities in Creating a Knowledge Based Economy: Increasing Female Participation in STEM.

Moderator **Dr. Leith L. Dunn**

Opening Remarks

Introduction of Speakers

Ms. Petal Punalall Jetoo

Ms Giselle Burbano

Dr. Lilliam Margarita Alvarez Díaz

Dr. Elizabeth Rincón Santana

Ms Zelmira May

Dr. K. Renee Horton

Ms. Elena Trim

Presentations by speakers

Situational Analysis in Respective Fields and Countries

What has worked; what hasn't

The way forward

Discussion

Day 3: Thursday 29 November 2018

8:00- 9.00am	Registration	Gold Room
9.00-10.00am	Plenary 6 Dr. David McBean Technology & Science - The Promise of An Easier Life Session Chair: Professor Ian Boxill	Gold Room
10:00-10.30am	Coffee Break	Patio
10.30-12.30 am	20 minute Short papers (4 Themes*6 * 20 minutes=24 orals)	
12:30-1:30pm	Lunch	Patio
1:30 - 2.30pm	Plenary 7 Professor Jamboor Viswanatha Mentorship and Networking for Scientific Advancement and a Diverse Research Workforce Session Chair: Professor Alvin Holder	Gold Room
2.30- 3:00	Coffee break	
3.00-4:00pm	Plenary 8 Dr. Douglas MacMartin Geoengineering and Climate Change Session Chair: Dr Tannecia Stephenson	Gold room
7:00-9.00pm	30th Anniversary Banquet	

	Session 3, Thursday 29 November	Theme 1: Innovation In Food Technology, Agriculture, Agroprocessing for Sustainable Development	Theme 2: Novel Materials, Catalysts, Fundamental and Applied Sciences.	Theme 3: Computer Science, Modeling, Information Technology, Engineering.	Theme 4: Science for Sustainable Development.
		Gold ROOM1 Session Chair:	Gold ROOM2 Session Chair:	Blue ROOM1 Session Chair:	Blue ROOM2 Session Chair:
13	10.30-10.50am	CAS-094: Anaerobic Microbial Degradation of Chlordecone in Microcosms from Guadeloupe Soil <u>Suly Rambinaising</u> , Laurent Laquittaine, Ronald Ranguin, Corine Jean-Marius, Line Lomheim, Andrei Starostine, Luz A. Puentes, Elizabeth A. Edwards, and Sarra Gaspard	CAS-106: Synthesis of Nanoparticle of Carbon <u>Thierry Cesaire</u> , Gabriel Carbonnel, Yves Bercion, Audrey Molza and Philippe Thomas	CAS-095: Engineering Programmes and Economic Development in the SIDS of the Caribbean and South Pacific <u>Cilla Pemberton</u> , John Pumwa, Rajeshkannan Ananthanarayanan, and Oneil Josephs	CAS-041: Using Gamma Radiation for Degradation of Diazepam, Midazolam and Flumazenil in Wastewaters - Michel Manduca-Artiles, Susana Gómez-González, Claudia Marchan-Moreno, María González-Marín, <u>Sarra Gaspard</u> , and Ulises Jáuregui-Haza
14	10.50-11.10am	CAS-096: Investigating Fracture and Crack Propagation in Soils Using MATLAB: A Novel Technique <u>Robert A. Birch</u> ; Jacqueline Bridge; and Edwin I. Ekwue	CAS-086: New Rare-Earth Metal-Organic Frameworks from Perhalogenated Terephthalate Ligands: Fluorescence Sensors for Iron, Copper and Nitroaromatic Explosives <u>Jermaine A. Smith</u> , Marvadeen A. Singh-Wilmot, Korey P. Carter, and Christopher L. Cahill	CAS-102: MHealth Disease Surveillance and Monitoring Among the Jamaican Diabetic Community: A Cross-sectional Study of the Interest to Use Health Mobile Apps <u>Susan A. Muir</u>	CAS-042: A Cost-effective Virtual Reality Headset for Immersive Interactive Learning in Developing Nations <u>Kaycilee S. Wright</u> , Brandon O. Campbell and Louis-Ray O. Harris
15	11.10-11.30am	CAS-097: The Potential Chemopreventive Value of a Prenylated Flavonoid Isolate of Jackfruit <u>Isaac J. Morrison</u> , JeAnn E. Murray, Roy Porter, and Rupika Delgoda	CAS-022: Mechanistic Aspects of the Aerobic Copper-catalyzed Decarboxylative Thiolation of Benzoic Acids <u>Kerry-Ann Green</u> and Jessica M. Hoover	CAS-109: An Investigation of Cognitive Overload and Reaction Time in Mobile Augmented Reality Environments <u>Amrita Ramnauth</u> ; Penelope G. DeFreitas	CAS-070: Underpinning Intercultural Competence within a Context-Effect Didactic Method <u>Lamprini Chartofylaka</u> and Thomas Forissier
16	11.30-11.50am	CAS-098: Integrated Production of Biodiesel and Purified Glycerol from Waste Cooking Oil <u>Michael D. Coley</u> , Denise D. Campbell, and Dale R. Rankine	CAS-088: Crystal Engineering of Lanthanide Metal-Organic Frameworks (Ln-MOFs) Using Conceptual Tertiary Building Units (TBUs) <u>Zeyar Min</u> ¹ , Marvadeen Singh-Wilmot, and Richard Taylor	CAS-116: Advancing Undergraduate Research in the Disciplines: Insight and Ideas from the University of Guyana <u>Pamela Rose</u> ; Troy Thomas; and Lenandlar Singh	CAS-051: PM _{2.5} and Gaseous Pollution at an Industrial Site in Kingston, Jamaica <u>Johan Boman</u> , Willard Pinnock, Samuel M. Gaita, Novelette McKnight, and Carlos Mingoes
17	11.50-12.10am	CAS-104: The Fermentation of the Pulp of Watermelon (<i>Citullus lanatus</i>) in the Absence and Presence of Metal Additives with a View to Obtain Ethanol for Commercial Use <u>Raymond C. Jagessar</u> , and J. Lynch	CAS-079: Making It Drier: How Pinus Caribaea Influence the Hydrology in Forested Tropical Watersheds Jesse R. Francis, <u>Kegan Farrick</u> , and Mark N. Wuddivira	CAS-115: An Exploration of Users' Perspectives on Software Updating Message Design <u>Neil Balram</u> , Aurel Liddell, and Lenandlar Singh	CAS-053: Advancing the Caribbean Energy Landscape – A Comprehensive Review of Electric Vehicles and Storage Systems <u>Masaō I. Ashtine</u> , Randy Koon Koon, Delando Grant
18	12.10-12.30am	CAS-107: Tribological Properties of Vegetable Oils Added with Graphite Particles in Dodecane <u>Nadiege Nomedede-Martyr</u> , Jacques-Louis Ricard, Rachel Rossi, Philippe Bilas, Thierry Cesaire, and Philippe Thomas		CAS-012: 30 Years of JCAMP-DX Formats and Still Going Strong <u>Antony N. Davies</u> and <u>Robert J. Lancashire</u>	CAS-099: Flood Management in Informal Settlements: The Case of Les Cayes, Haiti <u>Wisly Jean-Claude</u> and Asad Mohammed

Day 4: Friday 30 November 2018

8:00-9.00am	Registration	Gold Room
9.00-10.00am	<p style="text-align: center;">Plenary 9</p> <p>Dr. Parris Lyew-Ayee Data-Driven Decision Making: Practical Observations from the Public and Private Sectors in Jamaica Session Chair: Ms. Caroline Mahfood Sponsor: Sterling Asset Management</p>	Gold Room
10.00-10:30am	Coffee Break	Patio
10.30-11.30am	<p style="text-align: center;">Plenary 10</p> <p>Professor Melvin Pascall Innovations in the Food and Agriculture Industry with an Emphasis on Packaging Session Chair: Dr Donna Minott-Kates Sponsor: Grace Kennedy</p>	
11:30-1.30pm	<p style="text-align: center;">20 minute Short papers (4 parallel sessions 4*6=24) (4 Themes)</p>	Patio
1:30-2:30pm	Lunch	
2.30-3.30pm	Closing ceremony	Gold Room

	Session 4, Friday 30 November	Theme 1: Innovation In Food Technology, Agriculture, Agroprocessing for Sustainable Development Gold ROOM1 Session Chair: Dr Jo-Anne Sewlal	Theme 2: Novel Materials, Catalysts, Fundamental and Applied Sciences. Gold ROOM2 Session Chair:	Theme 3: Computer Science, Modeling, Information Technology, Engineering. Blue ROOM1 Session Chair:	Theme 4: Science for Sustainable Development. Blue ROOM2 Session Chair:
19	11.30-11.50am	CAS-056: Effect of Sample Mass on Particle Size Distribution in Predominantly Medium to Heavy Textured Tropical Soils <u>Mark N. Wuddivira</u> , De Shorn E. Bramble, Gregory A. Gouveia and Ananda Ramlochan	CAS-058: On Well-Posedness of a Non-linear Degenerate DIRICHLET Problem with Very Irregular Data <u>Silvere P. Nuiro</u>	CAS-113: The Use of Keystroke Dynamics as the Primary Basis of Authentication <u>Kwesi Elliot</u> , Dave Sarran, Lenandlar Singh, and Troy Thomas	CAS-029: A Point Prevalence Survey of Health Associated Infections and Antimicrobial Use in a Public Health Institution in Trinidad <u>Shinelle C. Francois</u> , Patricia Sealy and George Legall
20	11.50-12.10pm	CAS-015: Multi-stage Extraction and Purification of Waste Sargassum Natans to Produce Sodium Alginate: An Optimisation Approach <u>Akeem Mohammed</u> , Rakesh Bissoon, Elisheba Bajnath, Kristy Mohammed, Thérèse Lee, Meera Bissram, Nigel John, Nigel. K Jalsa, Koon Yang-lee, and Keeran Ward	CAS-077: Dispersion of a Solute in Casson Fluid Flow under the Influence of External Body Acceleration <u>Ajani Ausaru</u> and Nagarani Ponakala	CAS-114: A Model to Support the Development of Undergraduate Research in Computer Science <u>Lenandlar Singh</u>	CAS-035: Entropy Analysis of Heart Rate Variability of Adult Human Diabetics and Non-diabetics Before, During and After Mild Exercise <u>Michelle Amoroso</u>
21	12.10-12.30pm	CAS-074: Comparative Extraction Performance and Application of Sodium Alginate from Sargassum Seaweed <u>Tiffany S. Husbands</u> , and <u>Srinivasa R. Popuri</u>	CAS-085: Response Analysis of Fuzzy Fractionally Damped Mechanical Spring-Mass <u>Diptiranjan Behera</u>	CAS-103: The Impact of Fitspiration (via Social Networking Sites and Mobile Applications) on the Physical Activity Levels and Body Image of Female University Students <u>Susan A. Muir</u>	CAS-036: Effect of 150kHz Electromagnetic Radiation on Polycystic Ovary Development (Rat Model) <u>Stephanie Mohammed</u> , <u>Nikolay Zyuzikov</u> , Shivananda Nayak, and Venkatesan
22	12.30-12.50pm	CAS-016: Fabrication of Calcium Alginate Thin Films from <i>Sargassum Natans</i> for the Adsorption of Heavy Metal Ions from Waste Water <u>Chantal Mohammed</u> ; Shivanie Mahabir; Kristy Mohammed; Nigel John; Koon Yang-lee; Keeran Ward	CAS-087: Applications of the Lagrangian Method to Heun Function <u>Davide Batic</u> , <u>Omar A. Forrest</u> and <u>Marek Nowakowskic</u>	CAS-002 On a Stochastic Differential Equation with Gamma-Distributed Jumps <u>Jasmine Cesars</u> , <u>Silvere P. Nuiro</u> and <u>Jean Vaillant</u>	CAS-043: PET Technology: An Opportunity for Innovation in Radiopharmacy and Nuclear Medicine in the Caribbean <u>Lyonel Belia</u> , <u>Caroline Faes</u> , and <u>Ulises. J. Jáuregui-Haza</u>
23	12.50-1.10pm	CAS-072: Duration of Life Cycle Stages of Four Species of Blowflies (Diptera: Calliphoridae) <u>Taneisha A. Barrett</u> , Eric Garraway, Catherine Murphy, and Tannice Hall	CAS-062: Peristaltic Transport of an Ellis Fluid in an Inclined Channel <u>Andre Small</u> , M. Narahari and Nagarani Ponakala	CAS-063: Dynamics of e-Rumor Models <u>Séverine Bernard</u> , Alain Pietrus and Kendy Valmont	CAS-073: The Impact of Dibenzyl Trisulfide on Breast Cancer Cell Lines Derived from African American Patients and on Cytochrome P450 1 Enzymes <u>Shaniece F. Wauchope</u> , Jonathan V. Wooten, Nicole U. Mavingire, Petreena S. Campbell, JéAnn E. Watson, Eileen J. Brantley, Maxine D. Gossell-Williams, and Rupika Delgoda
24	1.10-1.30pm		CAS-009: Building Local Skills to Compete in a Global Economy: The Use of a Formal Apprenticeship Programme in the Bahamas <u>Robert W. Robertson</u>	CAS-013: Some Notable Scientists of Colonial Jamaica <u>Robert J. Lancashire</u>	CAS-003: Integrating Global Biomedical Sciences for Health Research in the Caribbean: The University of the West Indies and State University of New York Health Research Task Force <u>John F. Lindo</u> ,; <u>Jeffrey C. Lombardo</u> , <u>Terrence Forrester</u> , <u>Horace Fletcher</u> , <u>Tomlin Paul</u> , <u>Gina Prescott</u> , <u>Alison Nicholson</u> , <u>Andrew H. Talal</u> ,; <u>Sanjay Sethi</u> , <u>Brian Tsuji</u> , <u>Venu Govindaraju</u> , <u>Karen Phillips</u> , <u>Tyler Mullen</u> , <u>Jack DeHovitz</u> , and <u>Gene D. Morse</u>

