



THE CARIBBEAN ACADEMY OF
SCIENCES (GUYANA CHAPTER)

22nd BIENNIAL *Virtual* CONFERENCE

**Theme: Science, Technology
and Innovation for Sustainable
Development in a Greener
Caribbean.**

Georgetown, Guyana

Programme Booklet

via Zoom Webinar & Meeting

August 9 – 14, 2021



UNIVERSITY of GUYANA



The Caribbean Academy of Sciences (CAS) Guyana Chapter, which is housed in the University of Guyana, will be hosting the CAS 22nd Biennial Conference this year. Due to the COVID-19 pandemic, this year the conference for the first time will be virtually delivered.

THE CARIBBEAN ACADEMY OF SCIENCES (GUYANA CHAPTER)

22nd BIENNIAL *Virtual* CONFERENCE

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Booklet Produced by:
Department of Events, Conferences and Communication (DECC),
Office of the Vice-Chancellor, University of Guyana

Welcome Message from Conference Chair



Dr. Anna Perreira
Conference Chair,
Local Conference
Planning Committee

It is with great pleasure that I welcome you all to the Caribbean Academy of Sciences (CAS) 22nd Biennial Conference. This year's conference is significant as the COVID-19 pandemic has altered the manner in which traditional conferences were held. It is the first virtual conference for the association and also hosted by the newly resuscitated Guyana Chapter. Incredibly, this year has witnessed a large number of abstracts for presentation. Under the general theme of *"Science, Technology and Innovation for Sustainable Development in a Greener Caribbean"*, the conference planning committee has endured a steep learning curve as they managed the logistics of planning for a virtual conference.

Another first for the CAS is the inclusion of the humanities which allows for a more holistic approach to sustainable development.

Local and regional developments such as oil and gas, food insecurity, climate change, pedagogy in a COVID-era among others have catapulted academics and practitioners alike to be innovative in their responses and proactive in their approach to sustainable development.

CAS conferences have been the primary forum to display and foster connectivities amongst different research fields, and to expose and discuss innovative theories. This year's conference features distinguished plenary and keynote speakers, a Women in STEM and Youth Forums from scientists locally, regionally and internationally. It also provides the opportunity for graduates and undergraduates to present their research findings. The broad sub-themes of *Pure and Applied Sciences, Medical/Pharmaceutical Sciences, Renewable Energy, Environment and Ecosystems, and Education, Humanities and Social Sciences* will afford attendees the opportunity to engage in discussions on issues pertinent to fostering sustainable development in the region and to critically examine the range of possible responses to promoting a Greener Caribbean.

This first virtual conference could not have materialized without the support of the CAS Executive Committee and CAS Council, the University of Guyana, and our generous sponsors. We are profoundly appreciative and look forward to all the continued support. A special thank you to our conference planning committee who have balanced enormous workloads, yet successfully planned this event.

As chair of the 22nd Biennial CAS Conference and Vice President of the CAS Guyana Chapter, I humbly encourage you to participate and contribute to discussions which serve to generate innovative ideas on the region's development. The commitment demonstrated over the past year of planning has given hope and illustrated resilience and resourcefulness – a true trait of the Caribbean Region.

Welcome to the CAS 22nd Biennial Conference.

Conference Chair
Vice President of CAS Guyana Chapter

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Caribbean Academy of Sciences (CAS) in Brief

The Caribbean Academy of Sciences was established in May 1988 in Trinidad & Tobago out of the need for scientists in the Caribbean to be an effective force for science in the region. The idea of CAS was birthed at the General Assembly Meeting of the International Council of Scientific Unions [ICSU] in Bern, Switzerland in September 1986. CAS embraces all areas of science including the Social Sciences and sees its role as:

- Facilitating cooperation in scientific and technological research with special reference to the Caribbean region.
- Recognizing outstanding performance or achievement in science and technology
- Undertaking or facilitating the publication and collation of the results of scientific research
- Creating Public Awareness in Science & Technology.
- Promoting scientific enquiry and development of the 'Human Capital'.
- Exchanging knowledge and ideas for the good of Society.

The Guyana Chapter of CAS was resuscitated with the support and guidance of former University of Guyana, Vice Chancellor, Prof. Ivelaw Griffith and President of CAS Executive, Prof. Emeritus Winston Mellowes. The Guyana Chapter is currently housed in the University of Guyana. In February 2020 a new executive body of the CAS Guyana Chapter was elected. The current composition of the CAS Guyana Chapter Conference Planning Committee is:

- Ms. Elena Trim – President
 - Dr. Anna Perreira – Vice President/Conference Chair
 - Ms. Heetasmin Singh – Treasurer
 - Dr. Dawn Fox – Secretary
 - Ms Kezia Bess – Assistant Secretary-Treasurer (ag)
 - Dr. Jacqueline Murray – Programme Officer
-
- Ms. Medeba Uzzi
 - Prof. Raymond Jagessar
 - Ms. Petal Jetoo
 - Prof. Neela Badrie
 - Dr. Temitope Oyedotun
 - Prof. Kit F. Pun
 - Dr. Patrick Chesney
 - Mr. Stennard George
 - Ms. Penelope De Freitas

University of Guyana in Brief

The University of Guyana is the 58th year state University. It offers 141 programmes in over 60 disciplines online and face-to-face in eight campuses across Guyana. With a student population of now 10,000, UG has provided education, learning and research for over 50,000 alumni.

The mission of the University is to discover, generate, disseminate and apply knowledge of the highest standard for the service of the community, the nation and of all mankind within an atmosphere of academic freedom that allows for free and critical inquiry. UG's forward-thinking Blueprint 2040 is currently setting the course for the University's future design and cutting -edge institutional response to the changing needs of Guyana.

Caribbean Academy of Sciences (CAS) Executives

Newly Elected Caribbean Academy of Science (Central) Executives

- Prof. Raymond Jagessar – President
- Mrs. Petal Punalall Jetoo – Secretary
- Prof. Emeritus Winston Mellowes – Foreign Secretary
- Prof. Neela Badrie – Treasurer
- Dr. Mark Wuddivira – Public Relations Officer

Distinguished CAS Fellows

- Prof. Michael Taylor
- Prof. Harold Ramkissoon
- Prof. Emeritus Ronald Young

Recognised CAS Chapters

- Trinidad & Tobago
- Guyana
- Guadeloupe
- Jamaica
- Antigua
- Barbados

22ND BIENNIAL CONFERENCE *Virtual*



AUG 9

10:00 HRS

CARIBBEAN ACADEMY OF SCIENCE (CAS) OPENING CEREMONY

Chairperson: Prof. Raymond Jagessar, President, CAS Central;
Prof. Paloma Mohamed, Vice-Chancellor, Xi, University of Guyana;
Ms. Elena Trim, President, CAS Guyana Chapter; Dr. Parris Lyew-Ayee Jr;
Hon. Vickram Bharrat, M.P, Minister of Natural Resources; Dr. Anna Perreira,
Vice-President, CAS Guyana Chapter

13:30 HRS

WOMEN IN STEM FORUM

AUG 10

10:00 HRS

PLENARY SESSION 1

Chair: Dr. Dawn Fox, *University of Guyana*
Presenter: Prof. Maya Trotz, *University of South Florida*

11:05 HRS

TECHNICAL SESSION

ROOM 1 - Pure & Applied Science; ROOM 2 - Medical &
Pharmaceutical; ROOM 3 - Renewable Energy; ROOM 4 - Education,
Humanities & Social Sciences; ROOM 5 - Pure & Applied Science;
ROOM 6 - Education, Humanities & Social Sciences

13:30 HRS

PLENARY SESSION 2

Chair: Dr. Anna Perreira, *University of Guyana*
Presenter: Dr. Devon Dublin, *Hokkaido University of Education*

14:10 HRS

YOUTH IN SCIENCE FORUM

AUG 11

10:00 HRS

PLENARY SESSION 3

Chair: Dr. Jacqueline Murray, *University of Guyana*
Presenter: Prof. Percy Hintzen, *Florida International University*

11:05 HRS

TECHNICAL SESSION

ROOM 1 - Pure & Applied Science; ROOM 2 - Pure & Applied Science;
ROOM 3 - Environment & Ecosystems; ROOM 4 - Education,
Humanities & Social Sciences; ROOM 5 - Medical/Pharmaceutical
Sciences + Pure & Applied Science + Education, Humanities &
Social Sciences

22ND BIENNIAL CONFERENCE *Virtual*



AUG 12

10:00 HRS

PLENARY SESSION 4

Chair: Dr. Temitope Oyedotun, *University of Guyana*
Presenter: Dr. Patrick Chesney, *Guiana Shield Facility*

11:05 HRS

TECHNICAL SESSION

ROOM 1 - Pure & Applied Science; ROOM 2 - Pure & Applied Science;
ROOM 3 - Environment & Ecosystems; ROOM 4 - Education,
Humanities & Social Sciences; ROOM 5 - Pure & Applied Science;
ROOM 6 - Environment & Ecosystems

AUG 13

09:00 HRS

PRESENTATIONS BY CARICOM

UNEP ACP MEAs Program Presentation; Caribbean Hub ACP MEAs Phase III
Presentation; Presentation on the Minamata Convention on interim storage,
disposal of waste in mercury added products findings for the Caribbean

Session Chair: Professor Emeritus Winston Mellows

09:55 HRS

PLENARY SESSION 5

Chair: Prof. Neela Badrie, *The University of the West Indies (St. Augustine)*
Presenter: Dr Shirin Haque, *The University of the West Indies (St. Augustine)*

10:35 HRS

CLOSING REMARKS

Prof. Emeritus Winston Mellows

10:45 HRS

VIRTUAL TOURISM

REEL Guyana

11:05 HRS

ANNOUNCEMENT OF WINNERS

Dr. Mark Wuddivira, *The University of the West Indies (St. Augustine)*

11:15 HRS

ANNOUNCEMENT OF CAS FELLOWS

Prof. Raymond Jagessar, *University of Guyana*

11:20 HRS

VOTE OF THANKS/OFFICIAL CLOSE

Prof. Raymond Jagessar, *University of Guyana*

**For more information email
casgychapter@gmail.com**

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ZOOM WEBINAR:
Opening Ceremony

10:00 HRS – 11:20 HRS



**Guyana National Anthem
(Steel pan Rendition)**
Hanani Ben Lewi,
University of Guyana Alumni



Welcome
Chairperson: Prof. Raymond Jagessar,
*President, Caribbean Academy of Science
(CAS) Central*



Opening Remarks
Prof. Paloma Mohamed,
Vice-Chancellor, Xi, University of Guyana



**Introduction of Main Address Speaker &
Feature Address Speaker**
Ms. Elena Trim,
*President, Caribbean Academy of Science (CAS)
Guyana Chapter*



Main Address Speaker
Dr. Parris Lyew-Ayee Jr.,
*Advisor to the Minister of Science, Energy and
Technology (Jamaica)*



Feature Address Speaker
Hon. Vickram Outar Bharrat,
*M.P, Minister of Natural Resources,
Government of Guyana*



Vote of Thanks
Dr. Anna Perreira,
*Vice-President Caribbean Academy of Science
(CAS) Guyana Chapter*

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ZOOM WEBINAR:
Women in STEM Forum

“Career trajectories: Overcoming barriers and advancing to leadership.”

13:30 HRS – 15:00 HRS

MODERATOR



MRS. PETAL PUNALALL JETOO is the Secretary of the Caribbean Academy of Sciences (CAS) Executive Committee. She also serves as STEM facilitator with CAS. Ms. Punalall Jetoo coordinated UNESCO funded projects for Guyana and selected CARICOM countries aimed at boosting national Science, Technology and Innovation (STI) capacities. As Guyana’s National Science Coordinator (2008-2019) she introduced Inquiry Based Science Education (IBSE), STEM education and Education for Sustainable Development (ESD). Ms. Punalall Jetoo was appointed as GuySuCo’s first female Production Manager and led its ISO 9001 certification process. She presently works as a Chemist with American Sugar Refining Inc.

PANELISTS



DR. SHIRIN HAQUE is an Astronomer at the University of the West Indies, Trinidad. Her areas of research include cosmology, astrobiology and observational astronomy. She is the recipient of several local, regional and international teaching and Science awards and is the first woman to receive the CARICOM Science Award and is the 2020 laureate of the prestigious Anthony N. Sabga Caribbean Award for Excellence in Science and Technology. She has produced several Caribbean Science documentaries and produced and hosted two television series on Science. She is the editor and producer of the magazine “The Intellectual - art, science and architecture”.



DR. MALIKA GRAYSON is the founder of STEMinist Empowered LLC. Her work in STEM has led to her being named one of Trinidad and Tobago’s 40 Under 40 Youth Influencers by the country’s Ministry of Youth and Sports Affairs. Fortune 100 global speaker, bestselling author, and mechanical engineer, currently, Dr. Grayson is a Computer Systems Architect at Northrop Grumman Corporation where she is the Applications Portfolio Manager in the IT Organization. Over the past few years, she has had experiences in systems engineering, software development, R&D portfolio management and strategy.



PROF. NEELA BADRIE is a Lecturer and Researcher in microbiology and food safety at The University of the West Indies, St. Augustine, Trinidad and Tobago. She is also an attorney at-law at the Supreme Court of Trinidad and Tobago. Dr. Badrie is a Fulbright scholar, a fellow of The World Academy of Sciences (TWAS, Italy) and the Caribbean Academy of Sciences (CAS). At present, she serves as the Caribbean focal point for women in science on the InterAmerican Network of Academy of Sciences (IANAS), on the biosecurity working group of the InterAcademy Partnership (IAP) and as treasurer for CAS Central.



DR. K RENEE HORTON is an advocate for diversity and inclusion in Science, Technology, Engineering and Mathematics (STEM), and works diligently in the community for STEM education and STEM outreach. Renee believes in changing the face of STEM. She is the founder of Unapologetically Being, Inc., a nonprofit for advocacy and mentoring in STEM and serves as a quality Engineer for NASA in New Orleans. Dr. Horton is the past president of the National Society of Black Physicists and the author of a children’s series titled Dr. H Explores the Universe.



DR. MAYROSE SALVADOR received her B.Sc. in Chemistry from the University of the Philippines and her PhD in Physical Chemistry from the University of Toronto. She is the co-founder of Pueblo Science, a Canadian charity that has provided training to over 3,900 science teachers and has engaged over 400,000 students in science. In collaboration with the Impact Centre at the University of Toronto, she helped deploy affordable solar lighting to the indigenous communities of the Philippines.

CLICK TO ENTER →

ZOOM WEBINAR:
Plenary Session 1

10:00 HRS – 10:45 HRS

Introduction of Plenary Speaker

Dr. Dawn Fox, University of Guyana

Plenary Address (25 Mintes)

Prof. Maya Trotz, University of South Florida



DR. MAYA TROTZ is a Guyanese born professor of Civil and Environmental Engineering at the University of South Florida. She directs STRONG Coasts, a National Research Traineeship program to foster food, energy, and water solutions with coastal communities, and leads the knowledge management component of a Green Climate Fund project, "Water Sector Resilience Nexus for Sustainability in Barbados." She is a past President of the Association of Environmental Engineering & Science Professors and a board member of Fragments of Hope Corp, a coral restoration NGO in Belize. She holds a BS in Chemical Engineering from MIT, and MS and Ph.D. degrees in Environmental Engineering from Stanford University.

Question and Answer Session (10 Minutes)

ZOOM MEETING:
Technical Session 1

11:05 HRS – 12:35 HRS

CLICK TO ENTER →

ROOM 1: Pure & Applied Science

Moderator:

Prof. Emeritus Robert Lancashire, Caribbean Academy of Sciences Fellow

Using Creep Recovery Data to Improve the Postharvest handling and Packing of Fresh Fruits: A Case Study of the St. Julian Mango (*Mangifera indica* L. var Julie)

Robert Birch and Edwin Ekwue

Using Magnetized Graphene Oxide to Improve Concrete-Steel Interfacial Adhesive Strength

Avinand Rampersaud

Supercritical Fluid Extraction of Bay Oil from *Pimenta Racemosa* Leaves and Its Uses

Khadir A. Manwah, Sharad Maharaj, David R. McGraw, Amreeta Samaroo and Marian J. Watson

The Impact of Alginate Physicochemical Properties on the Adsorption Performance and Reusability of Calcium Alginate Beads

Chantal Mohammed, Aliyah Ali, Matika Kistow, Koon-Yang Lee and Keeran Ward

Question and Answer Session

ROOM 2: Medical & Pharmaceutical

CLICK TO ENTER →

Moderator:

Dr. Emanuel Cummings, University of Guyana/Prof. Emeritus Ronald Young, UNESCO National Commission (Jamaica)

COVID-19: Origin, Effects on Humanity, Prevention and in Pursuit of a Cure

Prof. Raymond C. Jagessar

Haiti Country-Case Study on Maternal and Child Health 1990 - 2018: Progress and Challenges towards the SDGs

Gary Joseph, Oscar J. Mujica, Luis Huicho, Aluisio J.D. Barros

A Survey of Potential Stakeholders for a Community of Practice for Antimicrobial Resistance in CARICOM States

Lisa Benjamin and Luissa Jacob

Real-time Quality Inspection of Chest X-rays using Computer Vision Systems

Joyann C. Todd, Andrew M. Garnett, Owen Grant, Joel Joseph and Girendra Persaud

Question and Answer Session

ROOM 3: Renewable Energy

CLICK TO ENTER →

Moderator:

Prof. Kit Fai Pun, The University of the West Indies (St. Augustine)

Sustainable Power Generation in Trinidad and Tobago

Sherard Sadeek

A New Low Power Wind Energy Research Station and Performance Data for a Windy Nation Rover Wind Turbine

Karyl D. Arthur

CONT'D ON NEXT PAGE



ZOOM MEETING: Technical Session 1 Cont'd

11:05 HRS – 12:35 HRS

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[ROOM 3: Renewable Energy](#)

Integration of Renewable Decentralised Production into an Electricity Network in Guadeloupe

Henriques Kissouna, Fateh Mehazzem and Paul Charles

Extraction of Sodium Alginate from Waste Sargassum: An Optimization Approach using Response Surface Methodology

Akeem Mohammed, Arianne Rivers, David C. Stuckey and Keeran Ward

Question and Answer Session

CLICK
TO ENTER →

[ROOM 4: Education, Humanities & Social Sciences](#)

Moderator:

Prof. Neela Badrie, The University of the West Indies (St. Augustine)/ Dr. Jacqueline Murray, University of Guyana

Investigating the Usability of Augmented Reality against Conventional Micro-navigation

Travon Antonio Sheoprashad, Penelope DeFreitas and Lenandlar Singh

Computing Education in Guyana: State of Development, Challenges, Opportunities

Penelope DeFreitas, Dave Sarran, Juanelle Marks, Aurel Liddell and Lenandlar Singh

Making Classrooms Engaging for Nursery School Students with Autism in Guyana: An Application of the Technology Enhanced Inclusive Design Model

Stephanie L. Joseph, Steve Ramoutar, Penelope DeFreitas and Vineeta Persaud

CODYBOT: A Virtual Peer Assistant for Introductory Programming Knowledge

Stephanie J.T. Simon, Juanelle Marks and Penelope DeFreitas

Question and Answer Session

CLICK
TO ENTER →

[ROOM 5: Pure & Applied Science](#)

Moderator:

Prof. Gomathinayagam Subramanian, University of Guyana

Microbiological Evaluation of Fresh-cut Watermelon (*Citrullus lanatus* "Sentinel"): Road-side Watermelon Vendors' Knowledge and Practices

Letasha Figaro, Neela Badrie, Marsha Singh and Rudranath Singh

An Investigation into the Levels and Sources of Contamination by *Escherichia coli* on Lettuce Produced by Farmers and Offered for Sale at Selected Markets within Region Six, Guyana

Tiffany A. Jordan

Use of Biodynamic Preparation 500, Tank, Biodung and Vermiculture in Compost Production and its Effect on the Cultivation of Tomato (*Solanum lycopersicum* L.)

Abdullah Adil Ansari, Terone Alvina Lowenfield and Sirpaul Jaikishun

Comparative Analysis of Liquid Fish Silage Fertilizer versus Urea on the Plant Vegetative and Yield Performance of Pak-choi (*Brassica rapa* subsp. *chinensis*)

Shirlena Oudith, Elroy Charles and Courtney Bullen

Question and Answer Session

CLICK
TO ENTER →

[ROOM 6: Education, Humanities & Social Sciences](#)

Moderator:

Dr. Thomas Singh, University of Guyana/Ms. Elsa Crommarty, University of Guyana

A Survey of the Perceptions of Medical Students about Online Learning during the COVID-19 Pandemic and their Attitudes towards Flipped Classrooms in the 2020/2021 Semester

Valini Maraj, Karanand Maharaj, Karuna Maharaj, Sarah Maharaj, Vishalla Maharaj, Jayda Maingot, Leannandra Mangalsingh, Neha Rao Manchikanti and Lisa Benjamin

Elaboration of a Digital Tool in a Perspective of Contextual Didactics linked to Interculturality

Pierre Fleury, Thomas Forissier and Priscilla Ramsamy

ZOOM MEETING: Technical Session 1 Cont'd

11:05 HRS – 12:35 HRS

CLICK
TO ENTER →

ROOM 6: Education, Humanities & Social Sciences

Gender Inclusiveness in the Natural Resources Sector in Guyana: A Focus on Education and Employment
Medeba Uzzi, Gyanpriya Maharaj, Christell Chesney and Ruth Daniel

A Framework for a University-based Enterprise: Case of the Prototyping and Engineering Training and Research Incubator Enterprise (PETRIE)
Cilla Pemberton, Renique Murray and Robert Birch

Question and Answer Session

CLICK
TO ENTER →

ZOOM WEBINAR: Plenary Session 2

13:30 HRS – 14:10 HRS

Introduction of Plenary Speaker
Dr. Anna Perreira, University of Guyana

Plenary Address: "Achieving a Greener Caribbean – Filling the Gaps from an Environmental Perspective" (25 Mintes)
Dr. Devon Dublin, Hokkaido University of Education



DR. DEVON DUBLIN is a Guyanese born and Cuban trained Veterinary Doctor and Zootechnician. He holds a Masters in Marine Life Sciences from the Graduate School of Fisheries Sciences and a PhD in Environmental Science Development from the Graduate School of Earth Sciences, both from Hokkaido University of Education in Japan. He has been involved in the management of international developmental projects in Latin America and the Caribbean, Asia and Africa. He is involved in multidisciplinary research related to sustainability, One Health, Socioecological production landscapes and seascapes (SEPLS), and human-nature interaction. Dr. Dublin is a world traveler and an ardent scrabble enthusiast.

Question and Answer Session (10 Minutes)

CLICK
TO ENTER →

ZOOM WEBINAR: Youth in Science Forum

"Career trajectories: On the shoulders of giants."

14:10 HRS – 16:10 HRS

MODERATOR



DR. MARVADEEN SINGH-WILMOT is Lecturer in Inorganic Chemistry and Associate Dean for Student Experience in the Faculty of Science and Technology at the University of the West Indies, Mona, Jamaica. She leads an active research group in the areas of lanthanide chemistry and metal-organic framework materials. Singh-Wilmot has a passion for science and is committed to the promotion of science as a tool for development. She uses science to enlighten and delight young people, from preschoolers to post-graduates, and she serves in various capacities as an advocate for science in her country.

PANELISTS



DR. K RENEE HORTON is an advocate for diversity and inclusion in Science, Technology, Engineering and Mathematics (STEM), and works diligently in the community for STEM education and STEM outreach. Renee believes in changing the face of STEM. She is the founder of Unapologetically Being, Inc., a nonprofit

for advocacy and mentoring in STEM and serves as a quality Engineer for NASA in New Orleans. Dr. Horton is the past president of the National Society of Black Physicists and the author of a children's series titled Dr. H Explores the Universe.



MS. FARNAZ BAKSH was a freshman at the University of Guyana in 2016 when she established the University of Guyana Robotics Club - Guyana's first makerspace, helping students innovate by freely expressing their ideas. She later led the national robotics team to rank in the top ten globally at the inaugural FIRST GLOBAL Challenge 2017. For her selfless efforts, she received the 2019

Guyana's National Youth Award for advancing youth development in Science & Technology. Ms. Baksh graduated with a Bachelor in Computer Science and is pursuing a Masters of Robotics at the University of Tartu, researching how affective computing will help students overcome learning disabilities.



MS. LOIS OLIVER has worked in various areas in manufacturing and the science policy sector for the last 20 years. Her first role fresh out of UWI Cave Hill campus was with Banks (Barbados) Breweries Ltd. as a laboratory technician, where her love for manufacturing was born. She moved on from manufacturing and eventually to

STEM policy and curriculum reformation and advocacy as the Assistant Director at the Caribbean Science Foundation. Manufacturing remains her first and true love, and she has returned to that field as manufacturing manager with oversight for quality assurance and R&D for a Barbadian food and cosmetics company.



MR. DAVE SARRAN is a lecturer within the Department of Computer Science at the University of Guyana and serves as the Assistant Dean within the Faculty of Natural Sciences. Mr. Sarran lectures in the areas of information systems design and deployment, information systems project management and information and communication technologies for development (ICD4D). His research

interests encompass the transformative potential of ICTs, e-governance and ICT policy development, and sustainability of ICT strategies in developing countries. Mr. Sarran holds a BSc, MBA and MSc. from the University of Guyana, Australian Institute of Business and the University of Sheffield, respectively.



DR. CLAIRE NELSON is the architect of the successful Campaign to declare June as National Caribbean American Heritage Month in the U.S. A renaissance woman, she is a Development Engineer, Social Entrepreneur, and Futurist. The first Jamaican woman to earn a Doctorate degree in an engineering discipline and the only black in her graduating class, Dr. Nelson holds Industrial Engineering Degrees from the State University of New York at Buffalo, Purdue University, and a Doctorate in Engineering Management from George Washington University. Recognized as a White House Champion of Change, she is sought after as a speaker on issues pertaining to economic development, globalization, and issues concerning the Caribbean and its peoples.



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UNIVERSITY of GUYANA

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FOR FURTHER ENQUIRES PLEASE CONTACT:

Admissions Division (Berbice Campus)
08:30 hrs - 16:30 hrs (Monday - Friday)
337-2308, 623-1926 or 642-7394 (WhatsApp available)
ugbc.registry@uog.edu.gy

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623-1944, 623-1945, 623-1943, 623-1949

Note: If you do not have the relevant entry requirements for the course you wish to apply for, the University of Guyana offers an Entrance Examination (UGEE) as well as Qualifying Examinations in specific subject areas.

Visit: <https://uog.edu.gy/university-guyana-entrance-exam>



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[ZOOM WEBINAR:](#)

Plenary Session 3

10:00 HRS – 10:45 HRS

Introduction of Plenary Speaker

Dr. Jacqueline Murray, University of Guyana

Plenary Address: “Critical Perspectives on Education, Humanities and the Social Sciences: The Legacies of Colonialism and Enlightenment Reason” (25 Mintes)

Prof. Percy Hintzen, Florida International University



PERCY C. HINTZEN is Prof. Emeritus at the University of California Berkeley where he taught for 33 years. He earned his Ph.D. in Comparative Political Sociology from Yale University in 1981. He is currently Prof. of Global and Sociocultural Studies at Florida International University. While at Berkeley he served as Director of the Center for African Studies, Chair of African American Studies, Director of Peace and Conflict

Studies, and Acting Director of the Center for Race and Gender. His research and scholarly production examine relationships among modernity, globalization, and postcolonial political economy.

Question and Answer Session (10 Minutes)

ZOOM MEETING: Technical Session 2

11:05 HRS – 12:35 HRS

CLICK TO ENTER →

[ROOM 1: Pure & Applied Science](#)

Moderator:

Prof. Raymond Jagessar, University of Guyana/Prof. Emeritus Winston Mellowes, Foreign Secretary, The Caribbean Academy of Sciences

An Investigation of the Safety and Suitability of Drinking Water in Guyana from Catchment to Consumer

Shane J. Sankar, Deon Anderson, Neela Badrie and Marsha Singh

Evidence of the Presence of Intracellular Bacterial Wolbachia in Insects Living in Mangrove of Guadeloupe

Suzanne Conjard, Yancy Billard, Anne-Marie Macal, Melanie Manikon, Kassandra Romany and Olivier Gros

Characterization of Bacterial Ectosymbionts Colonizing Gills of Four Caribbean Crabs

Naéma Béziat, Sébastien Duperron, Sébastien Halary, Laura Coma, Catherine Azede, and Olivier Gros

Rare-Earth Metal-Organic Frameworks from Perhalogenated Terephthalate Ligands: Fluorescence Sensors for Iron, Copper and Nitroaromatic Explosives

Jermaine A. Smith, Marvadeen A. Singh-Wilmot, Korey P. Carter and Christopher L. Cahill

Question and Answer Session

CLICK TO ENTER →

[ROOM 2: Pure & Applied Science](#)

Moderator:

Dr. Elroy Charles, University of Guyana/Dr. Mark Wuddivira, The University of the West Indies (St. Augustine)

Assessing the Potential of Aloe vera (Aloe barbadensis Miller) Gel to be used as an Edible Coating for the Preservation of Fresh Fruits and Vegetables

Vishal Ganessingh, Neela Badrie and Marsha Singh

Haiti Country-Case Study on Maternal and Child Health 1990 - 2018: Progress and Challenges towards the SDGs Utilisation of Tamarind (Tamarindus indica) Seed Waste to Produce Nutraceutical Tea Products

Dwayne C. Harris, Neela Badrie and Marsha Singh

Sensory Evaluation of a Novel Sapodilla Candy

Che L. John, Aaron J.B. Augustine, Kayla N. Thompson and Rohanie Maharaj

Production and characterization of Novel Dasheen (Colocasia esculenta) Wine

Kerrian R. Jackson, Mark Dookeran and Rohanie Maharaj

Question and Answer Session

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[ROOM 3: Environment & Ecosystems](#)

Moderator:

Dr. Temitope Oyedotun, University of Guyana

Are Dry Seasons Getting Longer and More Intense in Trinidad and Tobago?

Reynold J. Stone

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ZOOM MEETING: Technical Session 2 Cont'd

11:05 HRS – 12:35 HRS

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[ROOM 3: Environment & Ecosystems](#)

A Value Management Approach to Reducing Climate
Adaptation Deficit
Christian C. Virgil and Kit Fai Pun

The Effects of Forest Edges Surrounding Gold Mines on Tree
Species Composition
Jewel Liddell

Question and Answer Session

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[ROOM 4: Education, Humanities & Social Sciences](#)

Moderator:
*Dr. Charmaine Bissessar, University of Guyana/
Dr. Rowena Kalloo, The University of the West Indies,
(St. Augustine)*

Capacity Building in Science Education in Rural Communities
Mayrose R. Salvador and Alon Eisenstein

The Relevance of Context in Questionnaire Instrument Design:
Examples from a Study Involving Learners from Guadeloupe
and Quebec
*Lamprini Chartofylaka, Thomas Forissier, Lise Parent, Thierry De
Lacaze and Antoine Delcroix*

Developing an Integrated Framework for Cluster Value Creation
(CVC) in the Maritime Services Sector in Trinidad and Tobago
Leroy F. Quildon and Kit Fai Pun

Gender Wage Disparities in Trinidad and Tobago: Why It Hurts
More for Minority Women in STEM
Roshnie A. Doon

Question and Answer Session

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[ROOM 5: Medical/Pharmaceutical Sciences + Pure & Applied Science + Education, Humanities & Social Sciences](#)

Moderator:
Dr. Reeta Gobin, University of Guyana

Anticancer Effects of an Ethanol Extract of *Momordica charantia*, Kuaguacin-J and Cisplatin on Healthy MCF-7 and MDAMB-231 Breast Cancer Cell Lines In vitro Assays
Emanuel Cummings, Chahinez Houacine, Raphael Singh, Karishma Jeeboo, Abdullah Ansari, Latoya Golding and Jaipaul Singh

Microvascular Function in Sickle Cell Trait Carriers under Strenuous Exercise Conditions
Karen Reminy, Emilienne T. Ngo Sock, Marc Romana, Philippe Connes, Sylvie Ravion, Stéphane Henri, Olivier Hue, Marie-Dominique Hardy-Dessources and Sophie Antoine Jonville

Teachers' Experiences Introducing the new CXC CSEC Information Technology Syllabus in Guyana
Lenandlar Singh

Investigating and Designing an Ad-hoc Network-Based Anti-Theft Model for Personal Digital Devices
Andray Yagvalk, Roylon Venture, Aditya Persaud and Dave Sarran

Question and Answer Session

CLICK
TO ENTER →**ZOOM WEBINAR:**
Plenary Session 4

10:00 HRS – 10:45 HRS

Introduction of Plenary Speaker*Dr. Temitope Oyedotun, University of Guyana***Plenary Address: “The Guiana Shield ecoregion: a threatened source of under-utilised renewable resources for sustainable development.”
(25 Mintes)***Dr. Patrick Chesney, Guiana Shield Facility*

DR. PATRICK CHESNEY is renowned for his work on the Guiana Shield having co-founded and led the Guiana Shield Facility (GSF) for the promotion of, and delivery of support to, the conservation and sustainable development of the Guiana Shield ecoregion, one of three ecoregions of the Amazonian biome. The work of the GSF eco-regional platform has been recognised by the Convention on Biological Diversity, the European Parliament (E-013974/2013) and the Amazon Cooperation Treaty Organisation (ACTO 2017; ISBN 978-85-61873-09-7). He is a graduate of the University of Guyana (B.Sc. Agriculture), University of Puerto Rico (M.Sc. Horticulture) and Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) in Costa Rica (Ph.D. Agroforestry).

Question and Answer Session (10 Minutes)**ZOOM MEETING:**
Technical Session 3

11:05 HRS – 12:35 HRS

CLICK
TO ENTER →**ROOM 1: Pure & Applied Science****Moderator:***Mr. Lenandlar Singh, University of Guyana***The Use of a Computer Serious Game to Reduce the Latency of Emotion Recognition in Verbal Children with Autism Spectrum Disorders (ASD), ages 4 to 16***Devon Wintz, Samuel Klien, Colin Walcott, Dave Sarran, Owen Grant***Exploring Value Creation and SME Competitiveness in the Export of Maritime Services: Some Findings in Trinidad and Tobago***Leroy F. Quildon, and Kit Fai Pun***A Theoretical Model for Assessing End-users Adoption and Satisfaction of ERP Systems in Mid-sized Private Organisations in Guyana***Michael McLennan, Alicia Layne and Dave Sarran***The State of Open Data in Guyana***Dave Sarran, Penelope DeFreitas and Lenandlar Singh***Question and Answer Session**CLICK
TO ENTER →**ROOM 2: Pure & Applied Science****Moderator:***Dr. Dawn Fox, University of Guyana***The Ontology of Delays and the Emergence of Productivity Factors: A Framework for Enhancing Project Executions in Industrial Firms***Kevin N. Hassanali and Kit Fai Pun***Evaluation of Key Success Factors Affecting Project Productivity in Industrial Firms: A Conceptual Paradigm***Kevin N. Hassanali and Kit Fai Pun***Functional Group Gating Of Dibenzo-18-Crown-6 Towards The Development Of Lead (II) Ion Sensing Electrodes***Deneikah T. Jackson and Peter N. Nelson***A DFT and Experimental Study of the Hydrolytic Degradation Behaviour and Spectroscopic Properties of Some Benzylideneanilines***Tahjna I. Robertson, Peter N. Nelson***Data Integrity Testing in Randomized Controlled Experiments Using the Carlisle P-value Distribution Method***Reynold J. Stone***Question and Answer Session****CONT'D ON NEXT PAGE**

ZOOM MEETING: Technical Session 3 Cont'd

11:05 HRS – 12:35 HRS

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[ROOM 3: Environment & Ecosystems](#)

Moderator:

Dr. Thomas Singh, University of Guyana

Evaluation of Mud-Bank Morphodynamics of Two Sites On Guyana Coast: A Remote Sensing Analysis of Synthetic Aperture Radar Images

Kim E. Chan-Bagot, Temitope D. Timothy Oyedotun, Marc Simard, Crystal Conway

Measuring Sustainability Pathways in A Developing Extractive Economy: A Case Study On The Future Outlook Of Guyana

Alan Mentis and Stephan Moonsammy

Investigation of Fe, Mn, Cd and Pb in Agricultural Lands Used for the Cultivation of Rice in Berbice, Guyana

Sarosanee Mohabir, Heetasmin Singh, Kumar Latchman

Occurrence and Type of Microplastics in Selected Commercial Fish Species of Guyana

Shameeza N. Alfred, Mark. A. Ram

Question and Answer Session

CLICK
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[ROOM 4: Education, Humanities & Social Sciences](#)

Moderator:

Dr. Rowena Kalloo, The University of the West Indies, (St. Augustine)/ Dr. Roshnie Doon, The University of the West Indies, (St. Augustine)

Improving Academic Quality of A Graduate Programme In Food Science And Technology

Leah Williams and Prof. Rohanie Maharaj

Impact of COVID-19 On Social, Economic, Health, Education Sectors And Ethical Issues

R. C. Jagessar

Geodiversity And Outreach In Guadeloupe, F.W.I. : Getting On The Field Despite COVID-19 With Virtual Reality

Nicolas Madelaine, Simon Gonzalez, Yves Mazabraud, Olivier Bain

The Conceptions of Natural Risks in An Archipelagic Tropical Environment: Example With the Perceptions of Hurricane And Earthquake Risks in La Désirade Island, Guadeloupe, F.W.I.

Alizée Caillaud, Yves Mazabraud, Alexandra Renouard, Elise Beck, Thomas Forissier, Béatrice Jeannot-Fourcaud

Question and Answer Session

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[ROOM 5: Pure & Applied Science](#)

Moderator:

Prof. Abdullah Ansari, University of Guyana

Physicochemical Analysis, Carbohydrate And Lipid Composition of Rivina Humilis Berries

La Toya S. Roberts, Andrea M. Goldson-Barnaby, Dane A. Warren, Raymond R. Reid and Hensleisha P. G. Virgo

The Application of Essential Oil Extract from Local Bay Leaves to Prevent Carbon Dioxide Corrosion

Rajiv B. S. Budhooram, Raffie Hosein, Ann M. Wilson and Frank Byron

Extraction of Specialty Subset Collections of Local Cassava (Manihot spp.) Landraces from Core Gene Banks

Cleveland R Paul, Anthony Jones, Andrew Carter, and Floyd Benjamin

The Submarine Geological Heritage of Guadeloupe, F.W.I.: Exploration, Inventory and Valorization

Simon Gonzalez, Nicolas Madelaine, Yves Mazabraud and Thomas Forissier

Question and Answer Session

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ZOOM MEETING: Technical Session 3 Cont'd

11:05 HRS – 12:35 HRS

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[ROOM 6: Environment & Ecosystems](#)

Moderator:

*Dr. Patrick Chesney, Guiana Shield Facility/Ms. Medeba Uzzi,
University of Guyana*

**Characterization of Sediment Communities (Diatoms And
Meiofauna) Living in a Geothermal Spring (Bouillante,
Guadeloupe, French West Indies)**

*Alice Cordier, Eva Janowski, Olivier Gros, Pierre-Yves Pascal and
Mélody Philippon*

**Interaction of Toxic Substitute Phenols with Metal
Hexacyanoferrate (II) Complexes in Aqueous Medium:
Impact on Environment**

Tricia Grant and Brij Bhushan Tewari

**Experimental Growth and Bioerosion by the Excavating Sponge
Cliona Delitrix in Barbados**

Holly Trew and Henri Vallès

**Studies of the Influence of Biosourced Insulation on the
Thermal Comfort of Buildings under Humid Tropical Climate:
Case of Banana Leaves**

Guarry Montrose, Hamza Ezzoubairi and Ted Soubdhan

Question and Answer Session



UNIVERSITY of GUYANA

The University of Guyana Growth in a Resource-abundant Economy and Environment Institute

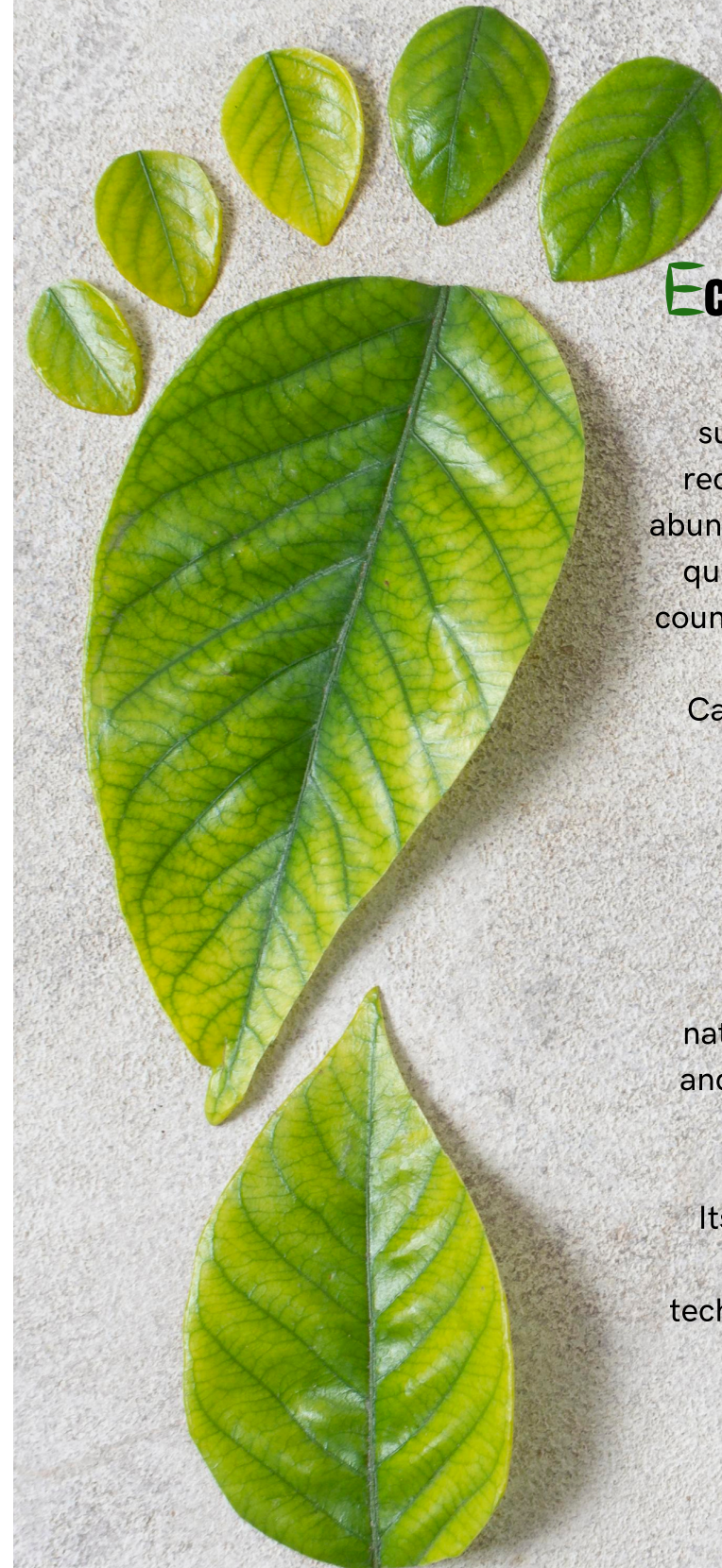
U.G. GREEN Institute (UGGI) will address sustainability and green economy issues in explicit recognition of Guyana's peculiarities as a resource-abundant economy and society whose institutions are quite different from those that prevail in developed countries where green institutes now exist. The UGGI can readily claim to be the first of its kind in the Caribbean, and one of only a handful in developing countries. The UGGI was approved by UG's Academic Board on February 22, 2019, giving it formal status as an institute within the Faculty of Social Sciences.

The Vision of the UGGI is to establish itself as a national centre of excellence for rigorous discourse and public awareness on green economy issues and learning-led development in Guyana.

Its Mission is to engage in education, research and advocacy (including the introduction of relevant technologies and best-practices where necessary) in order to enhance the well-being of Guyanese as individuals living in communities and as a nation.

More information about the UGGI and its work can be obtained from its website

<https://greeninstitute.gy/>.



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[ZOOM WEBINAR:](#) **CARICOM Presentations**

09:00 HRS – 09:55 HRS

Introduction of CARICOM Representatives

Prof. Emeritus Winston Mellows, Foreign Secretary, The Caribbean Academy of Sciences

Presentations:

- UNEP ACP MEAs Program Presentation
- Caribbean Hub ACP MEAs Phase III Presentation
- Minamata Convention on Interim Storage, Disposal of Waste in Mercury Added Products Findings for the Caribbean

Plenary Session 5

09:55 HRS – 10:35 HRS

Introduction of Plenary Speaker

Prof. Neela Badrie, The University of the West Indies, (St. Augustine)

Plenary Address: "Pale blue dot - our only home"(25 Mintes)

Dr Shirin Haque, The University of the West Indies, St. Augustine, Trinidad and Tobago



DR. SHIRIN HAQUE is an Astronomer at the University of the West Indies, Trinidad. Her areas of research include cosmology, astrobiology and observational astronomy. She is the recipient of several local, regional and international teaching and Science awards and is the first woman to receive the CARICOM Science Award and is the 2020 laureate of the prestigious Anthony N. Sabga Caribbean Award for Excellence in Science and Technology. She has produced several Caribbean Science documentaries and produced and hosted two television series on Science. She is the editor and producer of the magazine "The Intellectual - art, science and architecture".

Question and Answer Session (10 Minutes)

Closing Remarks

10:35 HRS – 10:45 HRS

Prof. Emeritus Winston Mellows, Foreign Secretary, The Caribbean Academy of Sciences

Virtual Tourism

10:45 HRS – 11:05 HRS

REEL Guyana

Announcement of Winners

11:05 HRS – 11:15 HRS

Dr. Mark Wuddivira, The University of the West Indies, (St. Augustine)

Announcement of CAS Fellows

11:15 HRS – 11:20 HRS

Prof. Raymond Jagessar, University of Guyana

Vote of Thanks (Official Close)

11:20 HRS – 11:30 HRS

Prof. Raymond Jagessar, University of Guyana



Mid Atlantic Oil & Gas Inc. (MOGI) is a Guyana Petroleum Exploration Company which was incorporated and registered in early 2013.

2013

On March 4, 2015, MOGI was awarded the CANJE Petroleum Prospecting License along with JHI Associates Inc., a privately held Canadian Company.

2015

In February 2016 ExxonMobil farmed into the CANJE PPL and was appointed Operator.

2016

In late 2018 TOTAL joined the Consortia.

2018

Our partnership is committed to an Exploration Program that is sustainable, local content oriented, with the highest levels of compliance to Health, Safety and Environment (HSE) requirements and adherence to the Laws and Regulations governing such licenses in Guyana.

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