



## CAS SUPPORTING FOOD AND NUTRITION SECURITY IN THE REGION

The Faculty of Food and Agriculture (FFA) held a public lecture and a national symposium on food and nutrition security on May 9<sup>th</sup> and 10<sup>th</sup>, 2018, respectively. The Caribbean Academy of Sciences (CAS) was a proud collaborator to these important events. The public lecture and symposium featured Prof. Emeritus Michael Clegg of the University of California, Irvine and the Programme Leader, Inter-American Network of Academies of Sciences (IANAS) Programme on Food and Nutrition Security. The events included the launch and dissemination to scientists, researchers, students, stakeholders, policy makers and the general public the information contained in the book "Challenges and Opportunities for Food and Nutrition Security in the Americas - The View of the Academies of Sciences" recently published by IANAS. This publication comprised 22 chapters and 232 authors and available for free download on the IANAS website (<http://www.ianas.org/index.php/programs/food-and-nutrition-security>). The CAS contributed the chapter on the



*(left to right) Prof. Emeritus Michael Clegg, Dr. Mark Wuddivira, Prof. Dale Webber, Prof. Indar Ramnarine, Dr. Wayne Ganpat, Ms. Stella Sandy, Dr. Jo-Anne Sewlal, Dr. Patricia Sealy and Prof. Emeritus Winston Mellowes.*



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### A peek inside this issue

- CAS contributes to food and nutrition safety in the region
- CAS continues making strides in STEM education training
- CAS 2018 Conference!

**June 2018**

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Caribbean region. The chapter was authored by Dr. Vidya de Gannes, Prof. Gerrit Meerdink, Ms. Nequesha Dalrymple, Ms. Shantelle Henry and Dr. Mark Wuddivira (Treasurer, CAS), who was the lead author and the coordinator of the Caribbean Chapter, and who also gave the vote of thanks at the event. The noteworthy recommendation in the chapter is that *“Coordinated production of value-added products using local commodities can sustain the future by minimizing food import bill, establishing the Caribbean common market and fostering food and nutrition security”*.

Remarks from CAS were given by CAS President, Prof Emeritus Winston Mellowes who also had the honour to introduce the feature speaker, Prof. Emeritus Michael Clegg. In his remarks, Prof. Mellowes emphasized that now more than ever, small island states such as ours must pay greater attention to food security and safety. Dr. Wayne Ganpat (Dean, FFA, UWI) and Prof. Indar Ramnarine (Deputy Principal, UWI) also gave welcome remarks on behalf of the Faculty and the UWI, St. Augustine Campus, respectively.

Prof. Clegg in his lecture highlighted that the CARICOM region imports at least 60% of its food supply and therefore overly dependent on highly processed foods. This has exacerbated the incidences of chronic non-communicable diseases (CND) in the region. The CND are now the leading cause of premature mortality and a major burden to individual and national budgets. The region is also highly vulnerable to climate change impact and extreme climatic events, thus affecting its agricultural sector. Prof. Clegg's lecture focused on challenges, opportunities, solutions and relevant successes in food and nutrition security from other countries of the Americas that the Caribbean can learn from as the region strive towards becoming food and nutrition secure again.

A copy of the book and its summary were presented to Alma Jordan Library, UWI by Dr. Jo-Anne Sewlal (Secretary, CAS) and received by librarian Ms. Stella Sandy. Copies were also presented to the Minister of Agriculture, Land and Fisheries, Senator, the Honourable Clarence Rambharat. During the presentation, Dr. Sewlal highlighted that such collaborations fulfilled two of the Academy's objectives; to be an authoritative voice on science and technology in the Caribbean region, and to increase the public understanding and awareness of the impact of science and technology on the development of society. CAS plans to publish the Caribbean chapter as a standalone book to make the information more accessible to the governments and people of the Caribbean. CAS also looks forward to participating in similar publications in the future. The book on the IANAS STEM programme was similarly presented to the library. This publication also contained a chapter on the Caribbean which was authored by Prof. Mellowes and Ms. Petal Jetoo (Guyana Chapter).



**Prof. Emeritus, Michael Klegg  
Feature Speaker**

## IAP-IANAS WORKSHOP

On the 29th–30th May, President Prof. Emeritus Winston Mellowes joined representatives from 17 of the 20 IANAS member national academies who participated in the workshop, along with ICSU Regional Office for Latin America and the Caribbean (ROLAC); two GYA members from the region; and five representatives of the policymaking community

Academy participants recognised the value of the SDGs but emphasised that the diversity of social and political landscapes, culture, development status and academies themselves meant that ways of responding to the SDGs would need to be tailored to national contexts.

Participating policymakers called for timely, accessible evidence from the science community, especially around impact; a greater effort from their own community to use evidence to inform policy; and more cross-sectoral collaboration (scientists, government, civil society etc) as governments develop participative, inclusive mechanisms to engage sectors on the SDGs. Some academies are already working with their respective governments on national implementation of the SDGs and can serve as exemplars to their peers.

There was a general acceptance that Academies need to be more proactive, *within their own*

*capacities and capabilities*: there are opportunities for them to engage; they can find out what is going on in their countries and try to get involved but should not necessarily wait to be approached. It was also decided that STI action plans or roadmaps can help build STI capacity and identify what is working and what is not. A lasting contribution/legacy of Agenda 2030 (the framework for the SDGs) could be building science capacity and literacy around the world – but this needs more active engagement from scientific institutions, including the academies. However, there exists the challenge to turn aspirational rhetoric into practical action.

Participants developed an action plan which will be socialised amongst IANAS members and reviewed in six and 12 months' time as part of the IAP project "Improving scientific input to global policymaking". Elements of it may feature in IANAS's next Strategic Plan. Also, some academies undertook to write to their Head of State with a commitment/offer to support national implementation of the SDGs – for example, by independently and constructively reviewing [Voluntary National Reviews \(VNRs\)](#); participating in national coordination platforms/councils; helping to shape and integrate STI into national development plans.



Prof Winston Mellowes (lower left corner) represented CAS at a meeting of Commonwealth Science Advisers in April.

**Photo:** Royal Society.

# The Use of e-Learning as a Support Tool in the Delivery of STEM Curriculum in Schools

On the 9th June, CAS President, Prof. Emeritus Winston Mellowes was one of the feature speakers at the Seminar/Workshop with the theme is "Educating students in on Inter-disciplinary and applied approach with STEM". STEM is a term used to group together four academic disciplines of 'Science. Technology. Engineering and Mathematics'. The event comprised of a Seminar presentation and a hand-on workshop followed by an open forum/discussion Session. Both Prof Mellowes and fellow feature speaker, Mr. Justin Zephyrine, provided participants with a review of the Inquiry Based Science Education (ISBS) and demonstrated how MOODLE (M-Learning) could be used in the delivery of the STEM curriculum. The summaries of their presentations are included below.

This event was organized by the Faculty of Engineering - Industrial Engineering (IE) Office of The University of the West Indies (UWI) in collaboration with the Education Society (EdS) Chapter of the IEEE Trinidad and Tobago Section. It was also supported by the Society of Caribbean Industrial Engineers (SCIE) and The American Society for Quality Local Member Committee (ASQ-LMC), Trinidad and Tobago.

## A Review of the Inquiry Based Science Education (ISBS) in the Caribbean

Science education should enhance learners' curiosity, wonder and questioning, building on their natural inclination to seek meaning and understanding of the world around. Scientific inquiry should be introduced and encountered by school students as an activity that can be carried out by everyone including themselves. Science education should provide every student equally with opportunities that enable them to take an informed part in decisions. and to take appropriate actions, that affect their own wellbeing and the wellbeing of others and the environment. It should aim to develop: understanding of a set of big ideas in science. The paper examined the importance of and the relationship between science, technology, engineering and mathematics (STEM). In this presentation, Professor Mellowes explored the background to Inquiry Based Science Education (IBSE) and the basis for its adoption. He talked about the scientific approach to knowledge acquisition and shared the experiences and philosophy of the workshops based approach to teacher education under the auspices of the Caribbean Academy of Sciences over the last ten (10) years. A brief discussion on Lessons Learnt regarding the usage of IBSE/STEM in classrooms was also made in the presentation.

## Use of Moodle (m-Learning) in the delivery of the STEM Curriculum

Technology has revolutionised education in the 21st century. Recent advances such as social media, Learning Management Systems (LMSs), wearable and mobile technologies (m-Learning) have taken teaching and learning into the virtual environment and caused a paradigm shift, influencing the way Science, Technology, Engineering and Mathematics (STEM) education is designed and delivered. This paradigm shift goes beyond the passive acquisition of knowledge by students, and emphasises the competencies developed through a more experiential approach. MOODLE is one avenue that facilitates this while providing a host of benefits in STEM education. MOODLE is a virtual learning interface that keeps STEM students engaged, on-task, self-motivated, and thereby developing their skills of reflective independent learning. It also helps them to discover and explain the world around them using digital tools to plan their projects, gather and analyse data, and represent their results in different forms. This section of the workshop conducted by Mr. Zephyrine employed a hands-on approach and oriented participants to MOODLE activities such as assignments and discussion forums, and a MOODLE plug-in to support STEM education. It illustrated the use of MOODLE for collaborative learning through an orchestrated online process of negotiating the representation of a model, document, plan, or inquiry, and sharing and discussing ideas. It also demonstrated ways in which MOODLE can provide additional learning opportunities via digital games that have the potential to support and guide independent practice in problem-solving and high-level thinking in STEM education.



## CASJ IS SEEKING COLLABORATIONS TO TACKLE THE GENDER ISSUE

Elaine Salmon-Brouers, J.P.  
CAS (Jamaica Chapter)

It is internationally recognized that Science, Technology and Innovation (STI) constitute the bedrock of sustained economic and social development. All members of the society need to be empowered to participate in this important activity but this is not always the case.

The Caribbean Academy of Sciences (CAS), seeks to ensure gender parity and inclusive access to education in all aspects of its activities and to promote this empowerment as far as possible.

The CAS biennial conference and follow-up activities demonstrate some of its key objectives which include:

- To provide a forum for the consideration of ideas and issues (including social) related to Science and Technology;
- To facilitate co-operation in Scientific and Technological research with special reference to the Caribbean Region;
- To recognize outstanding performance or achievements in Science and Technology including social issues;
- To undertake or facilitate the publication and collation of scientific research;
- To promote public awareness and appreciation of the importance and potential of Science and Technology in the Caribbean Region.

CASJ is seeking to collaborate with other partners to examine the reality of gender parity within the scientific and technological space with special reference to the Caribbean, in particular Jamaica. A session dedicated to this at the Conference will be entitled:

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

Key presenters in this session (hopefully proposed/supported by UNESCO) would provide a global perspective and then Caribbean academics or political representatives will highlight the situation with STEM in their countries. The outcome from the session will be to identify a committed team that can produce a status report with recommendations to reduce whatever disparities are uncovered and improve productivity in Latin America and the Caribbean

Please indicate your desire to make a presentation at this conference or supply information to the CASJ Secretariat.

## News on our members

### TWO NEW PROFESSORS!

We would like to congratulate two of our members on attaining their professorship.



**Prof. Reynold Stone**

Prof. Stone is currently the Treasurer of the Trinidad & Tobago Chapter



**Prof. Trevor Alleyne**

Prof. Alleyne is the current President of the Trinidad & Tobago Chapter

## Congrats to Prof. Pun!



**Prof. Kit Fai Pun**

Prof. Kit Fai Pun was elected as The World Academy of Sciences (TWAS ) fellow. He is the only person from the Caribbean to be elected for this year.

Prof. Pun currently serves as Chair of the Conference committee for the CAS biennial conference 2018



70 years of Service,  
70 years of Leadership



## The Caribbean Academy of Sciences

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

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

**Abstract Submission Deadline**  
**31st August 2018**

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

Abstracts for Oral and Poster presentations in all areas  
of medical, natural or social sciences are invited

# MARK YOUR CALENDAR!



## **21<sup>st</sup> BIENNIAL GENERAL MEETING AND CONFERENCE 2018**

**Tuesday 27<sup>th</sup> November 2018 – Friday 30<sup>th</sup> November 2018**

**At**

**UWI Mona Visitors' Lodge & Conference Centre, Jamaica**

**See Third Announcement on page 5. More details on [www.caswi.org](http://www.caswi.org)**

**Dear Readers,**

**We want to hear from YOU!**  
Comments may be edited for length and clarity.

**Send your comments to:**  
[joannesewlal@gmail.com](mailto:joannesewlal@gmail.com)

### **GUIDELINES TO CONTRIBUTORS**

**Articles on the natural history and environment are welcome especially those on Trinidad and Tobago.**

**Articles should not exceed 1,000 words (1 1/2 pages) and the editors reserve the right to edit the length. Images should be submitted as separate files.**

**Submit material to any of the following:**

- 1) [joannesewlal@gmail.com](mailto:joannesewlal@gmail.com)**
- 2) [secretariat@caswi.org](mailto:secretariat@caswi.org)**

**Deadline for submission of material for the 4<sup>th</sup> Quarter 2018 issue of the Bulletin is September 1<sup>st</sup>, 2018.**