



THE UNIVERSITY OF THE WEST INDIES
AT MONA, JAMAICA

WOMEN IN

SCIENCE,

TECHNOLOGY,

ENGINEERING &

MATHEMATICS



WHAT IS STEM?

SCIENCE,

TECHNOLOGY,

ENGINEERING &

MATHEMATICS

- STEM is an acronym for Science, Technology, Engineering and Mathematics education
- STEM is a curriculum based on the idea of educating students in four specific disciplines — science, technology, engineering and mathematics — in an interdisciplinary and applied approach. Rather than teach the four disciplines as separate and discrete subjects, STEM integrates them into a cohesive learning paradigm based on real-world applications
- STEM skills are increasingly necessary to engage in a knowledge-based economy. There is solid evidence to suggest that the fastest-growing and highest-wage jobs in future years will be in STEM fields and all employees will need to utilize STEM skills for problem solving in a wide range of industries
- There are dramatic achievement and opportunity gaps between African-American and Latino students compared to their White and Asian-American counterparts in STEM
- **Girls and women remain underrepresented and marginalized in most STEM academic fields and careers; hence the particular focus of this display to sensitize the university community on this very important issue.**

- Though the US has historically been a leader in these fields, fewer students have been focusing on these topics recently. Only 16 percent of high school students in the US are interested in a STEM career and have proven a proficiency in mathematics
- In Jamaica, UTech and UWI are the two leading institutions offering STEM programmes at the university level. For the following academic years STEM graduates accounted for :

Year	UWI	UTech
2008/09	11.30%	50.20%
2009/10	11.60%	32.70%
2010/11	13.70%	46.10%

- Additionally, between 2009-2011 the number of non-STEM professionals in Jamaica more than tripled the number of STEM professionals:

Year	STEM Prof	Non-STEM Prof
2009	1963	10120
2010	2270	10617
2011	1963	12545

- The Obama administration's 2014 budget invested \$3.1 billion in federal programs on STEM education, with an increase of 6.7 percent over 2012. The investments will be made to recruit and support STEM teachers, as well as support STEM-focused high schools with STEM Innovation Networks
- All of this effort is to meet a need. Projections estimate the need for 8.65 million workers in STEM-related jobs in the US. The manufacturing sector faces an alarmingly large shortage of employees with the necessary skills — nearly 600,000. The field of cloud computing alone would have created 1.7 million jobs between 2011 and 2015.
- By 2018, the bulk of STEM careers in the US will be:
 - ✓ Computing – 71 percent
 - ✓ Traditional Engineering – 16 percent
 - ✓ Physical Sciences – 7 percent
 - ✓ Life Sciences – 4 percent
 - ✓ Mathematics – 2 percent



PROFESSOR YVETTE A. JACKSON

- Professor of Organic Chemistry & Pro Vice Chancellor, Graduate Studies. The focus of her work has been on how molecules in general interact with each other to produce new ones. Her current research interests include work on the synthesis and chemistry of rotenoids, important commercial insecticides of plant origin. Some of these are attractive for their potential insecticidal, pharmacological, anti-HIV, and general antiviral and antimicrobial activity
- **Her work on a project sponsored by J. Wray and Nephew led to the first study of factors which influence the maturation of Jamaican rum. Another research project, sponsored by the Petroleum Corporation of Jamaica, involved the production of sorghum syrup from local sorghum. Various process parameters were investigated and this has led to the establishment of a technically and economically feasible process for commercial production of table syrup from locally grown sweet sorghum.** Her work has therefore minimized the guess work in the formulation of traditional Caribbean products and introduced predictive strategies for the physical behaviour of key ingredients in these products
- She is the **2009 co-recipient of the UWI Mona award for: “The Best Research Project”**: *The Iodine-Mediated Cyclisation of Thiobenzamides to Produce Benzothiazoles and Benzoxazoles*
- She also served as Postdoctoral Research Fellow in the Department of Chemistry at the University of Alabama in Tuscaloosa, USA. **Professor Jackson has over 30 publications** which have appeared in some of the best journals in the chemistry scholastic business.



PROFESSOR HELEN JACOBS

- Professor Jacobs is a **recipient of the Vice Chancellor's Award for Excellence for the 2005/2006 academic year for her Research Accomplishments**. She is also the **recipient of the Gleaner Honour Award 2007 for science and technology for her contribution to the field of Chemistry**
- During the nine years between receiving her Ph.D. and starting to lecture at the UWI in 1987, Professor Jacobs worked extensively in the hemisphere. She was a **post-doctoral fellow at the State University of New York, where she focused on synthetic organic chemistry**. The next year she was a **produce chemist with Grenada's Ministry of Agriculture, where she was involved in the identification, food analysis and evaluation of agricultural surplus, waste and by-products as potential components of indigenous animal feed**
- In 1987, she returned to UWI as a lecturer; she was appointed senior lecturer in 1996 and professor in 2002. During this time, she **instituted a research programme that involved the extraction, isolation, analysis and application of spectroscopic techniques on endemic Jamaican plants**. This programme examined "families and genera of plants with structurally interesting and biologically active compounds". **This research found unprecedented structures and skeletons in these plants, and some exhibit bioactivity. The results of this work have been fed into biological screening programmes for diseases such as TB around the world, including Germany and the United States.**



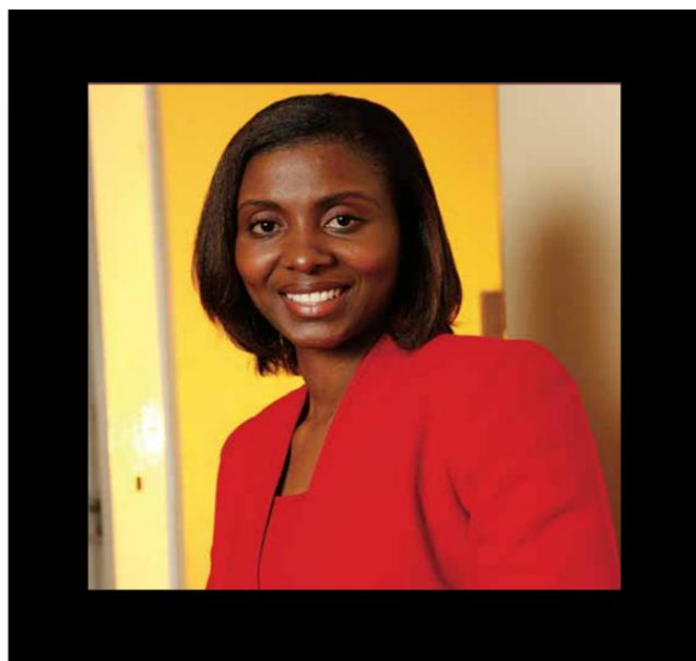
PROFESSOR PAULA TENNANT

- Professor Tennant is a Molecular Plant Pathologist working with plant viruses in the Department of Life Sciences. Her work involves the identification of viruses of vegetables and fruit crops with an emphasis toward developing management strategies using Biotechnology as well as natural sources of tolerance or resistance from diverse gemplasm, including domestic and wild species
- **Her close collaboration with Cornell University (New York, USA), The Biotechnology Centre, UWI Mona, and the Jamaica Agricultural Development Foundation (JADF) has led to the establishment of the appropriate regulatory structures to oversee the use and importation of agricultural biotechnology products in Jamaica and the development of virus resistant transgenic papaya**
- She has co-edited several international scientific volumes in the area of Biotechnology; and has authored many scientific papers which appear in reputable, peer-reviewed journals, the most recent of which is the reference book entitled '*Plant Disease: The Jamaican Experience*' that was coauthored with Professor Phyllis Coates Beckford. Her work is supported by external local and international grants
- Consequently, in 2010 she was recognized as one of the "The Most Outstanding Researcher" at the UWI Mona for her work in the area: "*Management of Plant Virus Diseases*".



DR. SIMONE ANN MARIE BADAL MCCREATH

- Dr. Badal McCreath was awarded the Elsevier Foundation award for her participatory role in the development of the newest anticancer screening lab at the Natural Products Institute, launched last year and opened by the Minister of Health, Dr. Fenton Ferguson. Her critical role in its management, training of relevant personnel, conference presentations and authored publications positioned Dr. Badal McCreath for this prestigious international award
- She is **one of five chemists** presented with the **Elsevier Foundation Award for Early Career Women Scientists in the Developing World for research that looks to nature for ways to address cancer, malaria and other medical problems.** The chemists represented five regions of the developing world; Dr. Badal McCreath represented the Latin America and the Caribbean
- Her interest is in screening Jamaican plant isolates for their potential properties to slow down block or prevent the carcinogenic process. "Our findings have so far identified several isolates that are more potent in reducing cancer cell viability as well as potentially safer than anti-cancer drugs now on the market," she said. "This research will pave the way for future research necessary for drug development and also the propagation and culture of novel Jamaican cancer and normal cells lines." Since cancer is the leading cause of death in Jamaica, such findings will prove useful in cancer treatment and prevention. She recently garnered a 7.5 million JMD grant from the National Health Fund (NHF) where she will participate in pioneering the development of novel Jamaican cancer and normal cell lines and stage 2 anti-cancer screening, a necessary step for drug development.



DR. CAMILLE BOWEN-FORBES

- Dr. Bowen-Forbes is a lecturer in the Department of Chemistry.
- Her research interests include: **bioassay-directed isolation and identification of phytochemicals from exotic Jamaican flora (in particular fruits) using antioxidant, anti-inflammatory, anticancer and other assays, and the exploration of the potential for application to the food, agricultural and pharmaceutical industries**
- She has for the last two years been studying **exotic or uncommon edible Jamaican fruits that grow wild, and conducting research into their health-beneficial properties and biologically active constituents**
- Her research has the **potential to lead to the discovery of new plant sources that may be used in the treatment of disease, as well as the development of value-added food products of health benefit to consumers in Jamaica, the region, and beyond. This should contribute significantly to our food and agricultural industries and may also have a positive impact on the pharmaceutical industry**
- In 2007 she **received the UWI Mona award for “Best research article”**: *Jamaican Raspberry Fruit with Health-Beneficial Properties.*



DR. JANE E. COHEN

- Dr. Cohen earned her Ph.D. in Botany in 1993, with the focus of her thesis being: "The Efficacy of Three Herbicides in Onion Crops in Jamaica". **She has since worked on soil fertility, crop physiology and production, and the impact of various methods of weed management. Another avenue of research has been the survey of plants, including orchid species, in Jamaican ecosystems.**
- Her current investigations involve the effects of solarization and mulching on weed ecology and crop development; modelling the response of sweet potato crops to changing water supply and potential effects of climate change; and evaluating propagation methods, growth, yield and tolerance to drought of improved varieties of cassava.



DR. THEJANI RUPIKA DELGODA

- Dr. Delgoda is Senior Lecturer and **Director, Natural Products Institute**. Her research interests are in gaining mechanistic insights to the safe and efficacious use of natural products in the prevention and treatment of human diseases. She is particularly interested in natural products with anti-proliferative, anti-oxidant and chemopreventive properties, with a special focus on avoiding potential drug-herb interactions via cytochrome P450 enzyme interactions.
- She has a Doctorate from the University of Oxford and was a Post Doctoral Fellow at the University of Leicester, United Kingdom.
- **She is Co-organizer of TEDx Jamaica.**



DR. NADALE DOWNER-RILEY

- **Dr. Downer-Riley is a 2015 recipient of the UWI Mona award for “The Best Research Publication”:** "Intramolecular Cycloaddition Reactions of Furo [3, 4-b] indoles for Alkaloid Synthesis."
- She is also the 2009 co-recipient of the UWI Mona award for **“The Best Research Project”:** *The Iodine-Mediated Cyclisation of Thiobenzamides to Produce Benzothiazoles and Benzoxazoles*
- Her research interests include: the **synthesis of bioactive natural products from plants and marine microorganisms** as well as the **synthesis of heterocyclic molecules.**
- She is also a recipient of the following awards:
2014 - Scientific Research Council Young Scientist Award
2005 - Prime Minister’s National Youth Award for Excellence in Academics



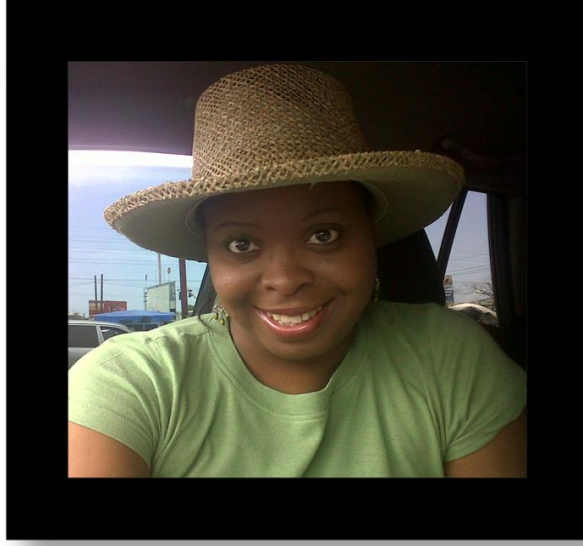
DR. WINKLET GALLIMORE

- Dr. Gallimore's research interests include: **the isolation and characterization of novel bioactive natural products from the marine and terrestrial environments leading to the development of linkages in industry to facilitate the commercialization of promising leads**
- Additionally, she conducts research in the identification of potential nutraceutical products from marine organisms.



DR. ANDREA GOLDSON-BARNABY

- Dr. Goldson-Barnaby is a graduate of the University of the West Indies and the University of British Columbia. At the University of the West Indies she pursued a Bachelor of Science in Chemistry and Food Chemistry and a Master of Philosophy in Applied Organic Chemistry. She was the recipient of a Canadian Commonwealth Scholarship which enabled her to pursue doctoral studies at the University of British Columbia, Canada
- She enjoys doing research with special interests in the areas of Protein and Lipid Chemistry
- Her first major role was as a research scientist at the pharmaceutical company, Tanaud International
- She is currently serving as Programme coordinator for the MSc in Food and Agro Processing Technology offered through the Department of Chemistry at the UWI, Mona
- She has presented her work at a number of conferences both locally and internationally
- In summer of this year, she will undertake a CARPIMs academic exchange scholarship to the National University of Samoa
- She believes in giving back and mentoring the younger generation and in this regard serves a UWI Mona First Year Experience Facilitator and a member of the Society of Scientific Advancement.



DR. SHERENE JAMES-WILLIAMSON

- Dr. James-Williamson is Lecturer and Museum Curator in the Department of Geography and Geology. Her primary area of research is **sedimentology** and **stratigraphy**. She has embarked on research projects centred around **geoarchaeology** where she is looking at **building material such as mortar and how it can be used as a tool to inform technological and cultural provenance on historic buildings and structures**. She is also involved in **research into a classification and characterization of geoheritage sites in Jamaica**
- Dr. James-Williamson recently received a J\$1.5 Million New Initiative Grant from the UWI Mona to conduct research in *“Using Geological Provenance Techniques as a Tool for Determining Provenance of Building Material and Material Culture for Historical Sites and Monuments for Purposes of Disaster Preparedness and Management and Geoconservation”*.



DR. ARPITA MANDAL

- Dr. Mandal is a Lecturer (Hydrogeology and Hydrological Modelling) in the Department of Geography and Geology. She is currently working on impact of climate models on hydrological models and flood hazards. Other research include: **hydrological modeling of the Hope River watershed with simulations for extreme event, hurricane model conditioned over hydrological model, impact of climate variability on flood models for Yallahs and South Orange Negril watershed and Groundwater assessment for Rio Cobre watershed.**
- Other works include: **assessment of flood risk for Port Maria, St Mary Jamaica**, M.Phil thesis topic for her student Anuradha Maharaj. She has also done research on the **hydrochemistry of the groundwater wells of the Kingston basin, the most densely populated and polluted basin supplying water to the entire parishes of Kingston and St Andrew**. Saline water intrusion studies involving DC (direct current) resistivity studies have also been carried out in the alluvium aquifer of St Catherine as another aspect of her research. Dr Mandal's research also aims to **re-map the water resources of the island, to provide detailed geological and structural mapping of the aquifers to locate possible new sources of water bodies**
- She is a recipient of a grant from ODPEM to support research on **flood modeling of Port Maria as well as from CARIBSAVE-CDKN for the Project titled "Climate Change and Inland Flooding in Jamaica , Risk and Adaptation Measures for Vulnerable Communities (CCRIF-RAVC)'**. She is also the 2014 recipient of the UWI Mona Award for the **"Project attracting maximum funds"** in the Faculty of Science and Technology.



DR. JUDITH MENDES

- Dr. Mendes, lectures in the Department of Life Sciences. She is the **Director of the Bellairs Research Institute of McGill University in Barbados**
- She is a **coral biologist**, an avid SCUBA diver, and the Coordinator of the Creative project
- In 2010 she was recognized for producing the “Research Project Attracting Most Research Funds”: **Caribbean Reef Education & Training Initiative.**



Dr. Donna Minott Kates

- Dr. Minott Kates' research interests include: Characterisation of food and foodstuffs that have a uniquely Jamaican identity via examination of nutrients and antinutrients, flavour profile
- Her research projects include: tracking **hypoglycin variation in ackees; chemistry of Jamaican spices; essential oil and oleoresin composition; changes in metabolite profile; biological activity. Polycyclic aromatic hydrocarbons (PAHs) in Jamaican jerked meats**
- In 2013 she was one of the recipients for the UWI Mona Award **“Best Research Publication”**: *Impact of Seed Size on Residual Hypoglycin Levels in Ackee*
- She is actively involved in the Mona Symposium on Natural Products and Medicinal Chemistry. The symposium, which started in 1966, is the longest running international scientific meeting in the Caribbean.



DR. SYLVIA MITCHELL

- Dr. Mitchell is Head of the Medicinal Plant Research Group, which she initiated in 1999. She supervises BSc, MSc, MPhil and PhD research students in biotechnology techniques related to medicinal and other economically important plants including bioactivity screening and in vitro biofarming. She is trained in various aspects of technology commercialization and has over twenty-eight years experience with tissue culture including 15 years at the Biotechnology Centre, UWI, seven years at the Scientific Research Council and three years at the Sugar Industry Research Group.
- Her own research includes development of monographs, in vitro physiology, tissue culture protocols, and field experiments using soil ameliorants such as biochar, and has over 255 publications in refereed journals, newspaper and magazines, including technical reports, monographs, conference proceedings as well as an e-book.
- She believes the Caribbean has real potential to realize from the sustainable utilization of its native plant biodiversity for food, herbs, spices, medicine, aromatherapy, furniture, and biofuels through the judicious use of biotechnology, a goal towards which she is diligently working.
- She is presently a board member of the Bureau of Standards Jamaica, and the College of Agriculture, Science and Education (CASE) and also serves as a co-editor for the Society for In Vitro Biology, and an Academic Editor for the Journal of Applied Life Sciences International (JALSI), Science Domain and reviewer for over 16 international journals.



DR. MARCIA ROYE

- Dr. Roye is a Senior Lecturer in Biotechnology. She is one of a group of just 20 women who received the L'Oreal-UNESCO International Fellowship Grant
- She is also the **first Jamaican to have received the L'Oreal-UNESCO International Fellowship (in 2000)**, and among an **exclusive group of approximately 1,100 female scientists from 103 countries worldwide to have been distinguished by Awards or supported in the pursuit of their career through the L'OREAL-UNESCO Women in Science partnership**
- Research conducted by Dr. Roye has resulted in the identification of numerous **plant viruses**, and has played an integral role in the development of strategies to control them
- Locally, her work has resulted in the **identification of more than 24 viruses associated with plants such as red pea, broad bean, tomato, scotch bonnet pepper, cabbage and common weeds**. Her research has been instrumental in **facilitating the control of viruses in two crops by cultivation of resistant varieties of tomato and cabbage**. This has enabled the local agriculture market to flourish, as these plant viruses can cause significant yield loss
- Dr. Roye's research in viruses has expanded to humans, as she has now embarked on **research in the detection of antiretroviral (ARV) drug resistance of HIV in Jamaican patients**. The research serves to improve ARV treatment and outcome for HIV-affected individuals as well as the quality of life of HIV patients.



DR. NOVLETTE SADLER MCKNIGHT

- Dr. Sadler McKnight's research interests include: (a) Mechanisms of inorganic and organometallic reactions: **synthesis and reactivity of molybdenum and ruthenium complexes and their applications as catalysts, models for enzymes and participants in atom-transfer reactions.** (b) Chemical Education: **to design and validate instruments to measure different dimensions of student learning, both cognitive and affective and to implement innovative strategies that that will allow for a better understanding of how to improve instruction in chemistry, especially against the background of the changing demographics and learning styles of university students.**
- Her current projects focus on **Peer Led Team Learning**, the use of the **Science Writing Heuristic approach** in undergraduate laboratory, and understanding the **science culture nexus in schools.**



DR. MARVADEEN SINGH-WILMOT

- Dr. Singh-Wilmot is a lecturer in Inorganic Chemistry and Crystallography
- She has published on a variety of new **lanthanide** containing molecules and still continues work on **rare earth nanoclusters** (multiple lanthanides in a cluster whose dimensions are in the nanometer range). Most of her attention is **currently focused on using lanthanides to assemble Metal Organic Framework Materials (MOFs)**
- Dr. Singh-Wilmot served as **co-chair of the Young Scientist Ambassador Program (YSAP) which is an initiative of The Young Scientists from the 2010 Annual Meeting of the New Champions (AMNC), Summer Davos.** This program involves Young Scientists from 55 different countries representing every section on the Globe; it promotes the efforts of AMNC Young Scientists to bridge the international scientific gap by facilitating cultural, scientific, intellectual, or educational interactions
- In October 2010 she was inducted as a Young Affiliate Fellow of the Academy of Sciences for the Developing World (TWAS) in Hyderabad India. She is the **first Young Affiliate to be selected from the Caribbean Region.**



DR. TANNECIA STEPHENSON

- Dr. Stephenson is a lecturer in the Department of Physics and a member of the Climate Studies Group, Mona
- **She was awarded the Bronze Musgrave Medal for Science 2014**
- **In 2013, she was appointed by the Joint Scientific Committee of the World Climate Research Programme (WCRP) as a member of the Coordinated Regional Climate Downscaling Experiment (CORDEX) Science Advisory Team (CORDEX-SAT)**
- **Her research interests are Caribbean climate variability, climate extremes, seasonal predictions using statistical models and statistical downscaling.** She has been affiliated with a number of climate variability and change projects and has published a number of journal articles, technical reports and short monograph with collaborators. Her work experience includes conducting research as a **visiting fellow at the Climatic Research Unit at the University of East Anglia in the United Kingdom**
- Dr. Stephenson's work will provide us with additional projections of how the climate of the Caribbean may change in the future and the results will be one of the motivations for the decisions made by the international community on climate change mitigation and adaptation.



DR. MONA WEBBER

- Dr. Webber is a senior lecturer in **marine biology**
- Her research has focused on **Zooplankton**: their community structure and distribution, and their use as indicators of water quality. She has also conducted **studies on mangrove habitats including an assessment of their biodiversity and the evaluation and development of appropriate water quality indices**
- She recently completed work on the biodiversity of a range of taxa in the Port Royal mangroves which included (with graduate student Celia Jackson) the identification of a new species of mangrove sponge
- Her current research involves conducting **ecological assessments (water quality and mangrove forest assessments) of critical coastal areas around Jamaica including recently designated fish sanctuaries and areas proposed for fish sanctuary designation, including the Malcolm's Bay/Galleon Beach, Morant Wetlands, Discovery Bay and San-San Bay**
- In 2013 Dr. Webber was **one of three** lecturers appointed to the **United Nations Pool of Experts to assist in the production of a World Ocean Assessment** – the first integrated global assessment of the state of the marine environment, including socio-economic aspects
- In 2015, Dr. Webber was one of the recipients of the UWI Mona award: **“Research Project with the Greatest Business / Economic / Development Impact”**: *The Pedro Cays Carryong Capacity study.*



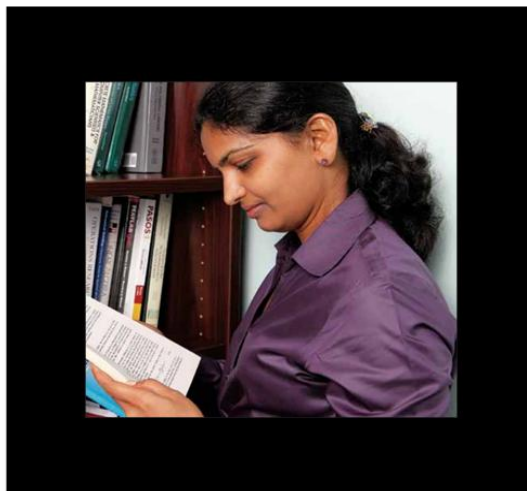
DR. TANIA HENRY

- Dr. Henry is **currently a lecturer in the Mona School of Engineering**. Her areas of specialization include: materials and **nanoengineering**
- She received a PhD in Electrical Engineering from Yale University. She has worked at IBM's T.J. Watson Research Center. She has also carried out postdoctoral research at Sandia National Laboratories, a science, technology and engineering lab for US national security
- Her research focus includes: controlled growth and characterization of semiconductor gallium nitride (GaN) nanowires for nanoelectromechanical systems (NEMs), and nanoelectronic applications such as nanoscale transistors. She also carried out research which involved the characterization of point defects in light emitting diodes (LEDs) by optical spectroscopy techniques. Point defects can produce heat generating events which affect the efficiency or light output of energy efficient LEDs. Mitigating these defects helps LED manufacturers improve the energy efficiency of their devices. Dr. Henry's research interest also include organic and inorganic nanoelectronics, nanomaterials for biological and chemical sensing, and energy efficiency, emerging nanotechnologies, and III-Nitride optoelectronic devices for energy efficient solid state lighting.
- Her contributions to science and engineering have been documented in peer-reviewed scientific journal publications including *Applied Physics Letters*, and *Optics Express*, #1 peer-reviewed journals in applied physics, and optics respectively (based on Web of Knowledge rankings). Dr. Henry's journal paper "Assessment of deep level defects in *m*-plane GaN grown by metalorganic chemical vapor deposition", **T. A. Henry**, A. Armstrong, K. Kelchner, S. Nakamura, S. P. DenBaars, J. S. Speck, (*Applied Physics Letters*, 100, 082103, (2012)), was co-authored with Professor Shuji Nakamura of the University of California, Santa Barbara, who won the 2014 Nobel Prize in Physics.



PROFESSOR GIRIJA JAYARAMAN

- Professor Jayaraman is a **renowned Applied Mathematician who has been working in this field for over 30 years.**
- She is the recipient of awards and grants funding from agencies in India and other countries.



DR. NAGARANI PONAKALA

- Dr. Ponakala is an applied mathematician, working in the field of Biomechanics since 1999. She is interested **in understanding the effects of catheter insertion in fluid flow in the cardiovascular system, based on the concept of dispersion theory.**
- She is a recipient of the 2010 UWI Mona Award for: **“Best Research Publication Article”**: *Effect of Boundary Absorption on Dispersion in Casson Fluid Flow in an Annulus: Application to Catheterized Artery.*



PROFESSOR ALEXANDRA RODKINA

- Professor Rodkina works in the area of **stability of the stochastic equations**. She served as **Head of the Department of Mathematics, UWI Mona**, for 6 years
- She is the author of more than **200** peer reviewed publication including 3 monographs. She has presented invited lectures and chaired sessions at more than **34 international congresses and conferences**. Under her supervision **2** research students obtained their **PhD** degrees and **3 MPhil** degrees
- She is a recipient of the UWI Mona 2009 Award for: “Most Outstanding Research Activity”: **Stability for Stochastic Equations**. She is the recipient of **5 London Mathematical Society and Royal Society of UK** grants as well as several grants to do research at universities in the **USA, Canada, Mexico, Australia, Ireland, South Korea**
- For the last 25 years she has been the **reviewer of Zentralblatt für Mathematik - Mathematics Abstracts**. She is also a reviewer of **international mathematical journals such as: “Stochastic and Stochastic Reports”, “Dynamics of Discrete and Continuous Systems”, “Journal of Applied Mathematics and Stochastic Analysis”, “Functional-Differential Equations”, “Stochastics”, and “Applied Mathematics E-Notes”**. She is a member of the editorial board of **“International Journal on Difference Equations”**.



PROFESSOR HELEN N. ASEMOTA

- Professor Asemota is the current Executive Director of the UWI Mona Biotechnology Centre. She has been a full Professor of Biochemistry and Molecular Biology since 2003 and has been tenured since 1998. She also served UWI for over 21 years in the Department of Basic Medical Sciences of the Faculty of Medical Sciences. Professor Asemota served as Professor in several universities in other countries, including Nigeria and the USA, and has trained over 30,000 students globally
- She has held membership in renowned professional organizations, including the New York Academy of Science, and has served in many local, regional and international boards. She has rendered consultancy services to various international organizations including the European Union, as technical expert; and the UN-FAO as International Biotechnology Consultant to several different countries, including Syria (2001 – 2002) and Tajikistan (2003-2008).
- Her research areas include: tuber crops (especially yams) production improvement, secondary metabolites and byproducts development – Biochemistry, Molecular Biology and Biotechnology; experimental diabetes and hypercholesterolemia; mechanism of action of natural products and supplements in animal models of non-communicable diseases and drug addiction; nutraceuticals/natureceutics and innovative products development. Her current thrust is to promote the exploitation of ‘biotechnology as a concept’ for the growth of insurgent bio-economy in the nation/region.
- She has various local and international awards and over 300 publications with over 110 in refereed International Journals, many as technical reports to international organizations, 4 as patents and several as book chapters, in the disciplines of Biochemistry, Biotechnology, Molecular Biology and Bio-nanotechnology. She has been Principal Investigator in the National Science Foundation, USA, the National Health Foundation, and the National Institute of Health, USA. She has experience in IRB and has chaired IRB Board and coordinated IRB activities in a USA university for several years.



DR. CLAUDINE ALLEN

- Dr. Allen is a lecturer in the Department of Computing. **Her particular interest is in the development of discrete reusable entities called learning objects.** The idea behind learning objects comes from the object oriented programming paradigm. She focuses on the development of taxonomies particularly suited for repositories in the typical secondary and tertiary school environment as well as the development of component architectures.



DR. GUNJAN MANSINGH

- Dr. Mansingh is a lecturer in the Department of Computing. Her research interests include: **data mining, decision support systems, knowledge management healthcare, expert systems and technology adoption.**
- She is a **co-recipient of the UWI Mona 2013 Award for: “Best Research Publication”** for the paper: *Building Ontology Based Knowledge Maps to Assist Business Process Re-Engineering.*

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