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THE UNIVERSITY OF THE WEST INDIES • ST. AUGUSTINE CAMPUS

SUNDAY 3RD JULY, 2016

COCONUTS get cracking

There was a coconut water extractor, splitting open the coconut to reveal the lovely jelly inside. This was one of the exhibits at the Undercroft of the Kenneth S. Julien Building of the Engineering Faculty, the work of over 120 students.

Titled "The Final Year Exhibition of Engineering Students: Design and Build," the two-day event was created within the Mechanical and Manufacturing Department to encourage students by recognising their innovative work

It brought sectors that could benefit from research and development together with new ideas and idea generators. Projects at the exhibition fell into five categories: dynamics, automotive, agriculture and agro-processing, manufacturing and alternative energy, and environmental and medical. Because food processing in particular is seen as an especially necessary and viable area for growth, several related projects were highlighted. These included, among others, an automated duck roaster, a pulveriser for oyster shells, a cassava harvester, and even one that demonstrated the thermal insulating properties of banana plant leaves.

Every year students in the Faculty of Engineering undergraduate programme engage in 150 final year projects, maybe more. When one considers similar activities in the Faculty of Science and Technology and the Faculty of Food and Agriculture this speaks to the potential of the University in driving an entrepreneurship based on technological innovation.

Significantly, whereas in the past students would see their projects as just a requirement for completing the degree, I have seen an increasing number looking beyond graduation, exploring the possibility of making their ideas a commercial reality. This speaks volumes to a small but significant change in the culture required to fuel the wealth generation engine," said Professor Brian Copeland, the new Principal of the St. Augustine Campus as he addressed the conference that accompanied the exhibition.

(See Page 17 for more on the Exhibition)



EXIT INTERVIEW - 10 This is My Home

■ Professor Clement Sankat







ENVIRONMENT - 14 Cleaning Up Carenage

Students take action

HERITAGE - 15 The Moveable Museum A case of cases







THE UWI-NGC RESEARCH AWARDS

Celebrating Excellence in Research

The University of the West Indies, St. Augustine Campus (UWI), together with The National Gas Company of Trinidad and Tobago Limited (NGC), offers congratulations to the recipients of The UWI-NGC Research Awards 2016.

On Wednesday 8th June 2016, the 3rd biennial Research Awards Ceremony celebrated researchers and projects that are advancing knowledge and impacting lives. They include work on mosquitoes and disease transmission (Most Outstanding International Research Project); the environmental impact of the Guanapo Landfill (Most Impacting Research Project); and the One Health One Caribbean One Love project promoting an integrated and collaborative approach to animal, human and environmental health in the region (Most Outstanding Regional Research Project).

For more on the research being carried out at The UWI St. Augustine, visit http://sta.uwi.edu/researchinnovation | https://sta.uwi.edu/researchawards/index.asp





Most Outstanding Researchers from left: Prof Dave Chadee (Faculty of Science and Technology), Prof.
Christopher Oura (Faculty of Medical Science), Dr Jerome DeLisle (Faculty of Humanities and Education),
Dr Wayne Ganpat (Faculty of Food and Agriculture), Prof. Brent Wilson (Faculty of Engineering)



Campus Awards (back row from left): Most Productive Research Unit, Centre or Institute, Sir Arthur Lewis Institute of Social and Economic Studies (SALISES), Prof. Patrick Watson, Most Outstanding Regional Research Project, One Health, One Caribbean, One Love - Prof. Chrisopher Oura, (Faculty of Medical Science), Most Outstanding International Research Project, Biology and Behaviour of Male Mosquitoes in Relation to New Approaches to Control Disease Transmitting Mosquitoes, Prof. Dave Chadee (Faculty of Science and Technology), Most Impacting Research Project, The Impact of the Contaminants produced by the Guanapo Landfill on the Surrounding Environment - Dr Denise Beckles, (Faculty of Science and Technology) with Principal Designate, Professor Brian Copeland, Campus Principal and Pro Vice-Chancellor, Professor Clement Sankat, Mr. Gerry Brooks, Chairman of NGC - sponsor for The UWI-NGC Awards, Dr. Nyan Gadsby-Dolly, Minister of Community Development, Culture and the Arts and Mr. Ewart Williams, Council Chairman, The UWI, St. Augustine



Most Productive Research Departments: Dr Adesh Ramsubhag (Faculty of Science and Technology),
Dr Alexander Sinanan representing Dr Nelleen Baboolal (Faculty of Medical Science), Dr Wayne Ganpat
(Faculty of Food and Agriculture), Prof. Boppana Chowdary (Faculty of Engineering)

OUR CAMPUS



Farewell to Dave

(October 30, 1953-June 21, 2016)

On the evening of Tuesday June 21, 2016, the University received the shocking news of the untimely passing of Professor Dave Chadee, the recipient of the "Most Outstanding International Research Project" award at the recently held UWI-NGC Research Awards Ceremony for his work on the "Biology and behaviour of male mosquitoes in relation to new approaches to control disease transmitting mosquitoes."

Professor Chadee's funeral was held on June 24 and the University community bid farewell to a man whose life work has been internationally recognised.

We reprint under an excerpt from an article carried in the March 2009 issue of UWI TODAY that describes how he came to be the Mosquito Man.

"Almost as invisibly as the mosquitoes he's been studying for twenty years, Dr Dave Chadee has been doing pioneering research on the annoying, and in the case of Aedes aegypti, deadly insects that are a growing plague to modern society.

Little is known locally of his work that has contributed significantly to refining methods to eradicate and control Aedes aegypti in particular, the source of four known serotypes of Dengue Fever (DF), and their potentially fatal complications: Dengue Haemmorhagic Fever (DHF) and Dengue Shock Syndrome (DSS), and Yellow Fever.

Internationally, however, Dr Chadee's work is so highly regarded that he was asked to collaborate with a team from Tulane University in New Orleans in developing a lethal ovitrap, a device designed to trap eggs and kill the laying mosquitoes, and for this work the team has received a grant of TT\$1.5 million from the Bill and Melinda Gates Foundation.

Entomology, the study of insects, is not a calling that comes to many. For Dave Chadee it was not so much a call as a scream. He remembers the fright and the awe with the clarity of someone who's identified a defining moment in life.

He'd been playing around a chenette tree, and with a four-year-old's innocent impetuosity, he hugged the trunk. Unbeknownst to him, the tree was ringed with caterpillars and their spiny bristles stung the affectionate arms pressed against them. As he screamed and thrashed about wildly, his school principal father came running home, recognising his offspring's wails in that discerning way of parents. By then the child was slashing away at the caterpillars with his chenette branch stick. His father soothed his wounds then took him back to the scene. He got a jar, filled it with it some leaves and placed the caterpillars carefully inside. Daily, they would inspect it and replace the leaves. One day, they seemed dead and he grew sad (they were pupating) but his father advised that they keep observing a little more. Finally, their vigilance was repaid.

Butterflies! Beautiful mint green butterflies, the most gorgeous creatures he had ever beheld, and Chadee was hooked for life.

He left their cocoa estate in Tableland and went off to Dalhousie University to do a BSc in Entomology, but was advised that if he wanted to do real research on mosquitoes he had to go to the tropics. So it was back to

Although the Aedes aegypti had been deemed eradicated in the sixties, by the late 1970s they had returned.

When he returned, and joined the Ministry of Health in 1979, it was the middle of a Yellow Fever outbreak. From a research perspective, he could not have timed it better.

Since then, he's done countless studies and collaborated with several others to examine possibly every aspect of this particular mosquito's existence. Given the nature and intimacy of his work, it is tempting to say that Dr Chadee knows every mosquito by first-name – he could probably tell you which mosquitoes bit him when he got Dengue twice."

UWI TODAY Editor, **Vaneisa Baksh**, will be on leave until the end of the year and **Ms. Rebecca Robinson** will be the acting editor until her return in January 2017.

FROM THE PRINCIPAL

The Journey of a Lifetime

I write to you for the very last time as Pro Vice-Chancellor and Campus Principal; a moment in my life that brings with it mixed emotions and reflection. I see the person I am today, and in looking back at almost 50 years of a life that has been inextricably intertwined with The UWI, the St. Augustine Campus, and Trinidad and Tobago, I am comfortable in saying it was a wonderful Caribbean journey.

Coming from Berbice, a rural town in Guyana to this campus in 1969, I was only a little boy, an 18-year-old, who wanted to experience the world in search of education. I brought with me only dreams and aspirations, while

leaving a promise to my parents, siblings and friends that I would do them proud.

I had only known my birthplace Guyana, waking up in the mornings and seeing "Dutch Guiana" (now Suriname). The Caribbean was just a word that was imagined, but not experienced. That quickly changed, as living at Canada Hall expanded my vision and added a perspective of Caribbean culture. I was privileged to be among young students like myself, many of whom came from various Caribbean countries, all trying to make the adjustment to a new way of life. This regional UWI environment truly became my cultural classroom, and I was able to grasp an understanding of the diversity of the people of the region, as well as their hopes and aspirations. This exposure was the genesis of my incarnation as a Caribbean person. I emerged as a new individual with a regional philosophy; my insight and appreciation of our rich cultural heritage expanded immensely. The process of my assimilation had begun, as my understanding and respect for the many influences of my environment changed my way of seeing. It did not take me long to embrace the fact that I was more than just Guyanese; I was a son of the Caribbean and it was The UWI that provided the mould which shaped my life in a meaningful way, both academically, professionally and socially.

Having spent most of my life here, Trinidad and Tobago has contributed significantly to my development. This country has given me new opportunities and an extended family of so many friends, acquaintances and colleagues. This is my home. As a committed member of The UWI fraternity for 40 years, this is where I have grown and where I have been allowed to serve the region in a very impactful way through my various appointments.

I also served many rewarding years as Chairman of the Boards of the Caribbean Industrial Research Institute and the Trinidad and Tobago Bureau of Standards, and on the Boards and Agencies of the State – allowing me to participate fully in national development. I am therefore grateful to all the Governments of Trinidad and Tobago, for



their steady support of our Campus and University.

I have been asked more recently by many, whether I would miss being Principal. Most certainly I will. But I will more miss being a part of the regional UWI, the St. Augustine Campus, and my home faculty – the Faculty of Engineering, which truly influenced my desire to foster development through service. I owe much to many mentors and leaders, past and present, both within and outside of The UWI. While I am proud to have been born and educated at an early age in Guyana, I feel equally proud and grateful to the country

that I call home. Everything about me is Trinidadian! My wife is from Trinidad and Tobago, my children are 'Trinis' and my interest and passion have resided here since 1969. I am Trini to the "flesh" not possibly to the "bone" – Trinidad and Tobago's cultural diversity and space have truly absorbed me.

In short, it has been a remarkable journey for me, one that I will cherish for the rest of my life. The UWI has been my life. The friendships I have developed over the many years across the region will undoubtedly last a lifetime. My life in academia and public service are well documented and while the time has come for me to leave The UWI system, I am doing so in anticipation of a new journey; a journey I imagine will bring with it rewarding new experiences and opportunities. I accept this new destiny; hopefully taking me along a path that will allow me to continue my contribution as an academic.

I will use this occasion to recommit my time to my family and provide them with the direct support that may have been subdued in having to share my focus with the University for so many years. I salute my family for their understanding and patience with me. My time was never "our" time.

I wish all my former colleagues, students, friends and acquaintances the best for the future, and I express my sincerest thanks for the pivotal roles they have played in making my lifelong journey a gratifying and memorable one – one which I hope has brought value to our Campus and University, to Trinidad and Tobago, the region and elsewhere.

Thank you and God bless you all.

(MI) What

CLEMENT K. SANKAT
Pro Vice-Chancellor & Principal

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Strength in Numbers

Prof Greene advocates for island power in the fight against climate change

BY JOEL HENRY

When it comes to climate change, the Caribbean is in a precarious position. Our proximity and dependence on the sea makes us particularly vulnerable to rising temperatures. Yet as a region we are not major contributors to climate change and hold no sway over those that have the most detrimental impact on the environment. On the surface it seems a position of powerlessness in a scenario where power is crucial. But despite our constraints, the Caribbean has in fact shown leadership in its response to the threat of a warming world.

"We must recognise that over the years some of the institutions have been doing solid policy research, scientific research and advocacy," says Professor Emeritus Edward Greene.

Professor Greene, the United Nations Secretary-General's Special Envoy for HIV in the Caribbean, was in Trinidad to lecture on "Climate Change: The Future of the Caribbean" as part of the UWI Distinguished Lecture Series.

Speaking at the Teaching and Learning Complex at St. Augustine, he looked at the threat climate change posed to the region, and the work that has been done and that needs to be done to mitigate its effects and adapt to the emerging environment.

"We have a fragile window of opportunity," Professor Greene says, speaking to UWI Today at the University Inn a few hours before his presentation. "If we don't act within ten years – according to scenarios done by the Stockholm Institute for Climate Change and supported by others – the cost for handling climate change would spiral by about 55% to 60%."

It's a warning but not delivered in a dire tone. The professor is in fact quite upbeat, pleasant and gentlemanly in that old school West Indian way. He is optimistic and focuses on what has gone right in the Caribbean's response to climate change and offering a blueprint for the future.

He does not deny, however, the severity of the threat. Scientists estimate that the planet has heated up by 1.7 degrees Fahrenheit since 1880. The heat accumulating because of human emissions is roughly the equivalent of 400,000 times the atomic bomb that was dropped on Hiroshima – every day.

If these emissions continue unchecked they could make temperatures rise past 8 degrees Fahrenheit, which would cause a catastrophic rise in sea levels. Low-lying countries such as Guyana, Belize and Suriname and many coastal areas of islands could be devastated. This is apart from other



Professor Emeritus Edward Greene speaking at his lecture on "Climate Change: The Future of the Caribbean." PHOTO: ANEEL KARIM

consequences of climate change such as extreme weather events, damage to the ecosystem, an increase in water-borne diseases, and impacts on industries such as agriculture, forestry, energy and tourism.

Professor Greene is quick to point out that steps are being taken to prevent this from coming to pass, most notably the Paris Agreement under the UN Framework Convention on Climate Change which was adopted in December 2015 by 192 countries.

"The Paris Agreement is a landmark because it strategically allows countries to develop their policies with the benchmark of holding the increase in global temperature below 2 degrees Celsius above pre-industrial levels and asking them to try for 1.5 degrees," he says.

He also points out that the Caribbean has advocated such a position long before the Paris Agreement:

"It is important to note that against great resistance from the developed world, the Caribbean Community launched and led a campaign ahead of the 15th UN Conference of parties in Copenhagen, 2009, under the banner '1.5 to Stay Alive'. It was a bold campaign spearheaded by the Caribbean Community Climate Change Centre (5Cs)."

Professor Greene said regional organisations such as the Belize-based 5Cs and the Caribbean Disaster Emergency Management Agency (CDEMA) in Barbados and UWI researchers such as Professor Anthony Chen, Dr. Leonard Nurse and Professor John Agard have made an important contribution to the climate change issue through policy, research and advocacy.

"I believe that over the years we have come to understand how we must frame our options and we have come to understand the costs of inaction," he said. "That's very important because politicians like to know what it will cost in GDP. I believe that we have been able to show this."

For the post Paris Agreement world, Professor Greene emphasizes the importance of framing climate change as an issue for all Caribbean people, one that must be dealt with collectively.

"We have to be sure we treat climate change not as something for academics and policymakers to deal with but something that must engage the people themselves," he said. "They must demand their rights for reduced emissions. We will embed that culture in the schools and parents, priests, teachers and so on will be part of that action. We need this to happen from the ground. This has to be a collaborative, shared responsibility. That has to be the next step."

HAPPY RETIREMENT TO OUR COLLEAGUES!

More than a hundred staff members from the St. Augustine Campus who were to have retired during the period from January 2015 to December 2016, were treated to an appreciation ceremony on June 17 at the Teaching and Learning Complex. After the recognition function, where tokens were presented, guests shared lunch.

It was an emotional moment for the **University Director of Marketing and Communications, Dr. Dawn-Marie De Four-Gill**, as she wished **Mrs Marion Khan** a happy retirement. Marion had been the senior secretary for years at M&C, and is one of the many faces that will be sorely missed at the Campus.

We wish to join the sentiments of gratitude and appreciation to our colleagues and to wish them a hearty period of retirement.



Agree to Disagree

The Sir Arthur Lewis Institute of Social and Economic Studies (SALISES) presented a forum in early May on the highly contested topic: Abortion: her body, her choice?

It is an issue brought to the forefront again thanks to a report of a minor being arrested for undergoing an abortion in Central Trinidad, and in the face of the Zika virus and its possible link to microcephaly.

Panelists were called to answer questions on this divisive topic such as, should abortion be made available on demand? Under what circumstances, if any, should it be allowed and others posed by the packed audience at the UWI St. Augustine, Noor Hassanali Auditorium.

The forum, chaired by Professor Patrick Watson, Director of SALISES began with Dr. Fuad Khan, former Minister of Health of Trinidad and Tobago lamenting the archaic nature of existing laws concerning abortion in Trinidad and Tobago, such as the Offences Against the Persons Act which criminalises persons who assist in the termination of a pregnancy: "Persons can get four years in prison...whether that's a doctor or a pharmacist." He stressed the need for other archaic laws to be revisited such as 1938's Rex vs. Bourne and 1973's Roe vs. Wade.

Dr. Jacqueline Sharpe, Advisory Director of the Family Planning Association of Trinidad and Tobago, emphasized the need for more information and more restrictive laws to avoid unsafe abortions. She said Trinidad is behind in its abortion laws compared with the rest of the region, such as Guyana, where abortion is available by request as a result of the Montevideo Consensus in 2013: "women's access to safe abortion must be protected using a human right and a public health approach."

Also, she said, Barbados allows abortions in the following instances: to save the life of a woman; her physical and/or mental welfare; rape and incest; foetal abnormality. The need to scale up family planning services was also



stressed, such as emergency contraception within 48 hours for all rape victims who are of a reproductive age, and postabortion counselling.

Father Clyde Harvey, Vicar of Clergy, Archdiocese of Port of Spain noted at the start of his presentation that nowhere in abortion rules is the welfare of the child mentioned or referenced. He said that the idea that

hydrocephaly caused by the Zika virus can be used as a reason for abortion is rooted in a need for perfectionism that is absolutely inhumane and that "life is not a problem to be solved, it is a mystery to be lived."

Dr. Merle Hodge, former Senior Lecturer of Language and Literature at The UWI St. Augustine and author and activist, noted that although she and Father Harvey share opposing views on this issue, they usually agree on everything else. Additionally, she stated that she is not out to change your personal opinion... if your values contradict, you will not have an abortion. This set the stage for the question and answer segment that was longer than all the speakers' presentations combined. A continuous queue of impassioned persons ranging from journalists, senators, doctors and lawyers, lined up to weigh in; so much so that Dr. Hodge commented, "Talking about abortion often turns into a cross-purpose argument: people end up sliding past each other. Hot air is wasted and it won't change the price of barley."

Abortion was held to task from personal narratives about how costly it is, to where do men's rights come into play in the abortion argument: don't they deserve to have a say? – to philosophical quandaries like where does life begin? One person even questioned Father Harvey's selection and how he came to represent the entire Christian community.

The panel did their best to address questions, but there were no easy answers. Dr. Sharpe reminded the audience that 22 million unsafe abortions happen every year with 47,000 deaths globally and that is not going to stop any time soon.

The Zika virus brought abortion back on the discussion table, but it's a conversation that has been around for centuries and will not go away any time soon. In the interim, it may be best that we agree to disagree, but the discussion must continue.

Jeanette G. Awai is a freelance writer Marketing and Communications Assistant at the UWI Marketing and Communications Office

BE PART OF A GREAT WEST INDIAN TRADITION



The University of the West Indies (UWI) is an innovative, internationally competitive, contemporary university deeply rooted in the Caribbean and committed to offering quality higher education. UWI, through its output of stellar graduates, Caribbean-focused research and policy advice provided to governments and to the private sector, continues to have a profound influence on the English-speaking Caribbean as a major contributor to the region's stability and relative well-being. We welcome you to be a part of this great West Indian tradition.

Applications are now invited for the following positions at the St. Augustine Campus:

■ FACULTY OF MEDICAL SCIENCES

Lecturer in Biostatistics Lecturer in Family Medicine

APPLICATION DEADLINE: JULY 31, 2016

For more information and to apply for these posts visit:

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Application forms also available at the Dean's Office, Faculty of Science & Technology, Student Services, C2 Building, UWI St. Augustine Campus



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Aug 19, 2016

VALUING EDUCATION

BY JOEL HENRY

Her most impressive answer is the simplest.

Sitting down to be interviewed by UWI TODAY, Mrs. Andrea Taylor-Hanna, the recently appointed Campus Bursar at UWI St. Augustine, was asked about her values, her outlook on life and how it will guide her in the position.

"A dollar must be used efficiently," she replied. "It doesn't matter if it is one dollar or a million dollars, the same principle applies. You must not waste."

Her answer is grounded, free from the unwieldy statements you normally get in response to questions on values. Mrs. Taylor-Hanna is, after all, an accountant and banker. She is a numbers person, and numbers are not swayed by rhetoric. Numbers are engaged with reality. At present, for the University, for Trinidad and Tobago, for the region, the reality is quite challenging.

"I was this way previously," she says of her prudent approach, "but it was really refined when I went to work for Republic Bank in their Trust and Asset Management Division. It really clarified a number of things for me. Every dollar counts. Just because you can pay for something doesn't mean you should. Feel free to save the money."

Mrs. Taylor-Hanna was appointed Campus Bursar in October 2015, the latest milestone in an over 35-year career as a finance professional. She has worked in several industries, among them banking, where she held several senior positions at Republic Bank, including General Manager of Internal Audit and General Manager of Planning and Financial Control. She was also President of the Institute of Banking and Finance, the component of the Bankers Association of Trinidad and Tobago that deals with education.

"I really do feel that every single thing I have done in my life so far has gone into preparing me for the execution of this function at UWI," she says.

This includes not only skills in areas like auditing, financial management and financial planning, but also human resources:

"A few years back I decided to do a master's degree in human resource development. Now, I'm a financial person but I looked and understood that understanding people and the way they think and figuring out how to motivate them is very important. In the beginning of your career and growth it is about technical skills. Once you have acquired your technical competencies it is all about human relationships and interactions."

As Campus Bursar, those skills are being tested. With a staff of approximately 100 people, the Bursary of UWI St. Augustine is responsible for every aspect of financial management for the main campus as well as the Medical Sciences campus at Mt Hope. This includes the monthly payroll for more than 4,000 people, cash management, paying bills, creating budgets, and overseeing projects and other investments.

"The challenge at UWI is the sheer complexity of the different strands that come together to produce the delivery of education," she says, giving the example of the different revenue streams that fund the University and the complexity that entails.

She adds, "I thought I was coming to work at a university but it is really a small city of about 23,000-24,000 people, with all the dynamics of managing a city.



Recently appointed Campus Bursar at UWI St. Augustine, Mrs. Andrea Taylor-Hanna: Feel free to save the money.

A few years back I decided to do a master's degree in human resource development. Now, I'm a financial person but I looked and understood that understanding people and the way they think and figuring out how to motivate them is very important.

That is what makes it different. That is what makes it interesting."

But the most pressing challenge for the Campus Bursar is the loss of funding that the University faces because of the economic recession. UWI's task is to maintain its high standard in the education and research opportunities it provides while receiving less funding. The mandate is to "protect the things that are critical," such as original research and the many areas of study. She also wants to ensure that students still have opportunities for scholarships and to travel abroad. Where cuts have to be made, they should do the least harm, especially to the University's core activities.

"We have to use this recession to force us to achieve higher levels of efficiency and productivity" she says. "We have to use it to remove what is worthy of removing and save what is worthy of saving."

Her approach is to work with the different units on the campus for them to determine what needs to be cut to meet the financial goals.

"Everybody that interacts with this University has to share this burden, from top to bottom, from our staff to our suppliers. Secondly, we must figure out how to continue to deliver the best education that we can to the students without the severe economic challenge affecting that in a negative way," she says.

She acknowledged, however, that tertiary-level students in general could be affected (like the rest of the country) by the recession, particularly because of potential changes to the Government Assistance for Tuition Expenses (GATE) programme. This is not pessimism. Mrs. Taylor-Hanna believes that citizens should recognize how privileged we have been and continue to be, even with the conditions.

"This is an issue that we have to face, all of us. Let us roll up our sleeves and get on with it," she says. "Fretting won't make it go away, quarreling won't make it go away and blaming somebody else won't make it go away. Use your energy to figure out how to make it work in your space and environment, and collectively we will work it out for the country."

She is hopeful that this can happen because it has happened before.

"I was around for the 1980s," she says, describing how Trinidad and Tobago adapted to those brutal economic circumstances. "Trinidadians came out of the 1980s more respectful of their jobs and more entrepreneurial. It made the individual citizen more dependent on himself to make a living."

But the new Campus Bursar sees positive signs in the present as well as the past. The representatives of the various campus units are responding to these times. They are stepping forward and finding ways to reduce costs.

"I'm seeing them getting down into their units and figuring it out, and coming back with answers for doing things differently. I am hopeful and every day is making me more hopeful that we will face the challenge and overcome it," she says.

It's a slow process but she believes it is the right process to create the kind of shift necessary for the university to thrive in the present environment.

Getting the numbers right is critical, but UWI is made up of more than the numbers.

The Farmer Who's Growing People

BY PAT GANASE

Dr. Wayne Ganpat takes up his new post as Dean of the Faculty of Food and Agriculture on August 1, 2016. Over the next four years, he will use his expertise in "Extension" – particularly his communications and outreach skills – to attract students back to agriculture and agri-enterprise; and raise the profile of the Faculty of Food and Agriculture as the treasury for agricultural learning, research and technology, in the region. Ganpat's mission is to be an agriculturist cultivating people.

"We have to encourage agriculture students to think outside the box, to invent the systems that make agriculture, food production, an art, a joy, and a business. We need to do this with the current students, even as we expand the enrolment in Trinidad and Tobago, as well as from the region and internationally."

Dr. Wayne Ganpat is talking about the mission of his next four years. A primary goal is to re-establish the once vibrant presence of the Faculty in the region; working to help governments and food producers solve their many problems and repositioning the FFA at St Augustine as the agricultural centre for the region. He also hopes to build on the work started by the retiring Dean Dr. Isaac Bekele in seeking to harmonize the several agriculture programmes across the region. One of his objectives is to communicate research findings and development efforts to bring about higher levels of food and nutrition security more widely to stakeholders, and to do this by inspiring a new generation of agro-preneurs.

The business of agriculture has changed since Wayne Ganpat started his career as an agricultural officer in the Ministry of Agriculture, over 30 years ago. He believes the field is wide open for technology-driven innovation, from growing to productivity to processing to marketing. Because producing food is one of the oldest professions, it suffers from the stigmas that have attached to it over millennia: back-breaking work at the mercy of the natural elements and the legacies of slavery and indentureship, poor returns.

"We need to encourage people to become interested in technology, in invention, in innovation, and in research into the end product of agriculture which is adequate and accessible safe and nutritious food," says Ganpat. His mission, he claims, is outreach: for more people to come to agriculture as training for life; to spread training throughout the region via technology; to enable farmers to access information



Dr. Wayne Ganpat receives the award for the Most Productive Research Department from the new Campus Principal, Professor Brian Copeland. Dr. Ganpat also received an award for Most Outstanding Researcher at the UWI-NGC Research Awards on June 8, at the Learning Resource Centre. PHOTO: GUYTN OTTLEY.

and to do research on their farms; and to remind governments and people across the region that UWI St. Augustine remains the centre of agricultural research and learning.

"At the Ministry of Agriculture, I learned the meaning of 'extension'. The goal is to take the results of research to the farmers. This means being the bridge between what's happening in the experimental field and the farmers on the ground. This is how I fell into communications, which is the answer to the challenge between academia and the farm. I managed training at the Farmers Training Centre in Centeno for many years. Staying in Extension, I managed the communications unit and did a lot of staff training. My first foray into communications and public education was at the regional level after the invasion of the pink mealy bug; this was followed by the giant African snail and West Indian fruit fly among others."

Since then, Ganpat has taken giant steps in research and publishing, including numerous peer-reviewed articles, two co-edited books on sustainable agricultural practices in the Caribbean, one on climate change impacts on food security in small island developing states, and a book on the History of Extension in Trinidad and Tobago. He is currently co-editing a book on Environmental Sustainability and

Climate Change; another on Agricultural Development and Food Security in Developing Nations, and another on Weeds of the Caribbean.

In June 2016, he was named the Most Outstanding Researcher in the Faculty of Food and Agriculture.

"I love research and writing. Extension, communications, is my passion," he says. "I have planted food, yes, when I needed to pay university fees. I could do it again if I had to. But, look around, there are so many opportunities for smart agribusiness. Why can't someone collect all the CEPEP roadside cuttings and turn them into compost for sale? With limited land space, we need to adapt or develop alternative systems of protected agriculture, appropriate for the tropics."

Dr Ganpat believes that young people can be creative, given the right challenges. "Perhaps we need to design interventions in the curriculum that would spur them to become entrepreneurs. I might give students in a class a different fruit or vegetable, and say to them, this is your project, find out what you might do with this to earn some money. Young people are turned on to technology: you can run several farm systems from a smart phone. This is where we need to take agriculture; young people and technology are the perfect mix to achieve this."

Crafting Today's Millennials

BY REBECCA ROBINSON

"In addition to her general responsibilities related to the overall management of the campus, the work of the Deputy Principal focuses primarily on academic quality and students. I have taken my lead from the first strategic aim of The UWI's Strategic Plan 2007-2012, which speaks of preparing a distinctive UWI graduate for the 21st Century."

So says Deputy Principal Professor Rhoda Reddock as she launches into the final year in her position, after eight years in that office.

Professor Reddock welcomes the extended term (until July 2017) as an opportunity to work with the incoming campus principal, Professor Brian Copeland.

In addition to her wide and packed portfolio, Professor Reddock has initiated or contributed to a number of university-level and campus policies. Some have been implemented while others are still in development. Among them are policies on Alcohol; Student-Athletes; Health and Wellness; and a revision of the one on Sexual Harassment.

Her overarching goal remains to support the University's Strategic Plan in producing graduates who have a regional frame of reference and exemplify the following attributes: "a critical and creative thinker; a problem solver; an effective communicator; knowledgeable and informed; competent; a leader; a team player; skilled and information literate; socially and culturally responsive; ethical; innovative and entrepreneurial; and a lifelong, self-motivated learner."

"The UWI is responsible for the holistic development of its graduates - where our programmes and degree tracks cultivate academic excellence, intellectual freedom, technical competence, creativity, ethics and integrity, civic responsibility, diversity and equity," she said.

With this output driven agenda, Professor Reddock will be engaging in "a year of consolidation." She will be seeking to fully institutionalise or ensure these systematic adjustments are integrated and adopted by staff and students alike. It's one challenge to make changes, and another to have them accepted

Professor Reddock credits her qualities of persistence and perseverance for having been able to make progress with her portfolio. Her understanding of the university system also helps – she was head of the Institute for Gender and Development Studies for 14 years, since it was a Centre. She thinks that her ability to see the big picture while simultaneously attending to details has been instrumental in getting the job done right.

Her goals are to structure a programme of mutually beneficial UWI services to at least one of



the communities surrounding the campus involving faculty, staff and students working together; to work with the Director, DSSD and the Guild of Students on strengthening the Guild's administrative systems; to progress the Campus Museum and Art Gallery project, as well as The UWI's After School Centre; implementation of the Student-Athlete Policy and to work with the DSSD director and staff and other faculty to develop strategies for expanding diversity and inclusion awareness, for instance, sexual rights. She admits that none of this could be achieved without the support and commitment of staff and faculty.

Her schedule has limited some of her professional pursuits. Since becoming Deputy Principal, she has had to limit her local and international engagement with academic and activist causes. She has put the writing of three books on hold. These include publications from her collaborative research on youth sexual cultures and the Break the Silence project, from which emanated a successful campaign against child sexual abuse. Her book on race/ethnicity, identity and citizenship in T&T has also been on hold. She looks forward to completing these. During this period, she has still managed to publish seven peer-reviewed articles, four book chapters and seven encyclopedia entries.

Professor Reddock's work demonstrates her deeply rooted belief that The UWI graduate, and by extension the Caribbean people, must be equipped to transform the trajectory of development and commit to social justice in this region and the world.

Professor Rhoda Reddock has been the architect of improvements in several key areas, many related to student life at The UWI, St. Augustine: Teaching, Learning and Student Development (under which fall Academic Quality and Student Engagement and Experience); the establishment of the Student's Request for Deputy Principal's Intervention Online System; revitalising and expanding co-curricular programmes; enhancing and synchronizing the student orientation processes; establishing the Student Academic Support Unit within the then ASDLU which, among other things, provides peer tutoring for students with academic challenges, the integration and expansion of Student Services into the new Division of Student Services and Development which introduces a number of new services and programmes such as - Financial Advisory Services, Off-Campus and Commuting Students Services and International, Graduate and Mature Student Support: The Student Services Seminar Series: the Biennial Conference on Sport Studies and Higher Education; facilitation of the Safe Space Initiative within the CAPS for sex/gender diverse students; Halls of Residence – Transformation into Living and Learning Communities by establishing Residence Assistants, Halls Code of Conduct and Zero-Tolerance to 'hazing and grubbing; Expanding Access to the Student Health Insurance; institutionalising Service-Learning and Community Engagement; establishment of the Campus Museum Committee which is working towards a Campus Museum and Art Gallery and support to the UWI After-School Care Centre.

It was about EXPANDING MINDS



BY VANEISA BAKSH

On New Year's Day in 2008, Clement Krishnanand Sankat was officially appointed Principal of the St. Augustine Campus of The UWI. It had been nearly fifty years since he had left Queen's College in Guyana on a government scholarship to the Faculty of Engineering. He got his BSc in 1972, receiving the Sir Solomon Hochoy Award for best Mechanical Engineering student before returning to the University of Guyana to lecture for a while and then picking up a post-graduate scholarship to do a Master's degree back at St. Augustine. A PhD at the University of Guelph in Canada followed and by 1978 he was back at St. Augustine for good.

As he reflects on how the time has passed, Professor Sankat reckons that since leaving his family in Berbice as a teenager he has spent practically his entire life living in Trinidad.

"This is my home," he says. "Where else?"

It is a couple of weeks before Professor Sankat hands over the Principal's mantle to his successor, Professor Brian Copeland on July 1. He has been discussing his two terms in that office: eight years of his accomplishments, challenges and the things he feels proud about leaving behind.

But he has reached a moment of nostalgia. It comes when he speaks about his years at The UWI and how much a part of his life it has been. People ask him if he is sad about leaving the office of the Principal but it isn't about that at all.

People have to understand that when I left Guyana, I was very young, he said. Once he came to Trinidad, first as a student in 1969, then as a lecturer, he never lived in Guyana again. His wife, Dr. Rohanie Maharaj, is Trinidadian and he has five children, Sarisha, Nishal and Katyana; two daughters, Olivia and Cecilia, live in Canada. The UWI and Trinidad and Tobago, he says, shaped him intellectually, morally and professionally. It is the place he considers home. And if T&T is the place he considers home, then UWI must be his favourite room in that house.

For it was at the St. Augustine Campus that he made his way through the academic world of engineering. He was Head of the Department of Mechanical Engineering, Assistant Dean and then Dean of the Faculty of Engineering, and was the Campus Coordinator, then Pro Vice-Chancellor for Graduate Studies before taking over as PVC and Campus Principal from Acting Principal, Professor Bridget Brereton.

It has been decades entrenched at the St. Augustine Campus for him, forming bonds in all its nooks and crannies as he navigated his way to the helm.

I asked him what he felt were the personal highlights of his career.

"I think the highlight of my career is contributing to development in my area of research; my contribution to university, country and region. While I have served at every level of this campus in administration, that was not my calling. The highlights of my career, the things that gave me the most pleasure, were associated with my research in food, in agriculture, and to see my research come into action. That's what I did for 30 years," he said. "I did it with a lot of passion."

Next on the list was "becoming a Reader, which was a mark of distinction, the first Reader in Engineering, becoming a Professor of Engineering, those are accomplishments I value. I think when you come into the University as an academic that is what really you should aspire to – to be a professor, to be the best in the profession."

But there is always the administrative side, he said. "I always had a foot in administration, simply because I wanted to give service to my Faculty, Campus and University and also to contribute on State Boards, etc. I hope that when others look back at my accomplishments they will see that in every sphere where I served as an administrator, I left some distinctive mark."

He said that the Mechanical Engineering programmes were internationally accredited under his watch by the IMechE (UK) for the very first time and that he and a couple of others pioneered the BSc programme in Agricultural Engineering at UWI when he returned from Guelph. He talks too about how many graduate students/engineers he trained. "My graduates have given me immense pleasure," he said proudly.

■ EXIT INTERVIEW – PROFESSOR CLEMENT SANKAT

"So both in the graduates we produced, our research, whether it is work we did in the diversification of the sugarcane industry, like the sugarcane bagasse for animal feeds; mechanical equipment for nutmegs; nutmeg processing in Grenada; the drying of fruits and herbs and spices for the Eastern Caribbean islands; mechanization in agriculture; storage of the breadfruit, pommerac, you name them, shadon beni, these things have brought me immense pleasure, because I was always curious. I always wanted to solve problems. I've always been very focused on problemsolving and creativity as a researcher, as an engineer, creating a better world around us. These things have brought me a lot of pleasure."

He refers to a University-wide report he did on graduate education at The UWI. "That report I think stands out. I have always felt the university should be a standout in terms of graduate training and research. I am leaving this Campus very proud of our graduate students. One in every three students at St. Augustine is a graduate student. We have the biggest graduate student numbers across the whole university. I leave the university with St. Augustine being the biggest Campus in the university system."

Relevance, Responsiveness, Reach, Regionality and Research. These were the watchwords that guided his tenure, he said, as he reached into a dossier on the table to extract a Powerpoint presentation from when he first became Principal. He talks about reaching out, like to Tobago, like to San Fernando where a satellite campus, the South Campus at Penal-Debe, has been under construction for a few years.

"In an environment where the Campus was pressed for space we didn't want to touch our green spaces. The space at St. Augustine was already overloaded. Setting up another space was important, as was trying to acquire new spaces on the outskirts of our campus right here. We've been doing that too. We've been buying up lands on the eastern side and putting up buildings. That is where our new Teaching and Learning Centre is; it's on a new space that the Campus bought. Trinity House, the Film Building, the Library Building, all these are buildings on new lands purchased, because we didn't want to overcrowd this lovely St. Augustine Campus and its ancestral greenery from the Imperial College of Tropical Agriculture. I wouldn't do it and I hope those coming after me do not do it also, because I would be the first to protest," he said.

He is particularly proud of the acquisition of the lands at Orange Grove which is the site of the planned Agricultural Innovation Park. "Remember Orange Grove was land in exchange for the Mt Hope Campus that was promised by former Prime Minister Dr. Eric Williams, but was never achieved. This principal worked steadily to achieve this with the support of the Government of Trinidad and Tobago and that has been one of my significant contributions."

He is also proud of the 150 acres of land at the South Campus and its "physical structure of 11 buildings, including residences, sporting facilities, a state of the art cricket ground, football field, pavilion, swimming pool, and student facilities that would be the envy of the students at St. Augustine or any Campus around the world. Rolling, green landscape with 10 acres of citrus already planted!"

I ask him if physical expansion would summarize his legacy. He says it is a part of what was a bigger vision. "The campus I inherited was a growing environment. We had to create new spaces."

He talks about Faculties created - Law, Science and Technology, and Food and Agriculture - and he says the latter is also one of his legacies. "I worked with my colleagues to recreate this thing because there was a crying out from our stakeholders to bring back agriculture to the top of the university's agenda and there is good reason for it, we are

importing \$4 billion in food, and the university came out of a legacy in agriculture. That is why Orange Grove, our East Campus with the Agricultural Innovation Park is now going to be the centerpiece of what is going to happen in agriculture on this Campus."

The Faculty of Law came about by the University taking that decision because the demand was overwhelming, he said.

"When I came in as Principal more than 1,500 students were applying to do Law, they would have had to do their first year in Trinidad and the next two years at Cave Hill. You know how many were getting places? Fifty. And that was repeated in Jamaica. So it was not like the University wanted to destroy the Faculty at Cave Hill. The University wanted to be responsive and to reach out. And of course, the South Campus came at the same time as the expansion of Law and therefore it found a natural home in there, just half an hour from St. Augustine," he said.

'So yes, I won't want my legacy to be seen as something just physical or expansionary, it was an expanded vision that included the growth of student enrolment, ensuring quality with institutional and programme accreditation at the centre. When I became Principal, students were sitting on the floors and corridors of this Campus. And the new facilities have removed all of that. There was a crying out for more space. Today we have some of the best teaching spaces in any part of our University at the Teaching and Learning Complex, the Faculty Development Centre on St. John's Road, and many more."

He is happy about the residences that were built for medical students at San Fernando General Hospital and Mt Hope and he regrets that one, possibly the most pressing, has not yet been started at Port of Spain, though he says the plans are already there.

He lists some of the buildings that were completed under his watch, and some he initiated. The Film Building on Carmody Street, he says, was one of his promises.

"The Department of Creative and Festival Arts has publicly complained about space. The first building built under my tenure, you wouldn't believe, was for the DCFA in Gordon Street. And as I leave, we are putting up a \$25 million building for the DCFA that is rising in the air with the support of Republic Bank. This is also one of the achievements under my leadership,

forging multi-million dollar partnerships with the private sector and also building strong international partnerships, for example with China, India, Korea, Mexico, Cuba, Brazil, etc."

He gets up to show drawings of the projected design of the northern entrance of the campus where Republic Bank is being built. It will transform the look and feel of our Northern Entrance, he says.

He says he has wanted to build a "world-class university" and I ask whether he thinks he has left behind a world class university and what would be those world class characteristics.

We are on that path, he says, offering a "quick checklist" taken from a 2013 lecture at UWI delivered by a global tertiary education expert, Dr Jamil Salmi.

The first thing would be attracting the best talent. "Now my score would be St. Augustine continues to attract the best. You just have to see the quality of students we accept from our secondary schools - many very good. Other leading universities in the world would be pleased to have them. We

continue to attract excellent West Indians and others to the academy as lecturers. We could do better if we had the ability to compensate better, but the environment also in Trinidad and Tobago has sometimes defeated us because good people have been turned off because of the crime."

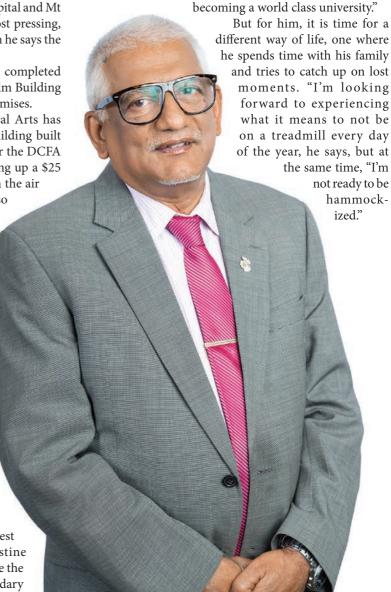
The second aspect would be securing great resources, essentially money.

"In many ways in the last several years we've done very well. The regional governments have supported us and particularly the Government of Trinidad and Tobago. The advent of GATE has brought immense benefits for students and their participation in university education, but I leave at not such a good time because we are now engulfed in the downturn in Trinidad and Tobago's gas and oil economy and so the Campus will be challenged in the next couple of years for resources. We are aware of this. And we are developing strategies to deal with this downturn, but if we do the necessary restructuring and implement with resolve, we can emerge in the next few years a much stronger Campus and University."

The third item on his checklist is "very good" governance.

"The UWI has a very unique governance structure because of the regionality – 17 governments – a structure that is sometimes seen as excessively bureaucratic and difficult, but let me say that we do have a governance structure that works and ensures accountability at every

He says that while the UWI gets "great marks from me in terms of governance, I still think we have a way to go to



MEET THE NEW PRINCIPAL



By the time you read this, the official transition would have been made and Professor Brian Copeland is now the eighth Pro Vice-Chancellor and Principal of the St. Augustine Campus of The UWI. Prof Copeland succeeds Professor Clement Sankat who held the position of Campus Principal from 2008 to June 30, 2016. Professor Copeland offered some insight into his philosophies of leadership as he spoke with UWI TODAY Editor, Vaneisa Baksh, before assuming the helm.

The new Pro Vice-Chancellor and Campus Principal at UWI St. Augustine, Professor Brian Copeland, cuts an unassuming figure as he moves about the Campus with his knapsack on his back, his laptop enclosed for safekeeping and easy access.

It is not a sight associated with any of the previous Campus Principals. But Professor Copeland is a first in many other ways as well - he is the first Campus Principal who was awarded the Order of the Republic of Trinidad and Tobago (ORTT) in 2008 by the Government of Trinidad and Tobago for his work as an innovator. The year before that he was part of the team receiving the Chaconia Medal Gold for Music Innovation and in 2002, he got the Prime Minister's Award for Innovation.

As he takes the helm for the first time, one aspect of the Professor's vision is his desire to infuse the spirit of innovation-based entrepreneurship throughout the Campus community. He knows that there is ambivalence towards this as many academics are worried that this push toward innovation and entrepreneurship will result in a reduction of research activity. To him, there is no dilemma because both activities are complementary.

"One feeds the other and if you do your innovation and entrepreneurship well, you will find that it [the research] is better funded." He says that in the Caribbean region, public and private sector contributions to research are way below the world standard. His goal is to commercialize the research so that it becomes profitable -

to get to a place where every two years, at least one start-up company comes out of this Campus. This will provide funds to do more research while making a positive impact on the regional economic space through the creation of new highly competitive companies, he says.

He knows that it will not be easy sailing, and mistakes will be made before the University acquires the experience and the culture of a profit-making institution. He believes guidance can be found by examining the income-earning models of other universities. He is big on the concept of developing homegrown solutions as a means of nurturing the local and regional human capacity to innovate and to engage in innovation-based entrepreneurship.

In this context, he has very strong concerns about the ownership of intellectual property, which is an aspect of him wanting the University, staff and students to retain as much control as possible over the implementation and commercial exploitation of ideas, systems and processes.

"If we could partner with somebody and accelerate it, no problem, but we must be the ones in charge. I'm not bringing anyone to do anything in here for us. We are too old a university. We've been around society for too long and we have to break out of that. We could do a lot for ourselves."

Prof Copeland takes up this new leadership after having served as Dean of the Faculty of Engineering from 2007-2015. That experience is partly the basis of his belief in leadership by example, respect for people and sharing

"Leadership to me has to start with respect for the people around you. Fairness, openness and transparency are part of this respect, which is why I say it starts with people; it ends with people."

"I just don't like to see people treated unfairly. I don't like to see systems being misused. As a matter of fact, \boldsymbol{I} think anybody who does that, they're lucky I am not a prime minister because I consider it as treason."

He also believes that your vision must be clear and well communicated, "so people will understand where you would like to go. That vision has to be owned by all so it means it has to be developed by all."

And since he feels that everyone has to be able to see the vision and contribute to it, he feels strongly that a leader has to be able to walk the talk. "If you're asking people to do certain things you have to be willing to do it yourself, and in the same context, and you have to be prepared to jump in and help them.

As Campus Principal he will have to lead by example at a time when the economic outlook for the region, and for Trinidad and Tobago, is not particularly encouraging. The UWI St. Augustine, like the rest of the country, finds itself with reduced financial resources and the associated challenges that this damp outlook brings. But he is undaunted and welcomes the opportunity to take the Campus "...more into an entrepreneurial mode."

This has been his personal goal for the Campus for about 20 years and now he has the chance to realise it. The question of financing is a "very, very big one" and he agrees that in addressing this challenge he would need to engage stakeholders (primarily governments) and reassert the important role UWI has in the region.

Clearly having spent some time pondering the role of the University and how he plans to use his term in office to lead the campus community, Professor Copeland makes reference to an address by former Barbados Prime Minister, Errol Barrow who spoke of The UWI's leadership role in the region at a 1968 Graduation address.

What Sir Errol said then had obviously resonated profoundly with him, as he has quoted it more than once publicly. "...a university institution cannot survive unless it has as its constant goal service to the communities that support and sustain its activities."

Within a regional university structure, how he intends to serve our communities will have to come about through a paradigm shift, "in terms of the way we do things and in terms of what our primary focus should be."

He talks about changing some existing organizational processes which, in his view, UWI St. Augustine, has outgrown.

"In just a few short years, you quadruple your numbers, staffing has not increased in kind, and the organizational and administrative framework remains essentially the same," he says.

It has come about from years of reflection; as a part of the system; as Dean of a Faculty which has invested heavily in refining its processes. And it comes from a mind that has been nurtured in the kind of creative environment so conducive to developing an innovative capacity. It's not surprising that Professor Copeland received a national award for his contribution to the refinement of the Steelpan. He is, after all, the son of deceased mas man Mack Copeland.

For those who have an idea of what goes on in the world of Carnival, it would be easy to align this space with his creativity and passion, and to see that his business instincts are sharp.

Just over a week ago, speaking at the Technical Conference of the Association of Professional Engineers of Trinidad and Tobago, he challenged them to redefine the concept of innovation, recommending a version found in a business dictionary that said, "the process of translating an idea or invention into a good or service that creates value or for which customers will pay."

He didn't want the definition of innovation to be seen as simply coming up with a novel idea, but as one that could be brought to commercial application and success. He told the engineers that he had also come to realise that there were two other key dimensions of innovation that were social and ecological in nature, and that the whole business of innovation was based on elements that, together, supported sustainable development.

It is essentially the mantra he has been singing within academia for more than twenty years.

Outside of academia, he is probably best known as the G-Pan Man, in connection with the musical instrument he patented as its inventor in 2009. The Percussive Harmonic Instrument (P.H.I.) was also patented with him as coinventor, along with Marcel Byron, Keith Maynard and the late Earle Phillip. This is perhaps one of the best examples of how academic interests can combine with personal passion to contribute to national development, he says.

His work in the development of the national instrument has spanned over 30 years - from as early as 1983 when he and Prof. Stephan Gift (current Dean of the Faculty of Engineering) published "Development of an Electronic Steel Pan" in the West Indian Journal of Engineering.

Born in San Fernando, where he still lives with his wife, he is a father of two adult children.

Professor Brian Russell Nigel Copeland's CV runs over 13 pages, with lists of publications, reports, teaching accomplishments, innovations, development programmes, funding and awards. With all of these accomplishments one might expect him to bask in the spotlight. On the contrary he is quick to dismiss such a notion and says, "I never was into that. I don't stand on ceremony..."

He fully accepts that his new office will call for ceremonial duties and other rites of the office, and it would be his duty to oblige in those functions.

It is early days yet, but time will surely unfold more of Professor Copeland's innovative thinking, something the University needs in these straitened times.

"Most people would have heard of the PHI of which I am co-inventor. The journey of that invention to commercial reality was stymied by activities that just about everyone is aware of but which I really do not care to discuss at this forum. What is significant is the fact that the reason why there is still strong interest in the product, even after a forced 4-year hiatus, is largely because of the input of people like Lesley Anne Noel of the DCFA, who used her ergonomic furniture design and artistic skills in the people like Noel of the DCFA and the DCFAconceptualizing the instrument chassis – widely acclaimed as a stupendous work of art, as well as Anushka Mahabir, Rehanna Mohammed and Allende Lee Lung all UWI students of marketing who did the marketing plan for the product that culminated in its appearance in Nicki Minaj's "Pound the Alarm" video that has now accumulated over 175 million views."

– **Professor Brian Copeland** spoke on Engineering for the growth of the Manufacturing and the Non Petroleum Sector at the Conference on Diversifying the Economy through Engineering on May 18, 2016. UWI St. Augustine. Ph

Photographed here with the current Dean of the Faculty of Engineering, Stephan Gift.



COMMUNITY SERVICE

CONNECTED and CYBER-CONFIDENT

BY REBECCA ROBINSON

Which to teach first – how to use YouTube or send an email? For many, both can be done without guidance, if not altogether at the same time, so a student volunteer could not hide the feeling of incredulity that neither is the place to start the class.

The course was an Adult Computer Literacy programme by ClickToStart a not-for-profit organization, coordinated by a member of The UWI's Campus IT Services (CITS) which literally, started with teaching how to click a mouse.

There is a segment of the Trinidad and Tobago society that is lagging way behind on accessing the benefits of ICT because their knowledge on the how-to-do has not been supplied in tandem with developments. The ClickToStart programme aims to shrink that knowledge gap.

With its intake this July being its fourth cycle, the programme has already graduated around 70 people of all ages and walks of life back into personal lives and jobs where they are more connected, cyber-confident and cyber safe too.

The vision is simple: to empower people through technology. The team giving their expertise and time towards this vision are all volunteers.

Keeping a group this size coordinated for regular work assignments must be challenging, one located in extracurricular, possibly doubly so. So what keeps them pressing into a fourth year while seeking to expand?

This was the question to coordinator, Abigail Wren and technical consultant, Vishwanath Samsundar, who agreed that seeing the ripple effect of helping people is a satisfying feeling. Between the verbal feedback they get from programme alumni and the student course evaluations, the 15-week programme has enabled men and women to help their children and grandchildren with internet-based tasks,

be cyber-safe, become more productive in their work or NGOs based activities.

Samsundar repaired a transparent PC donated by Roger Mc Farlane, president of The UWI branch of OWTU, as part of the ClickToStart instruction package, illustrating the internals of how computers work. (Samsundar is also well known on campus for teaching staff how to maximize the features on smart phones).

The once per week class teaches use of productivity tools such as those in the Microsoft suite, how to send emails, browse the internet, social media navigation, and yes, they do get around to YouTube.

There are tutorials where volunteers are ready to help and there are take-away assignments, as well as quizzes created in the LMS (Learning Management System), which are sometimes Moodle-based for reinforcement. These count toward confirming the skills of the participant and a completion certificate.

Another major accomplishment of ClickToStart is that is has softened the community perceptions about the functionality and reach of The UWI. Many students come from communities through the St. George (East) District Office of the Ministry of Community Development, Village Councils, community groups as well as NGOs – age is not a filter for sign up. As students come to the well-equipped computer labs on campus, that are rent-free to the programme, through the kind offices of DCIT and CITS, the environment and interaction build relationships and promote synergies.

It fits with the University's efforts to reach out and better serve communities. So in one click, ClickToStart has become a model of a win-win-win (staff-community-institution) programme at The UWI.



The 2014 group in one of the labs made available by DCIT.

CREATING A CULTURE OF CLEAN



A cross-section of some of the volunteers including Minister Rambharat, Senator Ali and Councillor Slater PHOTOS: OMARDATH MAHARAJ

Recent reports show that Trinidad and Tobago generates approximately 14.4 kilogrammes of trash per capita per day – the highest in the world. Similar reports were refuted by the Solid Waste Management Company Limited (SWMCOL) in 2015 and today, despite not collecting complete statistics, the physical evidence is most glaring.

The fact that we have left the cleaning to be shouldered by others in society and future generations results in mosquito and other pest reproduction as well as problems with drainage and soil degradation, for example. Further downstream the nation suffers from flooding, polluted waterways and beaches. Waste, in this scenario, is harmful to the marine eco-system and tourism prospects leading to a loss of income for fishing communities and renders the fishery unsustainable.

In perhaps the first public effort since the report, a group from a co-curricular course at the UWI which exposes students to service learning and community engagement, "Workplace Protocol for Students," teamed up with the Diego Martin Regional Corporation, Councillor for Chaguaramas/Point Cumana Enroy Slater, National 4-H Club, Tableland Pineapple Farmers Association, fisherfolk and residents to clean St Peter's Bay in Carenage of solid waste.

Speaking on behalf of the group, Karen Siewnarine felt that communities need to take responsibility for their space and waste. "While it is important to understand that pollution has a negative effect on wildlife, communities and the economy, initiatives like ours can empower people to help keep our beaches clean and preserve the environment. We hope that this effort will continue along the coastline in the Carenage area."

Minister of Agriculture, Land and Fisheries Clarence Rambharat also supported and participated in the clean-up effort.

"The clean-up highlighted the critical need for the country to develop a modern approach to waste management, particularly reducing, reusing, and recycling. Plastic bottles and other single-use containers continue to dominate the trash on our beaches and in our garbage. We must act," he said.

Let's Case the Joint: A Case for the Campus Cases

BY ANU LAKHAN

Fact: There is almost no way into this story that does not start with a joke. But which ones? The subject matter has been fodder for comedy forever (let's get near to literal about "forever"):

Universities are what's left of the Paleozoic era. Museums are the places where possibly interesting things go to die.

Have you ever met a tenured professor or a curator whose closest relatives didn't all die in the last ice age?

Good. That's taken care of. Aren't you happy? How many jokes about fossils are there, really? You can thank me later.

Dr Allison Ramsay from the History Department and Mike Rutherford from Life Sciences agree to stuff me into the latter's perilously cluttered office. Rutherford is UWI's Zoology curator and deputy chair of the Campus Museum Project.

Yes, exactly as you read it. There will be a great curating of objects, artefacts and...stuff that speak to the past of the St. Augustine Campus. As far back as when we started as the University College of the West Indies. And when we transitioned to the Imperial College of Tropical Agriculture (ICTA). And everything thereafter.

Dr Ramsay describes the University as a "lived experience" which is a really nifty phrase because it counters all my barbs about campuses and museums as old and musty and moth-eaten. The University is not simply a place generously donated by the State as a space to house its collection of tertiary level students and all the books they need. People – students in particular – live here. And living means something: means accommodation and food, schedules, social and cultural experiences. The reality of parking spaces (the likelihood of no parking spaces). You find mentors, friends and romance. You loathe your department head, make new friends and swear off romance. You live.

The Campus Cases project is an attempt to show how life at UWI, St. Augustine has evolved. Rutherford describes it as: "Taking the Museum to the people...Educating people without them knowing it."

These display cases (Yes, Virginia, they really are cases) will be found loitering in offices and in well-trafficked corridors. They will display anything from recipes from the cafeterias of yore, to the bell that was rung to signal the end of library hours. This bell was featured last year in Emerita Professor Bridget Brereton's excellent curtain-raiser for the proposed University Museum. I can't get an example from anyone of what will be enshrined without a mention of this bell. Either this bell was the most abhorred or beloved thing in our history or it's just one of those inexplicable incidents of celebrity like Kanye.

What can these cases be thinking, inserting themselves randomly into spaces frequented by decent, entirely uninterested students and staff? As with humans who behave in a similar way, there are several reasons.







Reason 1: Assertion and Visibility. They will not be ignored. They have stories to tell. You, casual drifter, will listen. If you see a glass box in an unlikely place with a small collection of historic items, can you not stop to look? If you can, you really need to rethink how you're using the curiosity element of your brain.

Reason 2: Education. Think of them as harmless sidewalk evangelists. Not the kinds who stalk you and menace you with umbrellas. These cases just want you to know about your legacy, want you to think about what UWI's history means.

Reason 3: Vagrancy. Except, rather than desperate, these cases are very creative solutions to their housing crisis. The UWI Museum is homeless. As in, nowhere has been designated for the housing of this collection. In spite of Professor Brereton's article. In spite of plans during UWI's fiftieth anniversary celebrations in 2010. Indeed, against ancient evidence cited by Brereton that the floor plans for ICTA's admin building was preparing such a place.

The Campus Museum Committee is chaired by Dr Glenroy Taitt, head of West Indiana and the Special Collections at the Alma Jordan Library. With his team, Dr. Taitt has achieved with West Indiana the most inconceivable of things: he made it accessible. You can, like, use it. It does not bode well if he can't force the museum into residence. Unsurprisingly, a lot of the cases do end up at the library.

UWI St Augustine has other museums. The Anatomy Museum and the Pathology Museum are not open to the public. Considering these disciplines and who's likely to be attracted to them (medics and serial killers), I say, fair enough. The Zoology Museum, under the stewardship of Mr. Rutherford, is open to visitors. Can't vouch for how much you'll see in there since so much of it seems to be lying about on his office shelves daring you to knock them over. The National Herbarium of Trinidad and Tobago has an inviting website but I'm still not clear if I'm invited to the physical premises. Museums! Pull yourselves together!

How could I have thought this was a joking matter? Our museums need us and we need them. Sure, it's possible to go through life without them and sort of manage. It's also possible to be just fine after a nephrectomy. Museums, especially ones that hold the promise of great range and variety, make us alive to our own possibilities. Maybe all you do is stop and read one of the signs in a Campus Case. And maybe it's a sixty-year-old publication from, say, the biological society. And say, you're currently thinking about the history and development of the sciences in the West Indies, maybe you'd be interested enough to find out if there are more papers like it. Better, suppose it's something like a collection of old pens. Which makes you think of calligraphy. Which makes you think of Medieval bibles. Which makes you realize that is what you forgot to consider for a linguistics paper. For the love of all the gods of learning, at least be not dull and boring.

Or, have a kidney removed and offer it up for adoption — it won't make you more interesting, but at least it will do some good to someone else.



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W: http://sta.uwi.edu/fst/lifesciences/biotechnology.asp



APPLICATION DEADLINE

INNOVATION

Shreedevi Sahadeo made her way to the podium; perhaps a bit nervous but handling it well. She was presenting her final engineering project, one of four standouts for the academic year along with Yvan Dass, Salisha Khan and Harold Raghubir. And in the audience before them were staff and students from the Department of Mechanical and Manufacturing Engineering, St. Augustine administrators as high up the chain as Campus Principal Professor Brian Copeland and guests from sectors as varied as manufacturing, tourism and agriculture.

In her project she outlined how she had researched the deficiencies in local greenhouse agriculture, designed and made a model of a much more efficient greenhouse. It was the kind of research that in the right hands, with the right funding could contribute to the revitalisation of food production, in a time when food security is a great concern.

In fact, all the projects - from an automated orange peeler that smoothly removed the skins of four fruits at once, to research on measuring the integrity of roofs for solar panels, to a company specific plan for optimising warehouses for one of Trinidad's major food processing companies - could potentially form the basis for viable products or processes that could create value for Caribbean

But most impressive of all, just outside in the Undercroft of the Kenneth S. Julien Building of the Engineering Faculty was an entire exhibition of projects, the work of over 120 students. Innovation on display.

"What you are seeing here is a seed that we will make grow'

Titled "The Final Year Exhibition of Engineering Students: Design and Build," the two-day event was created by key personnel within the Mechanical and Manufacturing Department for several reasons. Firstly, it encourages students with an interest or inclination for innovation by recognising their work. As it stands there are several cultural and structural disincentives for anyone with such passions.

Secondly, it brings sectors that could benefit from research and development together with new ideas and idea generators. Among the organisations in attendance were the Trinidad and Tobago Manufacturer's Association, the Tourism Development Company, the National Agricultural Marketing and Development Corporation and the Agricultural Development Bank.

The exhibition also makes a statement about UWI and its role as an agent of regional development through research and development that is responsive to the needs of the Caribbean.

[Universities] are supposed to be the ones who are on the cutting edge," said Professor Copeland. "That's what allows for the growth and development of science and technology. Then we further harness that science and technology to create products and processes.'

The May 2016 exhibition is the second since the idea became reality in 2015 but this year the energy seemed more urgent, perhaps because of the starkness of the region's economic fortunes.

"As with any business sector we know that opportunity is critical and timing is everything, and with the recession there is opportunity," said Franka McKenzie, Director of the TTMA. "It is no coincidence that there are so many 'Made in T&T' and 'Buy Local' campaigns. It is because there are more opportunities. We see it right here. We see it with the products on display."

Professor Copeland made similar statements, telling the audience that fostering innovation was one of his mandates as Campus Principal.

'We live in an opportune time," he said.

Projects at the exhibition fell into five categories: dynamics, automotive, agriculture and agro-processing, manufacturing and alternative energy, and environmental and medical. Because food processing in particular is seen as an especially necessary and viable area for growth, several related projects were highlighted. These included, among others, an automated duck roaster, a pulveriser for oyster shells, a cassava harvester, and even one that demonstrated the thermal insulating properties of banana plant leaves.

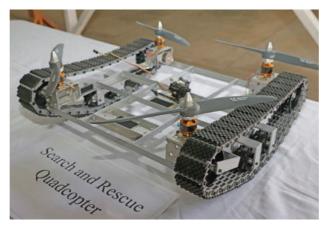
Exhibit A

Mech Eng unveils its student innovation

BY JOEL HENRY



Automated orange peeler PHOTOS: ANEEL KARIM



Both the exhibition organisers and guest speakers acknowledged that the culture of innovation being fostered by the exhibition is still in its earliest stages. Mr. Rodney Harnarine, Development Engineer with the Mechanical and Manufacturing Department and one of the Campus's most dedicated advocates for practical research and development, told those in attendance, "What you are seeing here is a seed that we will make grow."

Listening to students such as Yvan, Shreedevi, Salisha and Harold - inventive young people with their whole professional lives ahead – the enormous potential is evident. The aspiration in this new era is that institutions such as The UWI, the private sector and regional governments nurture that potential.

Agri-Based Projects (2016)

Melangeur for Chocolate Production Cocoa Bean Winnower Robotic Arm for Industrial Spraying **Pulveriser for Oyster Shells** Thermal Insulating properties of Banana Leaves Automatic Duck Roaster Coconut Picker Collector for dried leaves Manure cake remover Hand held Fertilizer Applicator Cassava Harvester Automated orange peeler Automated cassava peeler Coconut water extractor Ramboo Red

■ Agri-Based Projects (2015)

Chataigne Shredder French Fry cutter for cassava, sweet potato, plantain Black Eye sheller Tomato Grader for size Pigeon Pea Sheller Cocoa Pod Splitter Channa Splitter

Privilege and Rotten Teeth



 $From \ left, the \ four \ external \ examiners \ who \ spoke: Prof. \ Michael \ Anthony \ Pogrel, Prof. \ Alan \ Gilmour, Dr. \ David \ Felix, \ and \ Prof. \ David \ Bearn.$

It's not an obvious connection; that's why these kinds of information are unearthed by research. In this case, some dental research discussed at a lecture series hosted by The UWI School of Dentistry in May offered some interesting historical connections among sugar, money and rotted teeth.

"For instance, the rotted teeth of characters in 'Pirates of the Caribbean' would be most likely to occur in wealthy people who could afford sugar and not in poorer people as portrayed. The common practice of wealthy people buying or taking healthy teeth from poorer people for transplantation into their own mouths continued until the mid-1800s when it was realised that other diseases were transplanted as well," says Professor Montgomery McAulay-Rieger, the Dentistry School's Director.

Professor McAulay-Rieger was adding to information provided by Professor Michael Anthony Pogrel, who spoke on "Stents" and how it was originally the name of a dental impression material, and of Dr. Charles Stent, the man whose surname now covers many different medical devices.

Prof. Pogrel, Head of the Department of Oral and Maxillofacial Surgery at the University of California San Francisco, also provided data to show that dental caries was negligible worldwide until the introduction of sugarcane agribusiness in Jamaica by the British. He summarized his talk for UWI TODAY.

"The basic story is that from the early years from the 19th century, it was necessary to be able to do dental impressions in order to make reasonably well-fitting false teeth. The reason for this is that dental decay and gum disease had arrived in Europe. It had been known previously but was actually very rare. The reason it became almost epidemic from the late 1700s is coupled to the arrival of sugar

"Sugar cane is native to Southeast Asia. It was probably brought back to Europe and the Middle East by Marco Polo, and sugar was certainly known to the Crusaders in the 11th and 12th centuries, but was really unobtainable in Western Europe. Most sweetening was done by the use of honey which was both rare and relatively expensive. Therefore, most foodstuffs were unsweetened. The big change came when Britain captured Jamaica from the Spanish in 1665

and managed to grow sugar quite successfully.

"Attempts had been made to introduce sugarcane to the New World prior to this. The Portuguese had tried to grow it in Brazil but not terribly successfully, and the Dutch had also tried. It is probably from these people that the British obtained their first sugarcane to plant in Jamaica. The sugarcane actually thrived in Jamaica and later began to be exported back to Britain. As you may know, the growing and harvesting of sugarcane is very labour intensive, and indirectly, this led to the introduction of slavery in the Caribbean. By 1770, the cost of sugar in Britain had plummeted and everybody could buy as much of it as they wanted. This directly fueled the upsurge in dental caries in Britain and the rest of Europe, and the loss of teeth necessitating dental impressions with Dr. Stent's impression material and the manufacture of false teeth.

"The main problem was actually making realistic-looking false teeth, and attempts were made to carve them from walrus tusks and even from wood. The situation was saved by the Battle of Waterloo where 51,000 relatively fit and healthy people died in a relatively small area of Belgium. The teeth were collected from the dead bodies and shipped back to Britain in barrels to be used for false teeth that were actually called Waterloo Teeth. They did look realistic, but unfortunately, were as prone to decay as the original teeth. By about 1820 (the Battle of Waterloo was in 1815), the supply of Waterloo Teeth was exhausted, and that is when Claudia Ash came up with the first porcelain teeth."

This was just one of the fascinating topics covered at the External Examiners Lecture Series hosted by the School of Dentistry.

Prof. Álan Gilmour, Associate Dean of Undergraduate Studies (BDS) Cardiff University, presented "The Dental Graduate: Independent Practitioner or Safe Beginner." Dr. David Felix, Postgraduate Dental Dean, NHS Education for Scotland, presented "Prescribing Update." Prof. David Bearn, Professor of Orthodontics and Associate Dean for Learning and Teaching, University of Dundee Dental School, presented "Interceptive Orthodontics – An Evidence-based Update."

Alma Jordan Library Wins INNOVATION AWARD



For the second year running, the Alma Jordan Library has captured the OCLC Award for Innovation given at the annual conference of the Association of Caribbean University, Research and Institutional Libraries (ACURIL) held in Haiti in June.

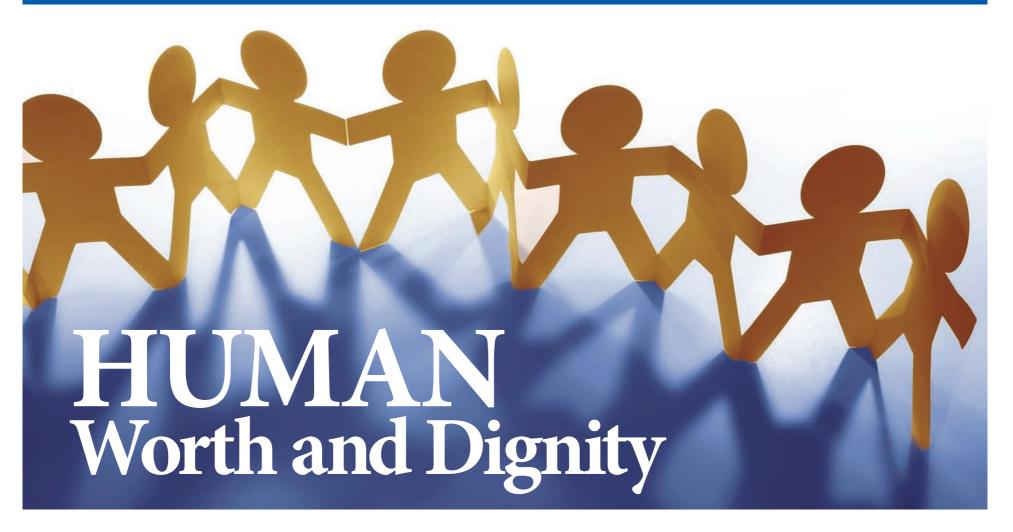
The award was for innovative cooperation initiatives in the Caribbean and is an annual one presented by the Online Computer Library Centre, a non-profit, computer library service and research organization whose membership includes over 72,000 libraries, archives and museums in 170 countries.

The ALJ won for its innovation in the application of information technology for the delivery of library services, in this case the development of a platform to host the electronic books produced by the University Press.

"This is indeed cause for celebration, as it is a testament to the excellent work of members of Library staff, and the vision of the Campus Libraries in going forward," said Campus Librarian, Frank Soodeen, as he congratulated staff.

The news of the award is headlined, "A Leader on Innovation," and gives details of the AJL's holdings and services and its new initiatives. Congratulations to AJL!

For more on the OCLC Award, please visit https://www.smore.com/e7rm9-oclc-award-on-innovation?ref=email



BY PAULA MORGAN



Professor Paula Morgan

Notions of human worth and dignity have a long history. They are socially contextualized, evolving concepts which are being negotiated daily. That these concepts are embraced so passionately within diverse cultures and multiple generations, tells us something about the nature of the human. Within all facets of our social order - from the

state authorities who dispense national awards, to the gang members who would kill over a "dissing" - concepts of worth and honour assume extreme significance.

In western world views, dignity has been associated with conferring autonomy. To treat persons and nations with dignity then is to treat them as autonomous and capable of choosing their own destinies. In eastern world views, the honour of the collectivity, takes precedence over the autonomy of the individual. Each focus has implications for how we live as individuals and as a community.

Societies have derived their sense of human worth and dignity from value of the individual within primary social institutions: the family, the community, workplace, the place of worship and the nation. And yet, arguably human life and personhood are interdependent; the value of the human extends beyond the sum of her parts. Moreover human worth transcends the confines of a fit and vigorous body, the prowess of a beautiful mind, and the yearnings of an adventurous soul.

Within each individual, there are facets and synergies which go beyond the sum of individual parts and bring

value added. And this increases exponentially when we bind ourselves into collectivities - families, communities and organizations, researchers and activists working for a cause. Together, we magnify our capacities, are fortified by our complementarities, and even our shortcomings and weaknesses. Together we are stronger, accomplish more; travel further. We therefore owe each other the duty of care encapsulated in the saying: "until all have crossed none have crossed and some we have to carry."

Synergies between the individual and group enhance the worth and dignity of all. Consider the commonly accepted notion that a group or a nation can be bounded together by such commonality, that all member share common value and honour. Simple country lads evolve from throwing coconut branch spears on the beach or playing with homemade crickets bats into Olympic athletes. In the process they enhance collective worth and opens potentialities and pathways to every other boy whose immediate resources do not extend much beyond articles of everyday use - bits of scrap wood, fallen coconut branches and discarded oil drums.

I reap the benefit.

My heart swells with pride when I listen to steel pan on the street in Korea and when I introduce myself as a Trinidadian to a stranger in Holland, who responds with a twinkle in the eye: "You come from Brian Lara country." My worth has been boosted by connection to world class sports men and musicians whom I have never met and whose skills and accomplishments I can never match. Trust me on this one.

Similarly as a member of the family, community or nation, I stand to be devalued based on the dishonorable actions of one. The bottom line is we share a collective responsibility for the worth and dignity of all.

Dynamic notions of human worth and dignity play

themselves out in a multiplicity of ways. The Institute for Gender and Development Studies (IGDS) recently collaborated with the Food and Agriculture Organization and UN Women to mount a regional workshop to develop a programme of work and to build public policy for rural women in agriculture in the Caribbean. The dignity and value of these farmers shone as they testified of challenges, adversities and hard won victories. They spoke with pride of incredibly long working hours, training their children from infancy to grapple with the land and wrestle a yield from it. Their sacrifice and diligence were inspirational. Their dignity and worth to their nations is unparalleled.

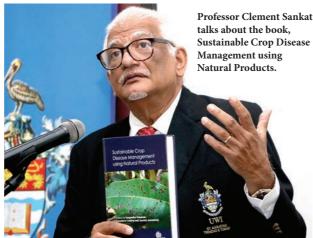
Consider a different scenario. Why do women weep violently when they lose their children who have become both perpetrators and victims of violent crime? It is because within the most antisocial and destructive of humans there exists inherent worth and the potential for beauty and order and redemption. Why do families deeply mourn the passing of physically and mentally disabled relatives? The value of the human transcends physical and mental capacity, just as it transcends seasons of social usefulness. The IGDS is currently engaged in a study of work life balance and the ageing. The research team is impressed continually with the preciousness of each person struggling to retain dignity in the face of compelling work and care demands, ageing and failing mental and bodily functions.

One can conclude then that human worth and dignity in their diverse meanings and manifestations are pivotal to life itself. They bring value to troubled existence and lend a meaning to toil and adversity. They confer significance on our accomplishments and victories and then some more. The centrality of human dignity and worth ultimately speaks to a straining towards eternality, a conviction of significance beyond this life, with its extremes of adversity and brutishness, joy and accomplishment.

Too Many Chemicals in the Crops

Caribbean on a pesticide treadmill







PHOTOS: ANEEL KARIM

Vegetable production in the Caribbean is yet to achieve self-sufficiency, despite this region having a conducive environment for growing a variety of tropical and sub-tropical vegetable crops. The huge spending on importing food and vegetables may not be necessary if crop production systems are made more efficient. In this region, yields and quality of the harvested produce have been lower than other parts of the developing world because of the poor productivity, high incidence levels of pests and diseases, poor crop management practices and drought and erratic climatic conditions. While the latter factors are purely weather-related, they in fact contribute to the changing scenario of disease and pest status in the Caribbean.

One common practice that is contributing to poor quality of vegetables in the region is the indiscriminate use of pesticides such as insecticides, fungicides and weedicides. This results in high levels of chemical residues which also present a serious health risk to the consuming public. The problem is becoming grave in the eastern and southern Caribbean, which has been moving on a "pesticide treadmill," relying on large quantities of pesticides for crop production. It is often speculated that the high pesticide usage might be a contributing factor for increased occurrence of cancer and other malignant disorders among the Caribbean population. The effect of pesticide residual contamination on human health is much worse in vegetables than in other food crops, because obviously vegetables are consumed either raw or semi-cooked.

The region is beset with problems that affect crop protection, including the lack of awareness on integrated systems of disease management. There is also inadequate knowledge on pests and diseases that often lead to misdiagnosis and improper management practices. It is common for farmers to use incorrect chemical pesticides or too high dosages. Chemicals are often applied at greater frequencies than necessary and sometimes with incompatible mixtures are used. There is often monotonous use of pesticides with similar active ingredients which influence the development of resistance of pathogens to the chemical agents.

The research group at UWI, St. Augustine led by Professor Jayaraj Jayaraman and Dr. Adesh Ramsubhag is studying the disease trends of vegetables in Trinidad and Tobago and in the Southern Caribbean and conducting research on developing field-level integrated disease management systems for vegetable crops. Extensive field surveys revealed the above mentioned pitfalls and problems. More than 50% of the farmers were using pesticides at weekly intervals and some even twice a week, while the standard recommendation is generally every two weeks, based $\,$ on need only. This excessive pesticide use results in a cyclical problem, with greater incidence levels of diseases and pests often occurring, despite application of chemical pesticides. This is due to development of resistance among the pests and pathogens. To cite a few examples, the UWI group has isolated several strains of bacterial and fungal pathogens that are resistant to commonly used copper fungicides and even to other commonly used



(Fig 1) Resistant Xanthomonas campestris pv campestris (bacterial blight pathogen affecting cruciferous vegetables) strain growing in copper fungicide medium.



(Fig 2) Yellow leaf curl virus disease of tomatoes occurring recently in serious proportions in the Caribbean.



(Fig 2b) White fly insect vector transmitting Yellow leaf curl virus.

systemic fungicides (Fig 1). The excessive usage of insecticides including synthetic pyrithroids have resulted in widespread resurgence of many sucking insect pests. One such striking example is increased prevalence of whiteflies and whitefly-borne virus diseases in vegetable crops which were neither reported in Trinidad nor in the Caribbean earlier. For instance we have observed the increased prevalence of yellow leaf curl in tomato (Fig 2) all over Caribbean in recent times. This virus is spreading to other crops including cow pea (bodi) as white fly population proliferates. We observed new pathogens such as the zucchini mosaic virus that is severely affecting pumpkins and other cucurbits in Trinidad. Considering these scenarios, there are imminent risks of development of new epidemics in the Caribbean region through emergence of new pathogens and pests in the very near future.

Any attempt to improve vegetable production would need to address the primary issues of management of crop pests and diseases, including reducing the indiscriminate use of pesticides by employing multiple approaches in a well-integrated and harmonious manner. This relates to the concepts of integrated pest management (IPM), integrated disease management (IDM) and integrated crop management (ICM) systems. IDM/IPM approaches are balanced, environmental sensitive and sustainable approaches that rely on a combination of common sense practices applied on a timely fashion to control the incidence of diseases and pests to levels below the tolerable limits. The approaches employed include cultural, biological, biotechnological and chemical approaches which are environmentally compatible, economically feasible and socially acceptable, and effect the least possible hazards to people, ecosystem and the environment.

Prof. Jayaraman's team is working on a research project funded by the African, Caribbean, Pacific-European Union (ACP-EU) to develop IDM systems for model vegetable crops including tomato, cowpea and pumpkin. Under this Project, protocols were optimized for early diagnosis of pathogens and diseases employing contemporary molecular based tools. Several IDM packages were developed and tested in farmers' fields that were proven to be successful in controlling diseases of the above vegetable crops. By implementing such methods, it is expected that the amount of chemical usage can be cut down to at least 50% which effects a big saving on the cost of production and above all minimizes the risk of residual toxicity, environmental pollution and health hazards which are otherwise caused by over use of chemicals. Farmers are welcome to interact with the DLS-UWI group to gain further knowledge on IDM methods.

The Department of Life Sciences, UWI-St. Augustine recently hosted an International Conference on Integrated Disease Management of Tropical Vegetables (June 16th and 17th, 2016. http://sta.uwi.edu/conferences/16/idm/index.php) which was widely attended by farmers and stakeholders from the Caribbean region.

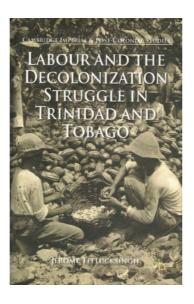
BOOK REVIEW

Labour and the Decolonization Struggle in Trinidad and Tobago examines T&T's early labour organizations and trade unions from the 1920s to the 1950s. A particular focus is the Trinidad Workingmen's Association (TWA), later known as the Trinidad Labour Party (TLP), in the evolution of the colony's identity and culture. This volume tracks contributions to the rise of the well-known general strike of 1937 and subsequent cohesion, building toward the Caribbean Labour Congress, an early advocate of Caribbean federation. The book is particularly strong in its survey of the impact of gender, religion, and the popular labour songs of these toilers, and how these labour organizations boldly advocated for them increasingly as a voting bloc.

Teelucksingh offers a nuanced view of multi-racial labour, observing Afro-Trinidadian and Indo-Trinidadian labour on their own authority. He offers perspectives on major labour personalities such as Arthur Cipriani, Krishna Deonarine (Adrian Cola Rienzi), Elma Francois, and Tubal Uriah Butler. He also highlights personalities not given as much focus such as F.E.M. Hosein, Timothy Roodal, and C.B. Mathura. Hosein denounced Crown Colony government's racial logic as a benevolent despotism. Roodal condemned great wealth disparities and divisions even where fellow ethnics exploited "their own people." C.B. Mathura fought for Indo-Trinidadian workers to build multi-racial and distinctly Indian-oriented labour groups, instead of seeking colonial patronage or identifying with racial or religious chauvinisms in their community.

The TWA/TLP recognized women's workplace rights, mobilized their participation in public meetings and rallies, and defended women's right to vote. The author recognizes progressive similarities between British Fabianism and the TWA/TLP approach toward women, recording activists such as Cecilia Yearwood, Cecilia Urquart, and Mrs. Alkins.

Placing this crucial period of national history in conversation with regional labour movements found in Guyana, Grenada and Jamaica, Teelucksingh shows how the TWA wished for links with the British Labour Party to influence Crown Colony Government.



On those who LABOURED

BY MATTHEW QUEST

Jerome Teelucksingh LABOUR AND THE DECOLONIZATION STRUGGLE IN TRINIDAD AND TOBAGO (London: Palgrave Macmillan, 2015)

Teelucksingh asks if the unemployed and marginal toilers in Trinidad understand fully the implications of labour songs which spoke of their blood and damnation. These labour songs do not elevate the explosive self-governing potential found in the 1937 Fyzabad strike.

Teelucksingh explains that Elma Francois's national unemployed movement and Negro Welfare Cultural and Social Association (NWCSA) were major turning points in the colony's labour movement that desired to smash this mediation.

I disagree with Teelucksingh that disputes among the labour movement in the conferences for federation leading up to the Caribbean Labour Congress, prevented a united front in opposing Britain. There was not great desire for immediate self-government among middle class nationalists, who increasingly spoke for labour. Certainly they never thought of direct self-government for the masses. For the elite increasingly had the coveted positions, and most often saw workers below them like a colonial official.

At times they articulated the call for greater human rights but does not global capitalism conquer under this premise today? It must have a pre-history in other colonial and anticolonial administrative strategies.

Perhaps in the 1930s the Trinidad working and middle classes could unite for a final moment against colonialism. But shortly after, they did not belong in the same party. One social class policed and repressed another in the name of a benevolent despotism.

Teelucksingh concludes that the working class – but overwhelmingly he means the trade union bureaucracy and those who spoke before Parliament – had a prominent role in decolonization. When he speaks of "the true soldiers of the movement for responsible government" and "the scarred warriors for economic, social, and political liberation," the author is referring to a separation of "the cadre of labour leaders who with the masses of the African and Indian working class..." expose unexamined problems that future rank-and-file, not trade union staffers, will have to unravel.

Matthew Quest is a Lecturer in Africana Studies at University of Tennessee at Knoxville, USA.

VIRTUAL FIELD HERBARIUM

One of the deliverables of the UK/UWI Darwin-funded project to 'Develop a Biodiversity Monitoring System for Trinidad and Tobago' was to create a database of the plant specimens kept at National Herbarium of Trinidad & Tobago (TRIN) using the Botanical Research and Herbarium Management System (BRAHMS) software. This software was developed by Mr. Denis Filer at University of Oxford, UK. Using this software the herbarium collection was digitized and the herbarium labels databased to develop a Virtual Field Herbarium. This was created so that persons can access information about the specimens kept at TRIN. This virtual herbarium is currently being managed by the University of Oxford and can be accessed via the Herbarium's website at: sta.uwi.edu/herbarium/. The current estimated specimen holding from Trinidad and Tobago in the BRAHMS database is approximately 60,000.



From left: Prof. John Agard, Dept. Life Sciences, Mr. Carlton Roberts, Head of Forest Resource and Inventory Management (FRIM), Forestry Division, Ministry of Agriculture, Land and Fisheries, Yasmin S. Baksh-Comeau, Curator, National Herbarium of Trinidad and Tobago (TRIN), Prof. Indar Ramnarine, Dean of the Faculty of Science and Technology, Mike Rutherford, Curator, Zoology Museum, Dept. of Life Sciences, UWI.



From left: Dan Jaggernauth, Member of the T&T Field Naturalists' Club who mounted the display, George de Verteuil one of the Herbarium's volunteers, and Bunty O'Connor.

BOOK REVIEW

Deosaran's Unmasking of Education

BY LIESEL NORVILLE



In the audience at the panel discussion, from left: Ms. Anna Mahase, Mrs. Hazel Manning and Professor Ramesh Deosaran.

Professor Ramesh Deosaran's latest book focuses on the inequality and inequity of Trinidad and Tobago's education system and its correlation to crime. Looking at the country's past, present and future, he examines how ethnicity, social class, gender, family background, place of residence and type of school attended affects the equality of educational opportunities. The book traces the background of the country's education system, investigating the changes arising out of political independence in 1962 and the prospects of education as the great hope for decolonisation, where meritocracy would lead the nation into industrialisation.

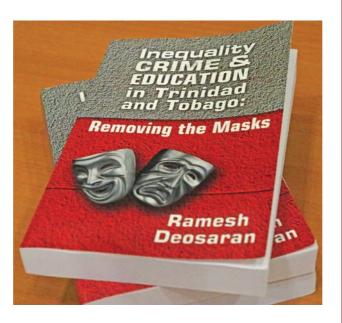
Deosaran unmasks the reality faced by the present education system and how inequality and inequity plagues the dual system of education in Trinidad and Tobago: denominational vs government school. Assigning prestige to one school over another, he wrote, causes a large number of students to feel less significant and under-educated. He believes technical-vocational schools need to be brought to the same level as grammar schools as they provide mainstream learning for students and are very important to the development of the country.

Deosaran closes off by identifying the impact of the pressures and strain of inequality experienced in the education system, which he says causes students to be involved in criminal activities. However, not all uneducated persons commit crime, as there are other factors that contribute to criminal behaviours. Interestingly absent are the issues surrounding persons who commit corporate crime.

From his immense research Deosaran's recommendations for changes in Trinidad and Tobago are concentrated on policy changes and reformation of the current system of education. The topics covered reach far beyond the struggles of the education system, including issues of race, social class and place of residence, which have arisen in the areas of employment and general socialisation.

All in all, it is an important work in the area of education and contributes significantly to the understanding of its correlation with crime.

On June 1, a panel discussion was held at The UWI to look at how this work could go forward. Mediated by retired educator, Dr. Lennox Bernard, the discussion covered a number of issues. Former Senator, Dr. Eastlyn McKenzie, an educator herself, pointed out that the book reads as a book on Trinidad, exclusive of Tobago, as she identified differences of the Tobago experiences in relation to its



history, population diversity and lack of denominational schools. Mr. David Sinanan, President of TTUTA, noted that people are being denied a chance to make a meaningful contribution in society because they are being force-fed the illusions of equality. Senior Lecturer in Behavioural Sciences at The UWI, Dr. Nasser Mustapha's main focus was that government schools are well maintained and managed, but are under-appreciated by society as places of good quality schooling. How does a culture get away from itself? This was the difficult question posed by Dr. Gillian Paul, President of COSTATT. Dr. Winford James agreed that the book may not apply to the Tobago experience. He added that the book gave the impression that if you are ignorant you will commit crime. But he also felt it provides vital information on the distinction between denominational and government schools, noting that there are government schools that are performing very well but do not receive the recognition they deserve.

The panelists agreed that there is a need for policy changes and reform in the education system to be less exclusive of certain denominations and sectors of the society. As the audience became very responsive to the discussion, the main conclusion was that the school is not the sole educator and families must be engaged for real change to occur.

EMERGING CINEMA hits the road



Following the success of the World Festival of Emerging Cinema's (WOFEC) inaugural edition, hosted by The UWI Film Programme (May 19-22), the festival will tour Trinidad and Tobago and the Caribbean through 2017. WOFEC

audiences were treated to a notably diverse festival lineup, selected from approximately 700 submissions from 76 countries, showcasing some of the best animation, documentary and narrative works by emerging international filmmakers.

Around 200 films made the final cut, including features from Albania, Colombia, France, Guinea-Bissau, India, Italy, Mexico, Netherlands, Peru, and Spain, along with specially invited films from Trinidad and Tobago and the Caribbean. The first edition of the Festival, which was non-competitive, did afford recognition to films, based on audience impact and engagement. Great emphasis was placed on active youth engagement, in the hope that this translates to a love for film and a deeper understanding of themselves through this medium. Thus the festival featured specific blocks for secondary level students, and the organizers sought meaningful interaction with the participating students.

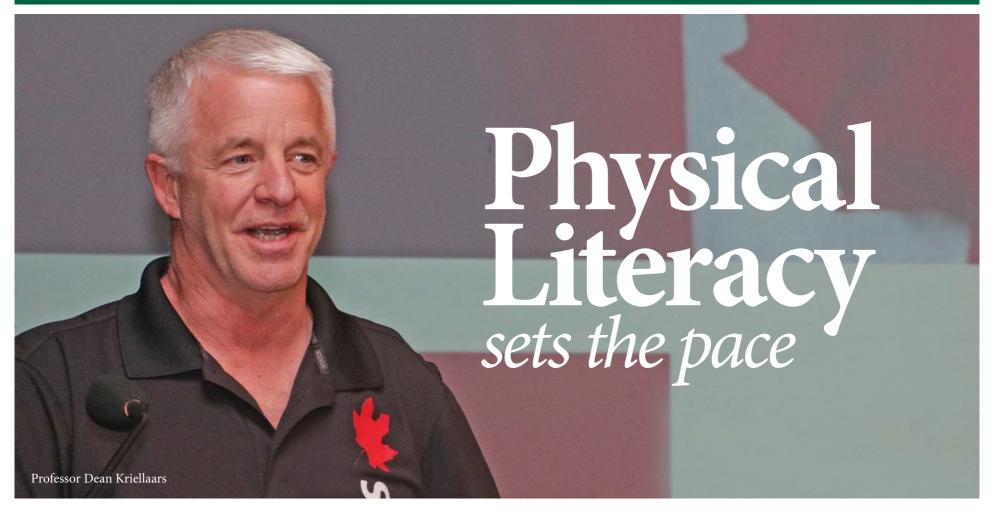
Dr. Heather Cateau, Dean of Humanities and Education, recognized the festival and film as necessary to the St. Augustine Campus and Faculty being a "global force". She added that we must put the perspectives of artistes front and centre, as they are integral to the opening of new frontiers in a time when we are met with many economic challenges.

Festival director and coordinator of the UWI Film Programme, Yao Ramesar said, "One takeaway of the festival was how strong and diverse audiences felt the lineup of films was. This speaks volumes about the quality and quantity of films being produced around the world and provides us with a window to the global marketplace that we have to operate in. The festival on tour is an embodiment of the festival and its image "Caribbean Man # 2" by Stanley Greaves, which depicts a mobile Caribbean vendor."



Students of St. Joseph's College at WOFEC. PHOTO: COURTESY FILM PROGRAMME

CONFERENCE ON SPORT AND HIGHER EDUCATION



BY JOEL HENRY

In childhood we are movers by nature. Children dance without the need for music. They climb anything they can find. An open space is an invitation to run. Their imaginations power them forward - superheroes, martial arts experts, warrior princesses saving the day in the front yard. As they get older, most of them will move less and less. As societies become more complex and less safe, this phenomenon becomes even more pronounced.

There is a growing body of knowledge that shows we have underestimated how detrimental this lack of movement is to children's physical and mental health. So says Dr Dean:

'You want every boy and girl to be able to throw, jump, run, hop, skip and swim. If they can do that we have found it generates confidence and if they have confidence that generates motivation. If you are motivated that generates more participation."

"If you participate in life in a meaningful way you thrive. You also have better mental and physical fitness. Physical literacy is cognitive and physical at the same time," he says.

The International Physical Literacy Association defines physical literacy as, "the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities

Professor Dean Kriellaars, or Dr Dean as he has become known through his international work, knows quite a bit about physical literacy. He is renowned as one of the architects of the Physical Literacy Movement. For more than 15 years he has combined his knowledge in neuroscience and physical therapy with advocacy about the importance of movement. He works with several organizations such as the International Sports for Life Society, the Aspen Institute and even Cirque du Soleil.

"In essence, I'm a physical literacy evangelist," he says during our interview at the University Inn just off campus in St Augustine.

Even while sitting, Dr. Dean is in constant motion. He leaps to catch every question, absorbs it quickly and races away with his answers. Compact and middle-aged, it's obvious he is a practitioner of physical literacy as well

Dr Dean, an associate professor in the Department of Physical Therapy at the University of Manitoba in Canada, was in Trinidad for the Second Biennial Conference on Sport and Higher Education held from May 18 to 20 to give the keynote address. Trinidad and Tobago is only one stop on a sprint that carries him across the world.

'Last week I was in Calgary, Toronto; then Washington DC, Miami and Trinidad. After this I am going back to Winnipeg, then New Finland, Quebec City and Montreal before June 3," he says.

At his stop in Washington DC his presentation on physical literacy was followed by a speech from Michelle Obama, First Lady of the United States of America, at the 2016 Project Play Summit. Project Play was a gathering of over 450 specialists that focused on children and sports.

On his first of what he believes may become many visits to Trinidad, Dr. Dean says he was very impressed by the awareness of physical literacy issues at the Sport and Higher Education Conference hosted by the St. Augustine Campus at the Learning Resource Centre.

'It way exceeded my expectations," he said. "The conference showed me that people know where they want to go. They understand the problem and are passionate about it. I'm very excited for the future and the interrelationships in terms of what we can do."

His keynote presentation, energetic and informative, was a highlight of the event. Dr. Dean told a story of societies – almost all societies – losing the ability to move. The results of that loss he measured in rising rates in type 2 diabetes (afflicting an estimated 30% of the population in the US and Canada). Children, he told the audience consisting of representatives from the health, education and physical education sectors, should "huff and puff" at least 60 minutes a day. Adults should do the same for at least 20 minutes a day.

Learning to move is just as important as learning to read and write," he said.

Dr. Dean also stressed the importance of encouraging girls to continue to take part in physical activity:

"Kids, particularly girls become inhibited by failure and withdraw. They stop participating. At five, six and seven, boys and girls play together. By 12 years old that stops. That's not because girls aren't capable. Parents are six times more likely to caution a girl than a boy on the playground. If you are not equipping girls at the same level as boys, that is a crime. But yet every culture does it."

But Dr. Dean was enthusiastic about the possibility of change. For much of history, we had no choice but to move. The average occupation was outdoors, not inside an office seated at a desk. Today movement is a choice and the physical literacy evangelist believes that people can be convinced it is the right choice.

"It's about spreading the word," he says. "The game is finding a community, possibly a country that starts the domino effect. In Canada, the example was recycling. It spread. It's really about showing good examples."

"If you participate in life in a meaningful way you thrive. You also have better mental and physical fitness. Physical literacy is cognitive and physical at the same time."

UWI CALENDAR of EVENTS **JULY-OCTOBER 2016**

QUEST FOR PUBLIC HEALTH

July 6, 2016 **UWI St. Augustine**

The UWI St. Augustine Campus, Department of History, Faculty of Humanities and Education presents a Conference on Public Health and Society in Latin America and the Caribbean and The UWI Chancellor and former Director for the Pan American Health Organisation (PAHO), Sir George Alleyne will be the keynote speaker at the Opening Ceremony. The Opening Ceremony is open to the public and Sir George Alleyne will be speaking on The Quest for Public Health on July 6 from 6pm at the Teaching and Learning Complex, Lecture Theatre E. All are invited. The Conference takes place from July 6 to 9 and will address themes such as The impact of Ethnicity and 'Class' on public health; New Technologies and Procedures and their impact on the society; Mental health and more.

For more information, please visit the website: https://publichealthandsociety2016.wordpress.com/



THE CRUX OF LEARNING September 23, 2016 Daaga Auditorium, UWI, St. Augustine

The UWI St. Augustine and Guardian Group Limited present the Premium Teaching Awards 2016 which celebrates the work of exemplary teachers on the St. Augustine Campus. The theme of this year's award ceremony is Student/ Teacher Partnerships: The Crux of Learning and will feature a special presentation by Dan Butin, Professor and Founding Dean, School of Education and Social Policy, Merrimack College. The Awards Ceremony takes place at 5pm at Daaga Auditorium. To RSVP, please call 662-2002 ext. 82611 or email cetl@sta.uwi.edu.

Updates will be posted on the Campus Events Calendar at www.sta.uwi.edu/news/ecalendar

UWI SPEC INTERNATIONAL HALF-MARATHON

October 23, 2016 Sport and Physical Education Centre St. Augustine Campus

Save the date for the 13th UWI SPEC International Half-Marathon kicks off at 5.30am at The UWI Sport and Physical Education Centre (SPEC). Registration and further details to follow.

For updates, please visit www.sta.uwi.edu/spec/marathon.



GRADUATION 2016

October 20 to 22 **UWI St. Augustine**

Mark your calendars! The 2016 Graduation Ceremonies are scheduled to take place from October 20 to 22 at The UWI Sport and Physical Education Centre (SPEC). Updates to follow.

For more information, please visit The UWI St. Augustine Campus' graduation website, closer to graduation dates at https://sta.uwi.edu/graduation/.



INCLUSIVE EDUCATION - CALL FOR PROPOSALS

February 15 to 18, 2017 UWI, St. Augustine

The University of the West Indies Schools of Education in collaboration with the State University of New York at Potsdam invite submissions for the first international Inclusive Education Conference at the Centre for Excellence in Teaching and Learning (CETL). The deadline for Abstract proposals is July 6. Abstract proposals should be submitted to Ms. Nadia Laptiste Francis, Conference Secretary at ieconference@sta.uwi.edu. Early Bird Registration for the conference runs from August 18 to November 30 so register now.

For more information about the conference, please visit: http://sta.uwi.edu/conferences/17/ie/.



INCLUSIVE EDUCATION |

Achieving Education for All Resolving challenges of learning difference, learner diversity, and 'at-risk children and youth

Hosted by The School of Education, UWI St. Augustine

UWITODAY WANTS TO HEAR FROM YOU

UWI TODAY welcomes submissions by staff and students for publication in the paper. Please send your suggestions, comments, or articles for consideration to uwitoday@sta.uwi.edu







