



University of Technology Jamaica

*Highlights from
Research, Technology
& Innovation Day
2018*



**A PIONEERING PAST AND A BRIGHT FUTURE OF
IMPACTFUL RESEARCH AND SCHOLARLY ACHIEVEMENTS**

ABOUT RESEARCH, TECHNOLOGY & INNOVATION DAY

The School of Graduate Studies, Research and Entrepreneurship as the unit responsible for research and innovation management in the University is the chief organiser of Research, Technology and Innovation Day (RTID).

Research, Technology and Innovation Day is an annual event that provides an opportunity for the University to display its research work and capabilities to stakeholders. The event facilitates interaction between the University and its various publics. In so doing, the University not only showcases the research work it is doing, which is of value to the society, but also seeks to develop strong linkages with Industry, Academia, and with Government.

The University of Technology, Jamaica through the School of Graduate Studies, Research and Entrepreneurship (SGSRE) on Thursday, March 8, 2018 led the staging of the University's annual Research, Technology and Innovation Day held at the new Shared Facilities Building, Papine Campus.

Held under the theme, "Pioneering Past; Bright future: six decades of impactful research and scholarly achievements" the one-day showcase comprised exhibits of cutting-edge research and innovation being undertaken by members of faculty, staff and students across the University's five colleges and three faculties.

Patrons of RTID including high school students and teachers, representatives of the business and scientific fraternities, members of the diplomatic corps and the general public also had the opportunity to participate in concurrent sessions running throughout the day, featuring presentations by members of faculty, staff and student researchers who elaborated on their work.

The objectives of RTID are to:

- 1 |** *Showcase recent results of research activities undertaken by faculty members and students*
- 2 |** *Demonstrate the facilities within the various units and other resources that are available to conduct research*
- 3 |** *Highlight existing research collaborations between the university, academic, and industry partners*
- 4 |** *Attract potential research partners from academia and industry*
- 5 |** *Promote the university's courses of study, especially graduate research degrees*

OPENING CEREMONY: CHAIRMAN'S OPENING REMARKS

MR. MARTIN HENRY

Manager
Projects and Operations and Chair
RTID Planning Committee



Giving Opening Remarks at the Opening Ceremony LT-50, Shared Facilities Building

Welcome to Research Technology and Innovation Day 2018....

This year's RTID is particularly special on two counts: The day is part of the 60th Anniversary celebrations of the institution. And, after many years in the Alfred Sang-ster Auditorium the event is being held this year in the brand new, state of the art Shared Facilities Building. Many thanks to the Auditorium for having hosted in the past....

Research Technology and Innovation Day is timed for the second Thursday in March each year to coincide with Anniversary Week. The Jamaica Institute of Technology began operations in March 1958 with a handful of students, staff and programmes. The Institute was quickly upgraded the following year to the well-known College of Arts Science and Technology. CAST has become the University of Technology, Jamaica....

The Programme booklet outlines the day's events which begin with this Opening Ceremony with a high-profile keynote speaker, son of Jamaica who has done well for himself in the United States. Exhibits of research, innovation and operations by the academic units are laid out museum-style in the spacious corridors of Shared Facilities....

And starting at noon there will be the Speakers' Forum, an innovative component of RTID in which members of staff will speak about their cutting-edge research in three concurrent sessions. We have grown from the usual two in the past to three concurrent sessions this year. There is a schedule for the presentations in the Programme booklet as well as an abstract for each presentation....

Starting at 2:00 o'clock today and running until 5:00, Power 106 will be carrying a live broadcast with Dervan Malcolm and we want to thank the media for the support for taking Research Technology and Innovation Day to the public before and during the event....

The RTID theme this year reflects the 60th Anniversary: "Pioneering Past; Bright Future: Six decades of Impactful Research and Scholarly Achievements". For the last few years we have put out a research publication for Research Technology and Innovation Day. This year the publication has pulled together exemplary papers and stories from several sources about impactful research work done over the years and is appropriately titled "A Pioneering Past and a Bright Future of Impactful Research and Scholarly Achievements".

The publication is now online and will be in print later....

OPENING CEREMONY PROGRAMME

Chairman's Opening Remarks Mr. Martin Henry
Manager, Projects and Operations
School of Graduate Studies, Research and Entrepreneurship

Welcome & Remarks Prof. Stephen Vasciannie, CD
President

Univeristy Song UTech, Jamaica Choir

Prayer Dr. Garfield Young
Dean, Faculty of the Built Environment

Greetings Professor Colin Gyles
Deputy President & HOD, SGSRE

Cultural Performance UTech Jamaica Choir

Overview of Research, Technology & Innovation Day Miss Tashoya Streete
RTID 2018 Planning Committee Member

Introduction of Keynote Presenter Dr. Kamilah Hylton
Dean, Faculty of Science & Sport

Keynote Presentation Professor Dr. Kingsley Chin, MD
Managing Director & CEO, KIC Ventures, Inc

Closing Remarks Chairman

National Anthem

Speakers' Forum 12:00 noon - 4:00 pm
Classrooms: 47A6 | 47A7 | 47A8

PROFESSOR STEPHEN VASCIANNIE, CD
President



Addressing the Opening Ceremony

PROFESSOR COLIN GYLES

Deputy President and Head, School of Graduate Studies,
Research and Entrepreneurship,



Extending greetings

MS TASHOYA STREETE

Graduate Studies Research Officer



Giving overview and schedule of the day's activities

WELCOME, REMARKS AND OVERVIEW

Professor Stephen Vasciannie, CD, President, UTech, Jamaica in his address shared on a number of initiatives being pursued by the University to enhance its research output. He thanked the SGSRE for organising the annual research showcase, noting that "research is entrenched in the mandate and mission of the University of Technology, Jamaica."

The President highlighted that "Universities live and die on the basis of their research output," adding that "we need to stress research and publications because universities exist not only to disseminate knowledge, but also to create knowledge." Research goes towards the development of new knowledge and to the development of new ways of understanding the ways in which we live, work and do business," he noted.

The President further noted that "as we seek therefore to strengthen our capacity for the dissemination and creation of new knowledge in a global, knowledge-based economy, increased output of research and publications among members of faculty and staff is an imperative." He pointed to some examples of areas requiring research, such as in identifying archaic and outdated Jamaican laws, research on the housing stock in Jamaica and studies needed in all aspects of engineering for the benefit of Jamaica.

Professor Vasciannie told the gathering that among the initiatives being undertaken to respond to the challenge to increase research at the University is the recent launch of the University of Technology, Jamaica Press on February 22, 2018 "to provide an outlet for University members to get their work into the publishing world." There has also been an increase in the allocation of funding provided by the University's Research Development Fund (RDF) and amendments to the arrangements for access to the RDF to make it easier for persons to apply for and receive grants from the Fund.

HIGHLIGHTS OF OPENING CEREMONY



The UTech, Jamaica Choir in performance during the Opening Ceremony.

HIGHLIGHTS OF THE KEYNOTE ADDRESS

DR. KINGSLEY CHIN

USA-based Jamaican Orthopaedic Surgeon,
Scientist, Inventor and Entrepreneur



Delivering an engaging keynote address titled, "Research & Innovation: Lab to Market or Research to Product," at the Opening Ceremony of the University of Technology, Jamaica's Research, Technology and Innovation Day at the Shared Facilities Building, Papine Campus.

Keynote speaker at the opening ceremony was Dr. Kingsley Chin, MD, Managing Director and CEO, KIC Ventures Inc. Dr. Chin is a USA-based Jamaican orthopaedic and spine surgeon, inventor and entrepreneur, who has leveraged his de-grees in engineering and medicine with his business experi-ence to found several enterprises. A native of Portland, he attended Titchfield High School and later obtained Ivy League education and training at Columbia University, Har-vard Medical School and the University of Pennsylvania.

In his well-received presentation, Dr. Chin shared his "research to product journey," highlighting why he has in-vested heavily in research. He also proffered some recom-mendations on what Jamaica must do to propel research and innovation for economic growth of the country.

He pointed to such opportunities for development of prod-ucts and services in healthcare technology and in health tourism. He lamented that Jamaica is

yet to take full eco-nomic advantage of is natural resources in such products as coconut, a host of tropical fruits, in exporting water, and in marijuana research and development of products. Dr. Chin argued that "you must look around the corner to see what is coming...to help you to understand where you need to focus your research." He added that Jamaica must "make a com-mitment to investing in research and to investing in converting research into products" and underscored that individuals, government, universities and the private and public sectors must work together to achieve this objective.

Contending that "just one revolutionary idea can change the world," Dr. Chin encouraged the high school and tertiary stu-dents and academics present, "to figure out how you are going to develop a product that is going to make the life of peo-ple better."

The successful innovator explained that this has been his driving force, leading to his holding of over 40 patents, over 35 products on the market and over 80 peer-reviewed published scientific articles. "I am constantly researching and publishing my results and developing product solutions," he noted, adding that "I did not obtain patents just to put on my resume, but for the purpose of developing products."

In 2005, Dr. Chin developed one of those patents into the MANTIS product (pedicle screw technology) and sold it to Stryker, making millions and positively impacting the lives of thousands of patients. In 2005 he founded KICVentures to invest in grow-ing healthcare technology companies.

He noted that revolutionary ideas that become products have propelled humanity the farthest, citing such examples as the invention of the airplane by the Wright Brothers and the invention of the phonograph, the motion picture camera and light bulb by Thomas Edison, America's greatest

inventor. Encouraging students to research and to innovate, he argued that “you are not just here to pass, you are not here just to graduate. You are in a privileged position as a student so when you go out there you can advance society.”

He encouraged the audience not to be discouraged from pursuing research because of perceived hindrances such as lack of funding, but to “start small before you go big,” adding that “you don’t need anything other than your mind. Your mind is limitless, it’s the things around you that limit your vision,” he reasoned.

He also reminded the attentive audience of the importance of giving back, noting that “the journey of success that you have is not yours alone.”

Dean of the Faculty of Science and Sport, Dr. Kamilah Hylton who introduced Dr. Chin, announced that the University will continue to benefit from his expertise, having recently joined the Faculty as an adjunct faculty member.

**KEYNOTE
SPEAKER URGES
INVESTMENT IN
CONVERTING
RESEARCH INTO
PRODUCTS**



EXHIBITS

● FACULTY OF THE BUILT ENVIRONMENT (FOBE)

The School of Building and Land Management

Geographic Information Systems and Geospatial Analysis as Tools for Solving Social Issues.

- *An Analysis of 3D Urban Mapping and GIS for Safety and Security in Jamaica's Urban Areas*

Geospatial Analysis of Storm Water Run-off on the University of Technology, Jamaica, Papine Campus

- *Predicting the Occurrence of Bushfires using Geospatial Multi-Criteria Analysis: A Case Study of Kingston and St. Andrew, Jamaica 2007-2016*
-

Caribbean School of Architecture

The Ward Theatre Entry Foyer and Lobby and The Music Incubator "SB Annex" (Design Studio Project Final Year)

The development plan to revitalize Downtown Kingston, specifically St William Grant Park & Parade Square as a cultural district (under the Creative Cities initiative), anchored by the Ward Theatre as a central hub for business activities.

Undergraduate Final Year Project: The National Music Museum of Jamaica - a Collaborative Research Project

The National Music Museum of Jamaica is a Collaborative Research Project between the University of Technology Jamaica, Faculty of the Built Environment, Caribbean School of Architecture (CSA), and The Architectural Division of the Urban Development Corporation (UDC). The research activities and outcomes include development of the project concept, a site feasibility study and the schematic design of student proposals. The schematic design proposals by students will receive primary supervision from Registered and Licensed Architects lecturing in the Studio and secondary supervision by other consultants lecturing within the Studio including visiting Architects of the UDC. The National Music Museum of Jamaica (2016) aims to further develop the concept, program and schedule of areas so as to accommodate new cultural activities while building on lessons learned from connectivity of the urban realm and public space. This Project is part of a larger national programme to the launch and promotes the need of Kingston the Creative City of Music (UNESCO) to create a home for the living history and cultural activities of Jamaican Music.

● FACULTY OF EDUCATION & LIBERAL STUDIES (FELS)

School Of Technical and Vocational Education

- *Higher Education Fostering National Change and Development in Jamaica: The Case of the University of Technology, Jamaica.*
- *Progression for Relevance: Home Economics (Family and Consumer Studies) Development 1976 to present at the University of Technology, Jamaica*

School of Humanities and Social Sciences

- *"All is not lost": Revitalizing Lokono (Arawak)*
- *"Press Play to Start" : Using games and quests to engage Spanish Language students at UTech, Jamaica*

EXHIBITS CONTINUED

● COLLEGE OF HEALTH SCIENCES (COHS)

School of Allied Health and Wellness (SAHW)

Display booths include:

- Nutraceuticals (Natural Shampoo, and Conditioner). – the Process
- Medical Technology: Haemopoiesis, blood grouping
- Guinea Hen Weed Tonic and Restorative and the Guinea Hen Weed Magic Relief pain ointment.
- Child and Adolescent Development (CHAD) – Posters

● FACULTY OF LAW (FOL)

- *Legal Aid Clinic*

● COLLEGE OF BUSINESS & MANAGEMENT (COBAM)

School of Business Administration

School of Hospitality & Tourism Management

Joan Duncan School of Ethics, Entrepreneurship and Leadership

● FACULTY OF ENGINEERING & COMPUTING (FENC)

School of Computing & Information Technology

School of Engineering

● JOINT COLLEGES OF MEDICINE, PUBLIC HEALTH, ORAL HEALTH & VETERINARY SCIENCES

College of Oral Health

School of Public Health and Health Technology

Pictorial Highlights of RTID Exhibits and Activities





SPEAKERS' FORUM

As one of the features of Research, Technology, and Innovation Day (RTID), the Speakers' Forum gives members of the University's various publics an opportunity to hear presentations from faculty members and students – and ask questions - about the basic, experimental, or applied research work they are pursuing. Research at the University of Technology, Jamaica is aligned with national goals and priorities. Highlights of the presentations made during the Speakers' Forum on RTID 2018, are presented in this section.

• VENUE: 47A6, SHARED FACILITIES COMPLEX

Time	Topic	Speaker	College/ Faculty
12:00 – 12:30	The Case for a Jamaican Music Museum	Mr. L. Mark Taylor	FOBE
12:30 – 1:00	Lead Paint Law: An Intervention for Poison Prevention in Jamaica	Mrs. Sherika Whitelocke-Ballingsingh	COHS
1:00 – 1:30	Building (an eventful) Brand Jamaica	Mrs. Donna Kelly	COBAM
1:30 – 2:00	Promoting STEM Education: A Case Study on the Challenges and Opportunities in Integrating Desktop Computer Numerical Control (CNC) Technology in Grades 7-9	Mr. Dwaine Hibbert	FENC
2:00 – 2:30	Sentence Reduction Day -Judicial Efficiency or a 'slap on the wrist'?	Ms. Shanice N. Trowers	FOL
2:30 – 3:00	Use of Social Media Platforms in Customer Service Operations	Dr Neleen Leslie	COBAM
3:00 – 3:30	Promoting Interdisciplinary Research at an Emergent University Using Low Cost, High Performance Computing	Mr. Norman Israel	FOSS

• VENUE: 47A8, SHARED FACILITIES COMPLEX

Time	Topic	Speaker	College/ Faculty
12:00 – 12:30	“Can we play here, should we?” - Developing a framework of gamification in Higher Education	Mrs. Michelle Stewart-McKoy	FELS
12:30 – 1:00	The Dynamics of Ecotourism in Protected Areas	Mrs. Gaunette Sinclair-Maragh PhD	COBAM
1:00 – 1:30	“Predicting the Occurrence of Bushfires using Geospatial Multi- Criteria Analysis: A Case Study of Kingston and St. Andrew Jamaica, 2007-2016”	Mr. Laurence Neufville	FOBE
1:30 – 2:00	Gang Violence and National Security in Jamaica: Implications for Achieving United Nations Sustainable Development Goals	Mr. Henry Lewis	FELS
2:00 – 2:30	Jamaica's Treasure: Using our medicinal plants for sustainable development	Dr. Denise Daley	COHS
2:30 – 3:00	Towards impactful computer-based health and sports informatics interdisciplinary research projects for consultancy, entrepreneurship and philanthropy	Ms. Susan A. Muir	FENC
3:00 – 3:30	Digital Citizenship – Our responsibility	Dr. Andrea Barrett	COBAM
3:30 – 4:00	Mining medicines and wealth from Cannabis in Jamaica: The Devil and the Details	Mr. Rasheed Perry	COHS

• VENUE: 47A8, SHARED FACILITIES COMPLEX

Time	Topic	Speaker	College/ Faculty
12:00 - 12:30	Active learning strategies utilized amongst undergraduate nursing students	Dr. Andrea Pusey-Murray & Ms. Deveree Stewart	COHS
12:30 - 1:00	Liability for Poor Road Conditions: Government's Immunity.	Mr. Raun S. Barrett, Attorney-at-Law	FOL
1:00 - 1:30	Understanding Global Bioethics: The Foundation of Research Ethics	Dr. Martin J. Schade	FELS
1:30 - 2:00	An Empirical Analysis of the Determinants of Executive Compensation in the USA Financial, Insurance and Real Estate Sectors	Dr. Phillip James	COBAM
2:00 - 2:30	Relational Dynamics: A Holistic Paradigm for Physics and Science	Mr. Patton Duncan	FOSS



Deputy President visits the Faculty of Law booth.

HIGHLIGHTS OF SPEAKERS' FORUM

Faculty of the Built Environment



THE CASE FOR A JAMAICAN MUSIC MUSEUM

Presenter: Mr. L. Mark Taylor

2012 saw Jamaica celebrating fifty years of independence from colonial rule. The University of Technology, Jamaica, recognized this milestone tangibly by awarding the Chancellor's Medal, for the third time, to the Jamaican popular music industry. How, and to whom, would the medal be awarded, and afterward where would it reside permanently? Simple questions, and potentially very difficult answers.



PREDICTING THE OCCURRENCE OF BUSHFIRES USING GEOSPATIAL MULTI-CRITERIA ANALYSIS: A CASE STUDY OF KINGSTON AND ST. ANDREW JAMAICA, 2007-2016

Presenters: Mr. L. Neufville (Lecturer) with Mr. Raylon Ricketts & Mr. Maurice Wallace (Graduate students)

This research predicted occurrences of bushfires in the parishes of Kingston and St. Andrew. Geographic Information System (GIS) was used to provide the framework for the integration of the Multi-Criteria Analysis (MCA) approach. Vulnerability maps were created to show the degree of bushfire risks in KSA. Actual 2015 bushfire data for KSA from the Jamaica Fire Brigade corresponded with the results from the research in the areas of lowest and highest risk. This showed the accuracy of the MCA approach, and that the findings can be used to assist in bushfire control planning in KSA.

HIGHLIGHTS OF SPEAKERS' FORUM

Faculty of Education & Liberal Studies



UNDERSTANDING GLOBAL BIOETHICS: THE FOUNDATION OF RESEARCH ETHICS

Presenter: Dr. Martin Schade

Ethics has always been understood as solely a human endeavour. Bioethics was seen as medical ethics because only humans were involved. Bioethics can no longer be concerned with only human life and well-being but also treat ethical questions relating to the nonhuman, biological environment. Ubuntu ethics speaks to the very essence of being human and leads the way for all research ethics.



GANG VIOLENCE AND NATIONAL SECURITY IN JAMAICA: IMPLICATIONS FOR ACHIEVING UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

Presenter: Mr. Henry Lewis

Improvement in national security and conditions of peace in Jamaica is a critical element in the realization of United Nations Sustainable Development Goals (SDGs). Understanding how gang violence poses a threat to national security and progress towards achieving the SDGs is crucial. This paper examines the incidence of gang violence and implications for achieving United Nations Sustainable Development Goals in Jamaica.



HIGHLIGHTS OF SPEAKERS' FORUM

Faculty of Education & Liberal Studies



"CAN WE PLAY HERE, SHOULD WE?" DEVELOPING A FRAMEWORK OF GAMIFICATION IN HIGHER EDUCATION

Presenter: Mrs. Michelle Stewart-McKoy

This paper presents a proposal for developing a Gamification Framework in Higher Education as a means of increasing learner engagement. It describes action research and project-based approaches to integrate game-based learning among undergraduate students. Use of learner profiles, learning quests, digital badges, progression bars, leaderboards, experience points and multiplayer activities are proposed as best practices.



**MICHELLE
STEWART-
M'KOY BEING
INTERVIEWED BY
DERVAN MALCOLM
OF POWER 106**

HIGHLIGHTS OF SPEAKERS' FORUM

College of Business & Management



THE DYNAMICS OF ECOTOURISM IN PROTECTED AREAS

Presenter: Dr. Gaunette Sinclair-Maragh

The study examined ecotourism's contribution to environmental sustainability and economic development in protected areas, analyzed this framework and demonstrated how these dimensions are linked to the pillars of sustainable development. The theory of environmental justice is used to explain the relationship among ecotourism, protected areas and sustainable development.



DIGITAL CITIZENSHIP – OUR RESPONSIBILITY

Presenter: Dr. Andrea Barrett

Digital citizenship is the concern with the appropriate and responsible use of technology. It encompasses areas such as digital literacy, cybersecurity, and ethical behaviour. An effective governance framework for online activities is an absolute requirement. This research aims to identify the requirements of responsible digital citizenship and the role of policy-makers in governing the digital space.



USE OF SOCIAL MEDIA PLATFORMS IN CUSTOMER SERVICE OPERATIONS

Presenter: Dr. Neleen Leslie

In this study, we explore how Jamaican customers utilize social media platforms to relay negative service experiences and questions and how companies utilize the same channels to resolve those issues. This study utilizes telecommunications giant, Digicel, a company with active social media platforms for the case study.

HIGHLIGHTS OF SPEAKERS' FORUM

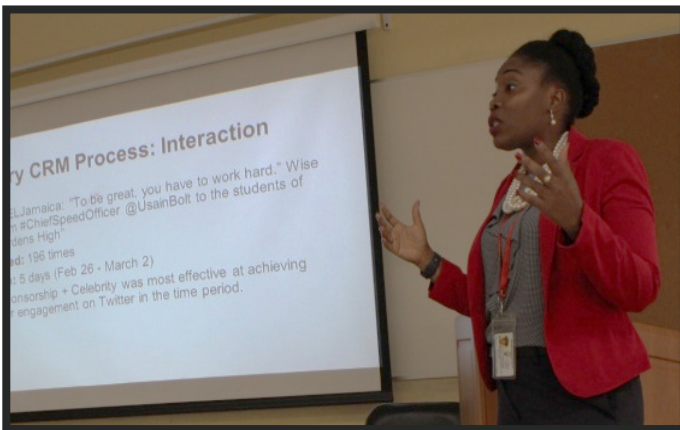
College of Business & Management



AN EMPIRICAL ANALYSIS OF THE DETERMINANTS OF EXECUTIVE COMPENSATION IN THE USA FINANCIAL, INSURANCE AND REAL ESTATE SECTORS

Presenter: Dr. Phillip James

This study is the first to seek to identify the main determinants of CEO compensation over a 22-year period from 1992 to 2013, and with respect to three US sectors. Companies were selected from the Execucom database and the data were analyzed by regression analysis. The results showed that some of the statistically significant variables influencing CEO compensation were: directorship, age of CEO, return on asset, return on equity and total asset. This study adds to the existing body of literature on executive compensation as it is the first of its kind to undertake a comparative analysis of three sectors in the USA.



BUILDING (AN EVENTFUL) BRAND JAMAICA

Presenter: Mrs. Donna Kelly

The strategic use of events is known as event leverage. While this has been touted as a useful strategy, there are areas that lack clarity and stakeholders that have been largely overlooked. This research project examined the impact of event leverage, on stakeholders and from perspectives that have been given little attention. The findings provide useful insight for proposing an event leverage strategy for Jamaica.



HIGHLIGHTS OF SPEAKERS' FORUM

College of Health Sciences



MINING MEDICINES AND WEALTH FROM CANNABIS IN JAMAICA: THE DEVIL AND THE DETAILS

Presenter: Mr. Rasheed Perry

In May 2015, research began into the medical use of Cannabis by government mandate, so that the University of Technology, Jamaica, its stakeholders and the country could benefit from the growing global Cannabis industry. This paper discusses the process of adaptation to this new opportunity, analysis of recent findings, prospects for new business investment, wealth and technical expertise.



ACTIVE LEARNING STRATEGIES UTILIZED AMONGST UNDERGRADUATE NURSING STUDENTS

Presenter: Dr. Andrea Pusey-Murray

The research examined active learning strategies and its application in nursing among 50 undergraduate nursing students. Active learning engages and challenges students to think and use real-life situations. Evidence was obtained via observation and feedback. The results showed that the implementation of active learning strategies led to deep learning by creating a deeper understanding of content material.



LEAD PAINT LAW: AN INTERVENTION FOR POISON PREVENTION IN JAMAICA

Presenter: Mrs. Sherika Whitelocke-Ballingsingh

There is a global initiative for the elimination of lead paint in developing countries. Jamaica presently does not have legislation or policy banning lead paint on domestic products and toys. Such a law would act as an intervention for the prevention of poisoning among children, whom can experience developmental maladies from lead exposure.



JAMAICA'S TREASURE: USING OUR MEDICINAL PLANTS FOR SUSTAINABLE DEVELOPMENT

Presenter: Dr. Denise Daley

The College of Health Sciences at The University of Technology, Jamaica has begun the quest to determine the best use of Jamaica's medicinal plants and to reap economic rewards from the development of nutraceuticals, nutri-cosmetics and functional foods with the implementation of The Neem (*Azadirachta indica*) Project. The plant material has been extracted for natural product development aimed at improving health.

HIGHLIGHTS OF SPEAKERS' FORUM

Faculty of Law



SENTENCE REDUCTION DAY JUDICIAL EFFICIENCY OR A 'SLAP ON THE WRIST'?

Presenter: Ms. Shanice N. Trowers

This presentation critically examined the concept of the Sentence Reduction Day and critically explored whether the initiative actually significantly would contribute to greater judicial efficiency or whether it would be a mere 'slap on the wrist' for the accused.



LIABILITY FOR POOR ROAD CONDITIONS: GOVERNMENT'S IMMUNITY

Presenter: Mr. Raun S. Barrett, Attorney-at-Law

This paper discussed the doctrine of "non-feasance" regarding liability of highway/road Presenterities and the government. The state enjoys immunity from liability for injury or loss arising out of a failure to repair roads and highways. The paper highlighted how the doctrine is applied locally and the plight of the claimants as they attempt to establish the state's liability. Urgent action by Jamaican lawmakers is recommended to correct this unfortunate state of affairs.



HIGHLIGHTS OF SPEAKERS' FORUM

Faculty of Engineering and Computing



PROMOTING STEM EDUCATION: A CASE STUDY ON THE CHALLENGES AND OPPORTUNITIES IN INTEGRATING DESKTOP CNC TECHNOLOGY IN GRADES 7-9

Presenter: Mr. Dwaine Hibbert

In 2017 the National Standards Curriculum (NSC) was launched to promote students' academic performance and national development. This study determined the challenges and opportunities in the integration of a Computer Numerical Control (CNC) machine in grades 7-9 NSC. The findings provide a better understanding of how CNC technology may be utilized to support and promote STEM education.



TOWARDS IMPACTFUL COMPUTER-BASED HEALTH AND SPORTS IN-FORMATICS INTERDISCIPLINARY RESEARCH PROJECTS FOR CONSUL-TANCY, ENTREPRENEURSHIP AND PHILANTHROPY

Presenter: Ms. Susan A. Muir

This presentation outlines an agenda for current and future relevant health and sports informatics research and development (R&D) within Jamaica. This is expected to generate rich and robust evidence about the application of computer-based tools that could lead to improved health outcomes and better sports performance. Development of cutting-edge projects in these areas could be catalysts for consultancy, entrepreneurship and philanthropy that are likely to have regional and global impact.



HIGHLIGHTS OF SPEAKERS' FORUM

Faculty of Science and Sport



RELATIONAL DYNAMICS: A HOLISTIC PARADIGM FOR PHYSICS AND SCIENCE

Presenter: Mr. Patton Duncan

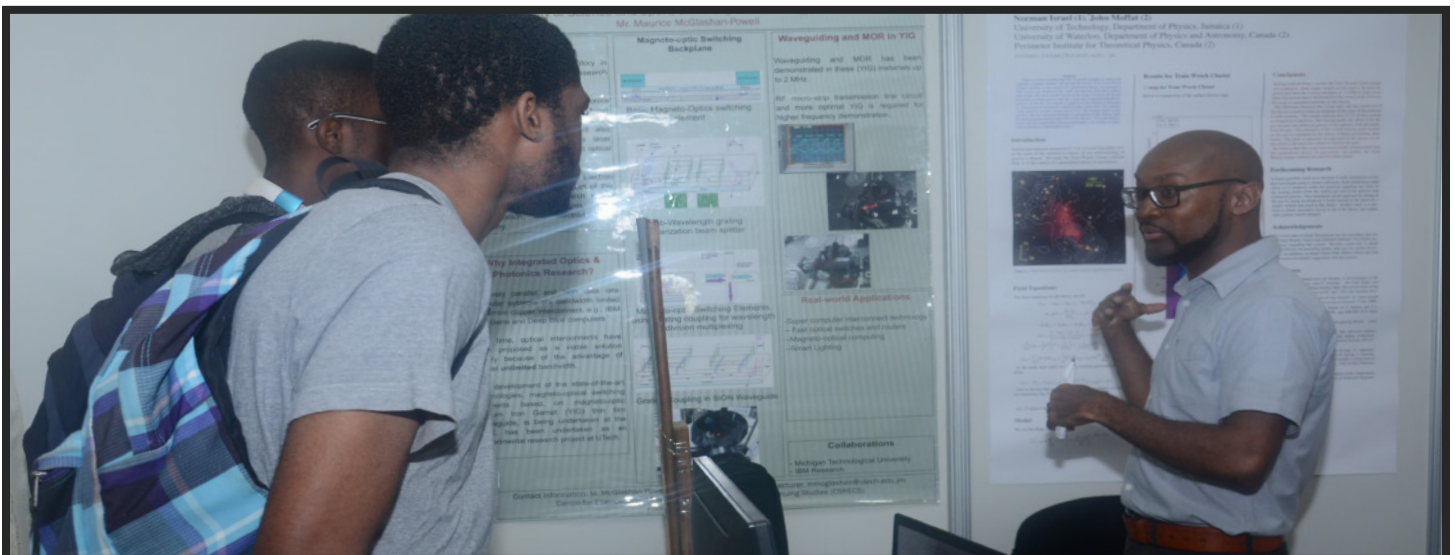
A summary of the historical development of the field of Relational Order, from the original debates of Newton and Leibniz, to modern quantum “loop” gravity is provided. The presentation outlines the non-Newtonian methodology of relational dynamics which is currently an area of active research for quantum gravity, Cosmology and the origins of the Universe. Original Liebnizian theory may provide a basis for a ‘unified field theory” and implications for biology, economics and optimizing social organization.



PROMOTING INTERDISCIPLINARY RESEARCH AT AN EMERGENT UNIVERSITY USING LOW COST, HIGH PERFORMANCE COMPUTING

Presenter: Mr. Norman Israel

High Performance Computers (HPC) machines are increasingly used to solve problems in the pure and applied sciences. While expensive, advances in video game and video streaming technologies make it possible to construct cheap, energy efficient HPCs in developing countries. The talk proposed a project to construct a HPC facility at UTech; how such a facility can be used to help Jamaica solve some of its critical problems; explained problems it can be used to tackle, and how UTech could use such a facility to generate revenue.



RESEARCH PUBLICATION

The University of Technology, Jamaica this year marks the 60th anniversary of the institution which started in 1958 as the Jamaica Institute of Technology. A year later the name was changed to the College of Arts, Science and Technology (CAST).

In 1995, when the institution was officially granted university status by an Act of Parliament, research output was immediately elevated as an important pillar in the core mission of the University. This mission is “to stimulate positive change in Caribbean society through the provision of high quality learning and research opportunities and service to our communities.”

The University of Technology, Jamaica remains committed to this three-pronged mission of teaching, research and service to significantly impact Jamaica’s growth and development goals. As we seek to strengthen our capacity for the dissemination and creation of new knowledge in a global, knowledge-based economy, increased output of research and publications among members of faculty and staff is an imperative.

This publication titled *“A Pioneering Past and a Bright Future of Impactful Research and Scholarly Achievements”*, which accompanied Research, Technology & Innovation Day 2018, contains selected pieces of research that have been conducted by members of faculty, staff and students from our three colleges and five faculties, that have had particular impact on society.

The interdisciplinary collection offer’s a bird’s eye view of UTech, Jamaica’s expertise at work. It is our hope that it will provide a useful reference tool for researchers and members of the public in general.

We invite members of government, industry and academia to continue to partner with the University of Technology, Jamaica in the journey of advancing discovery and the sharing of new knowledge for the benefit of society.



RTID 2018 PLANNING COMMITTEE

Mr. Martin Henry, Chairman

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Ms. Tashoya Streete, SGSRE

Ms. Grace-Ann Black, SGSRE

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Mr. Norman Israel, FOSS Representative

ACKNOWLEDGEMENTS

The SGSRE thanks all persons and Units who made Research, Technology and Innovation Day 2018 possible. Special mention is made of the Academic Units, Corporate Communications, Marketing and Calvin McKain Library.

AREAS OF RESPONSIBILITY OF THE
**SCHOOL OF GRADUATE STUDIES
RESEARCH & ENTREPRENEURSHIP**





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