

# THE PRINCIPAL'S RESEARCH AWARDS 2020

*Congratulations  
to the  
Award Winners*

### BEST RESEARCH PUBLICATION

**Research Title:** Characterization of microplastics in the surface waters of Kingston Harbour, Jamaica.

**Researchers:** Prof. Mona Webber  
Ms. Deanna Rose

### BEST RESEARCH PUBLICATION

**Research Title:** Bioaccumulation of cadmium in potato tuber grown on naturally high levels cadmium soils in Jamaica.

**Researchers:** Prof. Mitko Voutchkov  
Prof. Nouredine Benkeblia  
Mr. Da-Vaugh Sanderson

### BEST RESEARCH PUBLICATION

**Research Title:** The use of Raman Spectroscopy to monitor phase changes in concrete following high temperature exposure.

**Researcher:** Dr. Tanya Kerr

### BEST RESEARCH PUBLICATION (FMS)

**Research Title:** Use of a public park for physical activity in the Caribbean: evidence from a mixed methods study in Jamaica.

**Researcher:** Dr. Tamika Royal-Thomas

### RESEARCH PROJECT WITH THE GREATEST BUSINESS/ECONOMIC/DEVELOPMENT IMPACT

**Research Title:** Assessment and Economic Valuation of Coastal Protection Services Provided by Mangroves in Jamaica.

**Researchers:** Dr. Arpita Mandal      Prof. Mona Webber  
Dr. Rose-Ann Smith      Ms. Patrice Francis  
Dr. Taneisha Edwards      Mr. Camilo Trench  
Dr. Robert Kinlocke      Dr. Adrian Spence  
Prof. Simon Mitchell

### RESEARCH PROJECT ATTRACTING MOST FUNDS

**Research Title:** Resilience Strengthening to Climate Change Impacts through Youth Education in Primary Schools.

**Researchers:** Prof. Michael Taylor  
Dr. Tannecia Stephenson  
Dr. Dale Rankine  
Dr. Kimberly Stephenson  
Dr. Sharon Bramwell-Lalor (FHE)  
Dr. Dennis Samuels (Estate Management)  
Mr. Patrick Lewis

### MOST OUTSTANDING RESEARCHER OR RESEARCH ACTIVITY

**Researcher:** Dr. Andrea Goldson-Barnaby

#### Research Titles:

1. Biochemical properties of tree-ripened and post-harvest ripened *Mangifera indica* (cv. East Indian).
2. Anatomic features and antioxidant activity of cotton seed (*Gossypium hirsutum* L.) genotypes under different irrigation regimes.
3. Physiological traits and anatomic structures of the seed for two short cotton season genotypes (*Gossypium hirsutum* L.) under water stress.
4. Free radical scavenging capacity, carotenoid content and NMR characterization of *Blighia sapida* aril oil.
5. Lauric acid composition of *Cocos nucifera* (coconut) oil.

**Researcher:** Dr. Venkateswara Penugonda

#### Research Titles:

1. Spectroscopic and electrical investigations of copper ions in PbO–GeO<sub>2</sub> glasses
2. Spectroscopic and thermal analysis of lead-free multipurpose radiation shielding glasses
3. Optical absorption and photoluminescence properties of vanadium ions in ‘lithium-tungsten-borate’ oxide glasses
4. Role of molybdenum ions in lead zinc phosphate glass system by means of dielectric studies
5. Analysis of red mud doped Bi<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-BaO glasses for application as glass solder in radiation shield repair using MCNPX simulation

**Researcher:** Dr. Peter Nelson

#### Research Titles:

1. A Theoretical assessment of the primary hydration shell formation for calcium pyrophosphate
2. Spectroscopic, optical sensing and RedOx behaviour of 1, 5-diphenylcarbazon
3. 1H-indazoles from phenylhydrazienes: A Exploratory DFT study of a possible Intramolecular Evolutionary synthetic Route.
4. Preparation and Properties of Some Ion Selective Membranes: A Review.