

DEPARTMENT OF COMPUTING



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Head of Department

WORK OF THE DEPARTMENT

Curriculum Review

During academic year 2012/13 the Department completed the exercise of converting all undergraduate four credit courses to three credits with the submission of revised final year courses. Second year courses were done during 2011/12 and first year courses the year before.

We also introduced the Software Engineering major. This major is available to students as of 2013/14.

Finally, we introduced, in collaboration with the Mona School of Engineering, the new Computer Systems Engineering programme. The first cohort of students for this programme will be admitted in 2013/14.

We continue the review of the MSc programme that was started early in the academic year. We plan to complete this exercise during 2013/14.

WESTERN JAMAICA CAMPUS

The expansion of our programmes to WJC continues, although we experienced a few challenges with the infrastructure for live streaming of lectures. We are working with the office of the Faculty of Science and Technology to find a lasting solution to this problem. The enthusiasm of the staff involved has lessened the possible negative impact of this problem.

Staffing

Campus Appointments Committee approved the appointment of three new members of staff. Ricardo Anderson was confirmed as Assistant Lecturer based at the Western Jamaica Campus while two were appointed as lecturers to be based at Mona. Unfortunately only one of the two accepted the offer and is expected to arrive at Mona by January 2014.

Our administrative unit was strengthened by the appointment of Mrs. Fiona Porter-Lawson as Administrative Assistant II and Miss Kerry-Ann Wilkinson as Secretary III. With Mrs. Donna Burke continuing to serve the department well as Senior Administrative Assistant this now gives us the administrative support to help with the implementation of our strategic plan.

Two of our Visiting Professors visited in June/July 2013. Professor Kweku-Muata Osei-Bryson of Virginia Commonwealth University and Professor Robert France of Colorado State University visited for 2–3 weeks each and interacted with research students and mainly junior staff. The Department continues to benefit greatly from these two excellent senior professors.

PUBLICATIONS

Journal Articles

- Rao L., **Mansingh G.** and Duggan Evan (2013). “An Ontology of Controversial Terms at the Core of the Systems Life Cycle”. *International Journal of Metadata, Semantics and Ontologies, InderScience.*

- **Mansingh G.**, Rao L., Osei-Bryson K. M. and Mills A. (2012). “Profiling Internet Banking Users: A Knowledge Discovery in Data Mining Process Model Based Approach”. *Information Systems Frontiers*, Springer, DOI: 10.1007/s10796-012-9397-2.

Peer-Reviewed Conference Proceedings

- **Mansingh G.**, Osei-Bryson K.M. and Asnani M. (2013). “Determinants of Quality of Life of Sickle Cell Patients: A KDDM Process Model based Exploration”, in Proceedings of International Conference on Information Resources Management (Conf-IRM) – Managing IT in a Consumerized IT world. *Natal*, Brazil, 22–24 May, 2013, 13 pages.
- **Paul Gaynor** and **Daniel Coore** (2013). “Towards Distributed Face Recognition built over a Self Organizing Distributed Data Storage Device” in Proceedings of IEEE Wireless Technologies Symposium 2013 (Ocotillo Arizona) April 2013.
- **Rohan Smith** and **Daniel Coore**. “X10ABOT: The Extensible, Scalable and Modular Robotics Kit Architecture”, in Proceedings of IEEE SoutheastCon 2013. Jacksonville, FL, USA. April 2013.
- **Vincent Taylor** and **Daniel Fokum**. “Securing Wireless Sensor Networks from Denial-of-Service Attacks using Artificial Intelligence and the CLIPS Expert System Tool”, in Proceedings of IEEE SoutheastCon 2013. Jacksonville, FL, USA. April 2013.
- **Paul Hamilton** and Suresh Sankaranarayanan (2013). “Intelligent Agent based RFID System for On Demand Bus Scheduling and Ticketing”, in Proceedings of 2nd International Conference on Network and Computer Science (ICNCS 2013), Singapore, April 1–2, 2013
- **Anderson R.** and **Mansingh G.** (2012). “An intelligence based knowledge-driven decision support system for Social Protection programs”, in Proceedings of BI Congress 3: Driving Innovation through Big Data Analytics, Joint SIGDSS & TUN Workshop. Orlando U.S.A., December 15–16, 2012, 11 pages.

INCOME GENERATION

We continued to run a number of income-generating activities and although we would like to generate higher incomes, we are still making a surplus:

Programme/Activity	Income	Expenditure	Net Income
MSc Computer Science	11,550,000	7,981,288	3,568,712
MSc CBMIS	9,311,368.24	5,867,727.42	3,443,640.82
Cisco Networking Academy	2,303,000	1,362,969	940,031
Summer School	1,457,927	838,700	619,227
Consultation Fund	741,429.34	521,681.84	219,747.50
eLearning Jamaica Project (Ezra K. Mugisa)	US\$165,000	In progress	In progress

PUBLIC SERVICE**Ricardo Anderson**

- Mentor, Jamaica College Robotics Team
- Chairman, Spot Valley High School ICT Committee

Paul Gaynor

- President elect, Sunset Optimist Club of New Kingston

Gunjan Mansingh

- Mini-track chair for Americas Conference on Information Systems (AMCIS) 2013 – ICTs and Sustainable Development in the Caribbean – Opportunities for Under-utilised Technologies and Strategies.

Department of Computing

- Member, Local Organizing Committee, Caribbean Open Data Conference and Code Sprint, April 11–12, 2013.
- Reviewer, INFORMs – *Journal of Computing*.
- Reviewer, *Knowledge Management Research and Practice Journal*.
- Reviewer, Hawaii International Conference on System Sciences (HICSS), 2012.
- Reviewer, Decision Support Systems.

Ezra K. Mugisa

- Member UCJ ICT Accreditation Committee
- Reviewer, IET Software.

STUDENTS

Student Throughput

The table below shows a breakdown of the numbers of students who graduated from the various programmes we offer:

Programme	BA (CS)			BSc (CS)			MSc (CBMIS)			MSc (CS)			MPhil			PhD		
Faculty	FHE			FST			FSS/FST			FST			FST			FST		
Gender	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total
1st Class				3	1	4		3	3	5		5						
2nd Class (upper)		1	1	6	2	8												
2nd Class (lower)	1	3	4	13	5	18												
Pass	4		4	4		4	13	10	23	7	1	8	1		1			1
Total	5	4	9	26	8	34	13	13	26	12	1	13	1		1			1

Student Awards and Prizes

Computing wins Programming Competition

A team of Computing students won the /roots (slash roots) programming competition at the Caribbean Open Data Conference held April 10–12, 2013. A total of 13 teams entered the competition including five from the Department of Computing.

- First prize went to Team K2MJB, a group of 3rd year students: Bruce Hoo Fung, Jonathan Smith, Kimberley Roper and brothers Mumba and Kangwa Sambo for their application ‘Farma Bredren’, a mobile phone application that will improve how the Rural Agriculture Development Authority (RADA) collects information on crops from farmers across the island.
- Third prize was won by the ‘Blaze Bartender’ application developed by a group of 2nd year students: Jason Scott, Jonathan Scott and Kevin Leyow.

Karl Robinson Prize

Aston Hamilton won the Karl Robinson Award for best performance in Computing Courses up to semester 1 of year 3 in the programme.

Software Applications Developed by Students

For their capstone project students typically develop applications to solve various kinds of problems. Some of these applications are subsequently enhanced and deployed to solve someone’s real problem. Two systems have been developed in this way and have been deployed to solve problems on the campus.

Ricoché is a Timetabling System which uses prior/current year registration data to determine popular course combinations so as to avoid student timetable clashes. It allows for flexible specification of long-term and short-term constraints on scheduling and allows timetables to be generated for various units such as departments, faculties or enterprises. *Ricoché* is a web based, open source solution that provides a timetable with zero

clashes in resources (rooms) where resources are allocated based on the best fit in view of course size, course delivery method and room facilities. Ricoché also provides a timetable with zero or minimal student timetable clashes. Where an initial student clash-free timetable is not obtained based on student course selections, decision support is provided which aids the user in generating a timetable with minimal student timetable clashes. This application was developed by final year students Daine Brissett, Kadira Carter, Christopher Jaggon and Marlon Oneil. They were supervised by Mr. Carl Beckford.

Prospective Student Recruitment System (PSRS) is an application that will assist the UWI Admissions section to keep in touch with prospective students of the campus. This system was developed under the supervision of Dr. Curtis Busby-Earle by modifying and customising an Open Source Software solution.