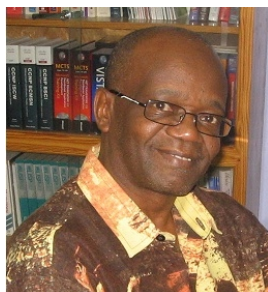


DEPARTMENT OF COMPUTING

Ezra K. Mugisa, PhD, DIC, CITP – Head of Department

WORK OF THE DEPARTMENT

The department began to implement its plan to expand the curriculum into the five areas of computing: computer science, information technology, information systems, computer engineering and software engineering, by adding the BSc in Information Technology to our programme offerings. To accommodate this, we have expanded our scheduling to include evening and Saturday classes. This also facilitates especially working students who may be interested in part-time study. The Computer Science major was revised so that 3 credit courses replaced 6 credit courses and the credit requirements were increased to 39 from 36.



In response to a recommendation from the Quality Assurance review of 2009, we designed a new course, *Internship in Computing*.

In order to expose our students to in-house internship activities we have set up a Software Development Unit.

Plans to add professional certification courses to our course offerings also started in this academic year. In January, we established a Cisco Networking Academy. Two cohorts have completed the first two modules of the four on Cisco's CCNA programme.

We successfully hosted a software modeling workshop in collaboration with The University of Technology, Jamaica. It was led by Professor Robert France of Colorado State University.

Dr. Daniel Fokum was recruited initially as temporary lecturer to replace Dr. Huw Evans and was later confirmed under a 3-year contract. Dr. Suresh Sankaranarayanan resigned from his post as lecturer.

PAPERS PRESENTED

Peer-Reviewed

- **Carl Beckford** and **Ezra Mugisa**, “Towards Achieving an Ideal Environment for Teaching Programming Online”, In Proceedings of 2nd International Conference on e-Education, e-Business, e-Management and E-Learning (IC4E 2011), January 7-9, 2011, Mumbai, India
- **Carl Beckford** and **Ezra Mugisa**, “A Tool for Learner-Centric Course Delivery in e-Learning”, Proceedings of AACE E-LEARN 2010 – World Conference on E-Learning in Corporate, Government, Healthcare & Higher Education, October 8-12, 2010, Orlando, Florida.
- **Curtis Busby-Earle** and **Ezra K. Mugisa**, “SECRET: Potential Vulnerability Discovery”, in Proceedings of Annual International Conference on Information Technology Security (ITS 2010), November 29-30, 2010, Phuket, Thailand
- **Claudine Allen** and **Ezra Mugisa**, “A Space-Based Context Model to Increase the Reusability of Object-Oriented Learning Objects”, in Proceedings of AACE E-LEARN 2010 – World Conference on E-Learning in Corporate, Government, Healthcare & Higher Education, October 8-12, 2010, Orlando, Florida.
- **Paul Gaynor** and **Daniel Coore**, “A Reliable, Energy Efficient Memory Repository built from an Unreliable Distributed Sensor Network”, Wireless Technologies Symposium, New York, USA, April, 2011
- A Hylton III and **S Suresh**, “Intelligent Agent based Scheduling of Hospital Appointment System in Android Environment”, in Proceedings of 4th IEEE International Conference on Computer

Science and Information Technology (ICCSIT 11), Chengdu, China, June 10-12, 2011

- S Bogle and **S Suresh**, “Intelligent Agent based Job Search System in Android Environment”, in Proceedings of 2011 IEEE International conference on Electro/Information Technology, Minnesota, USA, May 15-17, 2011
- **S Suresh** and K Cuffe, “Intelligent Agent based Scheduling of student Appointment in Android Environment”, in Proceedings of 5th IEEE International conference on Computer Sciences, Convergence Information Technology, Seoul, Korea, Nov 30 - Dec 2, 2010. Pp. 46-51. ISBN: 978-89-88678-30-5.
- **S Suresh** and M Harley, “Intelligent Agent based Mobile Health Care”, in Proceedings of Third IEEE International Conference on Education Technology and Training, Wuhan, China, Nov 27-28, 2010. Pp.371-376. ISBN:978-1-4244-9659-4
- M Gordon and **S Suresh**, “Biometric Mechanism in Mobile Payments”, in Proceedings of Seventh IEEE International Conference in Wireless and Optical communication Networks (WOCN 10), Colombo, Srilanka, September 6-8, 2010. ISBN: 978-1-4244-7202-4.
- D Stephenson and **S Suresh**, “AutoRefs - A Software for Automated Referencing System”, in Proceedings of ISRST International Conference on software Engineering Theory & Practice (SETP 10), Orlando, USA, July 12-14, 2010. Pp.147-152. ISBN: 978-1-60651-023-0
- C.A McTavish and **S Suresh**, “Intelligent Agent based Hotel Search and Booking System”, in Proceedings of 2010 IEEE International conference on Electro/Information Technology, Chicago, USA, May 20-22, 2010. Pp. 331-336. ISBN: 978-1-4244-6874-4
- Stewart H., **Mansingh G.**, (2010), “Using Knowledge Management to Transform the Jamaica Constabulary Force”, in

Proceedings of SIG-GlobalDev Workshop. St. Louis, U.S.A., December 12, 2010.

- **Mansingh G., Rao L.**, Osei-Bryson K. M., Mills A., (2010), “Application of data mining process model: A case study - Profiling Internet Banking Users in Jamaica”, in Proceedings of 16th Americas Conference on Information Systems (AMCIS), Lima, Peru, Aug 12-15, 2010.
- Jason Thompson and **Ashley Hamilton-Taylor**, “Active Object Diagrams”, in Proceedings of 2nd International Conference on e-Education, e-Business, e-Management and E-Learning (IC4E 2011), January 2011, Mumbai, India. IACSIT/IEEE.
- Kadian Davis and **Ashley Hamilton-Taylor**, “SKA for RBTs: An Interactive Multimedia Teaching Tool to Support the Learning of Red-black Trees”, in Proceedings of 2nd International Conference on e-Education, e-Business, e-Management and E-Learning (IC4E 2011), January 2011, Mumbai, India. IACSIT/IEEE.
- Kadian Davis and **Ashley Hamilton-Taylor**, “SKA for RBTS: An Algorithm Visualization System to Support Red-black Trees”. Poster, ACM SIGCSE 2011, March 2011, Dallas Texas.
- **Mansingh G.**, (2011). So that we may Reap from what we have Sown: Knowledge Management & KM Systems”, Strategies for Enhancing Jamaican Competitiveness in the Global Knowledge Economy, Jamaica Computer Society, Kingston, Jamaica, April 15-17 2011.
- **Rao L., Mansingh G.**, Osei-Bryson K. M., (2011). “A MCDM-based Decision Support System for Business Process Re-engineering Project Selection”. The 21st International Conference on Multiple Criteria Decision Making, Jyvaskyla, Finland, June 13-17, 2011.

PUBLICATIONS

Books

- * **Ezra Mugisa**, “An Approach to Architecture-Based Systematic Software Reuse: Plugging Components into an Architecture”, 300 pages, VDM Verlag Dr. Müller, 2010. ISBN-10: 3639316568, ISBN-13: 978-3639316568

Journal Articles

- * **Claudine A. Allen** and **Ezra K. Mugisa**, “Improving Learning Object Reuse Through OOD: A Theory of Learning Objects”, *Journal of Object Technology*, Volume 9, no. 6, November 2010, pp. 51-75, doi:10.5381/jot.2010.9.6.a3. (URL: http://www.jot.fm/contents/issue_2010_11/article3/html)
- * **Curtis Busby-Earle** and **Ezra K. Mugisa**, “Identifying Potential Security Flaws using Loophole Analysis and the SECRET”, *GSTF International Journal on Computing (JoC)*, Vol. 1 No. 2, February 2011, (ISSN: 2010-2283)
- * **D. T. Fokum**, V. S. Frost, D. DePardo, M. Kuehnhausen, A. N. Oguna, L. S. Searl, E. Komp, M. Zeets, D. Deavours, J. B. Evans, and G. J. Minden, “An Open System Transportation Security Sensor Network: Field Trial Experiences,” *Transactions on Vehicular Technology*, IEEE, vol. 59, no. 8, pp. 3942–3955, Oct. 2010.
- * **K Miller** and **S Suresh**, “Applications of Policy based Agents in Wireless Body Sensor Mesh Networks for Patient Health Monitoring”, *International Journal of e-Health and Medical communications*, Vol.2(2), pp. 24-45, IGI Publishing, 2011
- * R. A. Brown and **S Suresh**, “Intelligent Store Agent for Mobile shopper”, *International Journal of E-services and Mobile Applications*, Vol.3 (1), pp.56-71, IGI publishing, 2011
- * **Mansingh G.**, Osei-Bryson K. M., and Reichgelt H. (2011), “Using ontologies to facilitate post-processing of association

rule by domain experts”. *Information Sciences*, Vol. 181(3), February 2011, pp 419-434. doi:10.1016/j.ins.2010.09.027

- * **Ashley Hamilton-Taylor**, “Engaging Students in Developing Countries with ICT via a Multifaceted Foundation Course”, *UWI Quality Education Forum Journal*, OBUS, UWI, Mona, No.17, April 2011.
- * Kadian Davis and **Ashley Hamilton-Taylor**, “SKA for RBTs: Interactivity in Data Structures and Algorithm Courses with SKA for RBTs”. *International Journal of Innovation, Management and Technology (IJIMT)*, Volume 2, Number 1, February 2011, ISSN: 2010-0248.

INCOME GENERATION

We run a number of income generating programmes and activities and the income/expenditure figures are summarised in the table below:

Programme/Activity	Income	Expenditure	Net Income
MSc Computer Science			\$1,157,518.53
MSc CBMIS			Not available
Cisco Networking Academy	1,553,500.00	1,216,475.85	\$337,024.15
Summer School	\$1,859,797.00	\$1,445,758.95	\$414,038.05
Software Development			\$1.5M

PUBLIC SERVICE

Curtis Busby-Earle

- Member, Board of Governors, St. Hugh’s Preparatory School, Kingston

Paul Gaynor

- Director, The Sunset Optimist Club of Kingston

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)			BSc CSO			MPhil CS		
Faculty	FHE			FPAS			FPAS			FPAS		
Gender	M	F	Total	M	F	Total	M	F	Total	M	F	Total
1 st Class	1		1	5	5	6						
2 nd Class (Upper)	1		1	5	2	7						
2 nd Class (Lower)	2		2	11		11	1		1			
Pass	1		1	9	2	11						
Total	5		5	30	5	35	1		1	2	1	3

CSO = Computer Studies Option

Student Awards

The department was pleased to grant the Dr. Karl Robinson Award, for best performance in Computer Science courses up to semester 1 of year 3 in the programme to **Tahreif Hylton**.