

Benjamin Ngugi

Assistant Professor

Education

PhD, New Jersey Institute of Technology, Newark, New Jersey, Information Systems, 2005

BSc, University of Nairobi, Nairobi, Kenya, Electrical /Electronics Engineering, 1990

Teaching Interests

Information Security & Privacy, Information systems for Competitive Advantage

Research Interests

My research interests cut through three main areas-:

Security & Privacy:

This includes Behavioral Biometrics, Security of Medical Electronic Records and Devices, Fraud, Information Security, Privacy and Legal Compliance

Business Intelligence:

This includes Data Mining, Data Quality, Behavioral Patterns Recognition & Classification

Technology Adoption:

This includes Adoption of Behavioral Biometrics, E-Health Systems, Mobile Banking and Learning Technologies

Honors/Awards

2006: Passed CISA (Certified Information Systems Auditor) exam in June 2006. CISA is now the globally accepted standard of achievement among information systems audit, control and security professionals, ISACA.

Scholarship/Research

2008: Proceedings of the Seventh Annual Workshop on HCI Research in MIS, Paris, France.

Grants, Fellowships, or Contracts

2010 - "Suffolk University Summer Research Funding," (\$2,000).

ACADEMIC EXPERIENCE

Courses Taught

Management Information Systems

Security & Privacy

Business/Professional Experience

Instructor, New Jersey Institute of Technology, Started as a teaching assistant in the first year and then became a teaching instructor in the last three years, Newark, New Jersey (2001 - 2005).

INTELLECTUAL CONTRIBUTIONS

Refereed Journal Articles

Ngugi, B., Tremaine, M., Kamis, A. Intention to use Biometrics Systems. *To appear in e-Service Journal*.

Ngugi, B., Ogembo, J. G., Pelowski, M. (2010). M-Pesa: Investigating the Growth of Mobile Money Banking in Kenya. *The Electronic Journal of Information Systems in Developing Countries*, 43(3), 1-16.
<http://www.ejisdc.org/ojs2/index.php/ejisdc/article/viewFile/713/331>

Ngugi, B., Recce, M., Tarasewich, P. Typing Biometric Keypads: Combining Keystroke Time and Pressure Features to Improve Authentication. *To appear in Journal of Organizational and End User Computing (JOEUC)*.

- Ngugi, B., Tremaine, M., Tarasewich, P. Biometric Keypads: Improving Accuracy through Optimal Pin Selection. *To appear in Decision Support Systems and Electronic Commerce.*
- Ngugi, B., Dardick, G., Vega, G. (2009). PCI Compliance: Overcoming the Challenges. *International Journal of Information Security and Privacy*, 3(2), 54-67.
- Ngugi, B., Kahn, B., Tremaine, M. Biometric Keypads: Challenges to Improved Quality of Performance. *To appear in ACM Journal of Data and Information Quality.*

Book Chapters

- Ngugi, B., Dardick, G., Vega, G. Addressing Current PCI Compliance Challenges. In Nemati Hamid R. (Ed.), *Security and Privacy Assurance in Advancing Technologies: New Developments*. IGI Global.

Conference Proceedings

- Wu, D., Ngugi, B. (2010). *Incorporating Temporal Structure Components to Electronic Temporal Coordination Systems*. Lima: Proceedings of the 16th Americas Conference of Information Systems (AMCIS2010).
- Tarasewich, P., Ngugi, B., Sanghavi, M. (2009). *Exploring Employee Perspectives on Information Privacy and Security in the Mobile Environment*. HCI in MIS Session at HCI International Conference 2009.
- Wu, D., Ngugi, B. (2008). *Personal Temporal Structure Usage in Electronic Temporal Coordination Systems: A Qualitative Study - (Nominated for Best paper Award)*. Proceedings of the Seventh Annual Workshop on HCI Research in MIS, Paris, France, December 13, 2008.
- Wu, D., Tremaine, M., Ngugi, B. (2006). *Personal Use of Temporal Structures Involving Electronic Time Management Systems*. Proceedings of International Conference of ISOneWorld, Las Vegas, NV, USA. <http://www.information-quarterly.org/ISOWProc/2006ISOWCD/papers/42.pdf>
- Ngugi, B., Tremaine, M., Recce, M. (2004). *Fighting Identity Fraud with the Addition of Biometric Techniques*. American Conference on Information Systems. <http://aisel.isworld.org/pdf.asp?Vpath=AMCIS/2004&PDFpath=SIGSEC01-1254.pdf>

Other

- Lydia, S., Ngugi, B., Jafar, M. *Credit Card Fraud: A New Perspective on Tackling An Intransigent Problem*. Fordham Journal of Corporate and Financial Law.
- Ngugi, B., Dardick, G., Vega, G. (2009). *Lessons from Computer Intrusion at TJX* (2nd ed., vol. 5). The CASE Journal.

Non-Refereed Presentations or Papers

Regional

- Ngugi, B., Tremaine, M., Recce, M. (2004). *Secure and Transparent User Authentication at the Human-Computer Interface*. Presented at New Jersey's Homeland Security, Fort Monmouth, NJ, USA..
- Ngugi, B., Tremaine, M., Recce, M. (2004). *Secure and Transparent User Authentication at the Human-Computer Interface*. Presented at New Jersey's Homeland Security Conference, Fort Monmouth, Monmouth, New Jersey.

Faculty Development

Conference Attendance

2006: Attended AMCIS 2006 MIS Camp (Junior Faculty Consortium) conducted by Cindy Riemenschneider and Fred Davis both from the University of Arkansas.

The Camp consisted of a panel, interactive sessions, and role-playing exercises built around discussions of what it takes for junior faculty to become successful in the professoriate. Acapulco, Mexico.

Seminar

2009: The seminar expounded on the new Massachusetts rules that came into effect in 2009 requiring any business dealing with personal identifying information to implement information security protection and disclosure program to protect the data and inform concerned individuals if there is a breach

- The seminar was organized by the Suffolk University Law School who had invited leading Massachusetts regulators namely: Scott D. Schafer, the head of privacy enforcement for the Massachusetts Attorney General and David A. Murray, the chief architect of the Massachusetts identity theft regulations for the Officer of Consumer Affairs and Business Regulation (OCABR). Boston, Massachusetts.
- 2009: The seminar analyzed the magnitude and impact of recent fraud cases like Madoff. It begun by identifying the wrongdoers, then identified those who owed a legal duty to stop them or to warn the public, and then outlined the methods of recovering the money even if it has gone to innocent parties. The program focused on two principal areas that necessarily follow after an occurrence of fraud: 1. the consequences to, and the rights of, victims and 2. the sources and methods for obtaining repayment. The seminar was organized by Suffolk University Law School that had assembled leading and experienced experts to analyze this field, including the case law that has already developed. Boston, Massachusetts.
- 2008: The Boston Tech-Security Conference brought together private industry, academia, government decision makers and technical enthusiasts in the fields of Information & Network Security. Topics included: Intrusion Detection and Prevention Systems, Wireless Security, Web Hacking, Contingency Planning, Vulnerability Assessments, Threat Management Workshop, Computer/PDA & Enterprise Forensics, Password Recovery & Disk Wiping Tools, Internet Investigation Techniques. Boston, Massachusetts.
- 2008: Attended an Intellectual Property Seminar at Suffolk University Law School. The seminar explored the difference between trademarks, trade secrets, copyrights and patents, and how these differences play out in corporate America in an increasingly global world. This is becoming an increasingly important topic in the Information Security and Privacy area of my research because of the increased protection that IP assets require and increasing cases of business espionage Boston, Massachusetts.
- 2007: Attended a five day Case Writing Workshop in spring'2007 by Gina Vega of Salem State College. The objective of the workshop was to mentor faculty on writing of teaching case studies. As a result, I wrote the TJX computer intrusion case study and others will follow. Boston, Massachusetts.
- 2007: Attended an intrusion detection (procedures and practices) seminar in Framingham conducted by Dennis Huaman Jefferson Wells, Boston Framingham, Massachusetts.
- 2007: Attended a seminar on 'PCI compliance and Web eCommerce applications' on 12th October by Jim Weiler, Security Consultant, Staples, Inc.
PCI (payment card industry) compliance has about 200 requirements. The session discussed some practical approaches to find and apply these in eCommerce. As a result, I started writing a paper titled 'PCI Compliance: overcoming the challenges' Framingham, Massachusetts.
- 2006: Attended a Wireless Security seminar on 1st November by Martin Dolphin, CISA, CISM and CISSP. Senior Manager within the Ernst & Young Technology Security & Risk Services practice, based in the Boston, MA office.
The session discussed the tools and knowledge necessary to prepare and perform a wireless security assessment and interpret the results. Newton, Massachusetts.

SERVICE ACTIVITIES

College/School Assignments

Committee Member

- June 1, 2010 - June 1, 2012: Faculty Governance Council (FGC); The faculty governance council makes the governing policies enshrined in the handbook and monitors other coordinators with other committees in college to ensure efficient delivery of services.
- 2009: PSPC; I was a member of the PSPC committee. We reviewed several items including the implementation of the new faculty governance council, the proposed teaching task force and several handbook revisions.

Faculty Advisor

September 2009 - Present: Information Systems Club; Continued advising the IS club but now with Prof Neil Hunt taking the lead. Significant activities included the Winter club promotions and the Google Versus Bing competition.

June 1, 2010 - June 1, 2011: Information Systems Audit and Control Organization; Serving as a liaison between ISACA and students

Raise student awareness of ISACA

Encourage student to become student member of ISACA

Expose students to the professional opportunities available in the fields of IT, assurance and information security management..

2008: Information Systems Club; Continued advising the IS Club. Expanded the goals of the club to include attracting new IS majors and minors as well as helping the club members get internships and Jobs.

2008: Student Advising; Advised open and IS major students on their different program requirements and career goals..

2007: Information Systems Club; Rejuvenated the IS club in fall'2007. The goal of the Club is to promote interest in information systems through interesting IT projects , trips and guest speaker presentations.

2006: Student Advising; Advised about 22 students in choice of majors and classes.

University Assignments

Student Recruiter

Suffolk University Promoter; I have been promoting Suffolk University within the Kenyan community in different functions either as a guest speaker or as the education director in our community. Suffolk University is mostly know in west Africa because of its Senegal campus but is not know within the Kenyan community. This is now changing partly to my effort. I have had more than five prospects follow up with me and I have given recommendations to at least three. The most popular programs includes SBS undergraduate and graduate programs like the MSF program and Joint JD/MBA.

Department Assignments

Committee Chair

2009: ISOM Journal List; I led the gathering of inputs from IS faculty to update and finalize the 2009-2010 ISOM Journal List. Prof Ben Marcus led the initiative for the OM list.

Committee Member

January 2010 - June 2010: ISOM 310 Text Book Selection Committee; The committee consisted of all the main ISOM 310 professors namely Chrisy Yao (chair), Jonathan Frank, Arnold Kamis, Dennis Lee, Jafar Mana and myself

The goal was to come up with a new text book for ISOM 310 as the current book by Obrien was becoming outdated

Achievements-----

We developed a criteria for evaluation.

We search for different books being used in different schools
we evaluated this books along the identified criteria.

We shortlisted three books and eventually settled on the Text book by Valacich/ Schneider.

2008: Faculty Recruitment; Participated in the evaluation and shortlisting of various faculty candidates.

2008: IS Majors Recruiting Committee; The IS Major recruiting committee(Jafar Mana, Arnold Kamis and Benjamin Ngugi) goal is to design and develop strategies that can help recruit more IS majors through promotion using various channels.

2008: ISOM Journal List; Prof Chrisy Yao and I gathered inputs from ISOM faculty together with evaluation metrics earlier proposed by Prof Arnold Kamis and finalized the 2008-2009 ISOM Journal List.

June 1, 2007 - June 1, 2008: ISOM Journal List; Prof Arnold Kamis, Chrisy Yao and I worked in gathering faculty inputs in creating the 2007-2008 ISOM Journal List.

Achievements

We defined the criteria for Evaluating Research Journals in the ISOM Department.

We then gathered different Journals from the faculty and beyond and evaluated them using the developed criteria to come up with the IS Journal List.

2006: ISOM Department Open House March 22nd; Steve MacDonald and I co-hosted the ISOM department Spring'2007 Open House. The goal of the open house was to encourage students to consider taking an IS major/minor so as to have an edge over their competitors in the Jobs field.

Faculty Advisor

2005: Minor in ISOM brochure design committee; Steve MacDonald and I designed and printed a Minor in ISOM brochure for the ISOM department.

The goal of the brochure was to encourage non-ISOM students to take a minor in ISOM.

Professional Service

Committee Member

August 18, 2010 - August 20, 2010: the 4th International Conference on Cyberlaw; Conference Organization.

Reviewer, Journal Article

2008: Hawaii International Conference on System Sciences; 2008: 42st Hawaiian International Conference on System Sciences (HICSS-42)-2009, I served as a reviewer for the 'Electronic Marketing' minitrack. The paper that I reviewed was titled 'E-Mail bounce management using text mining' (International)..

2007: 41st Hawaiian International Conference on System Sciences (HICSS-41)-2008; I served as a reviewer for the 'Electronic Marketing' minitrack, HICSS 41 to be held in Hawaii. The paper that I reviewed was titled 'A Study on Perceived Risk of Online Shopping in Taiwan'.

Track Organizer

August 9, 2007 - August 12, 2007: AMERICAS' CONFERENCE ON INFORMATION SYSTEMS; I co-chaired a mini-track on the 'Technical and Educational Aspects of IS Security'.

Public Service

Guest Speaker

Kenyans in the Diaspora Conference 2009; Was a guest speaker and discussion in the information technology session.

Officer, Secretary

2006 - August 18, 2008: All Saints Community Church ,Development Committee; The development committee led in the search for the church hall and development of the church members in gaining financial security and career skills.

Program Coordinator

All Saints Community Church , Education and Counseling Ministry; Advices church members in educational matters, organizes for capacity development seminars.

Professional Memberships

Association for Computing Machinery (ACM).

Association for Information Systems (AIS).

Information Systems Audit and Control Association (ISACA).