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Education

- Expected 2013 **Doctor of Philosophy**, *Drexel University*, Philadelphia.
Electrical Engineering
- 2008 **Bachelor of Science**, *Drexel University*, Philadelphia.
Computer Engineering, *summa cum laude*

Professional Experience

- 2004–2007 **Student Laboratory Technician Specialist**, *Lockheed Martin, Maritime Systems and Sensors*, Moorestown, NJ.
Member of the technology protection and information assurance groups
- Performed binary and source code software security evaluations,
 - Developed software protection mechanisms for production code,
 - Evaluated commercial software protection solutions,
 - Performed security evaluations and remediation on production systems,
 - Applied for technology protection patent,

Research Projects

- 2008-current **Research Fellow**, *Drexel University, Department of Electrical and Computer Engineering*
- 2010–2011 **SAPIENT**, *Funding Agency: Lockheed Martin Advanced Technology Labs (ATL) and Defense Advanced Research Projects Agency (DARPA)*.
Evaluated solutions for reliable communication in highly constrained networks, considering bandwidth, latency, loss, and connectivity constraints. Considered heterogeneous networks comprised of satellite, tactical radio, WiFi, WiMax, and other links. Proposed methods for using Delay Tolerant Networking (DTN) to improve communication in such a network.
- 2008–2010 **CREW**, *Funding Agency: U.S. Army Communications-Electronics Research, Development, and Engineering Center (CERDEC)*.
Developed a system using a software-defined RF front-end and a MATLAB back-end to successfully detect specific sequences of RF emissions. Implemented advanced statistical detection techniques in both simulation and live environments. Evaluated the effectiveness of the detection technique in noisy urban environments. Performed a live demonstration of the complete system from a mobile platform, successfully identifying RF emissions injected into the live environment.
- 2004–2008 **Undergraduate student research assistant**, *Drexel University, Department of Electrical and Computer Engineering*
- 2004–2007 **RE-Detector**, *Funding Agency: Lockheed Martin, Maritime Systems and Sensors*.
Conducted a comprehensive survey and evaluation of reverse engineering tools, culminating in a report detailing these tools and their use in the reverse engineering process. Developed a system for detecting reverse engineering tools on a system using uniquely identifiable footprints of popular reverse engineering tools as part of a software protection technique. Developed a mechanism for dynamically classifying computer applications based on operating system interaction as a method of detecting clandestine functionality.

Teaching

- 2008-current Teaching Assistant, Drexel University, Department of Electrical and Computer Engineering
- 2008-current **ECE-S511, 512, and 513: Graduate Systems**, *Graduate-level course sequence covering mathematical foundations, linear systems, and nonlinear systems.*
Responsible for organizing course curriculum, developing and maintaining course website, creating and grading homework assignments, MATLAB projects, and exams. Held weekly office hours and help sessions for students and served as substitute instructor.
- 2010 **ECE-S690: Data Fusion**, *Ph.D. level course in data fusion.*
Responsible for creating and maintaining course website, creating and grading homework assignments, and providing additional help to students.
- 2010 **HNRS-301: Game Theory**, *Undergraduate honors-level course covering basic game theory.*
Responsible for creating and grading homework assignment, holding weekly office hours, and serving as substitute instructor.
- 2009 **ECE-S690: Game Theory**, *Graduate-level course in advanced game theory.*
Responsible for creating and maintaining course website, creating and grading homework assignments, and providing additional help to students.
- 2008 **ENGR-232: Dynamic Engineering Systems**, *Undergraduate course in dynamical systems.*
Responsible for proctoring weekly lab sections where students review the material taught in lecture and complete MATLAB projects related to the material. Responsible for grading homework, quizzes, and exams, and aiding in creation of exam questions.

Awards and Honors

- 2008-2009 Dean's Fellowship, Drexel University
- 2008 Graduated *summa cum laude* from Drexel University
- 2008 Finished 3rd Place, College of Engineering Senior Design Competition, for successful construction of Human-Electric hybrid vehicle

Invited Talks

- 2009 Lecture to Mechanical Engineering Senior Design students on the makings of a successful design project
- 2008 Presentation to John's Hopkins Center for Talented Youth Energy and the Environment workshop on the automobile and developing alternative transportation methods

Academic and Professional Organizations

- 2008-present Institute of Electrical and Electronics Engineers (IEEE)
- 2008-present American Society of Mechanical Engineers (ASME)
- 2008-present Applied Communications and Information Networking Center (ACIN), Camden, NJ, USA

Publications

- [1] Raymond Canzanese, Moshe Kam, and Spiros Mancoridis. Inoculation against malware infection using kernel-level software sensors. In *Proceeding of the 8th international conference on Autonomic computing, ICAC '11*, New York, NY, USA, 2011. ACM.