K R Damindra Savithri Bandara

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SUMMARY

Ph.D Candidate working in the area of wireless network and Software Defined Radio security actively seeking full time positions in Information Security and Threat Analysis. Skilled programmer, experience in conducting research, strong publications and good communication skills.

EDUCATION

George Mason University, Fairfax, VA — Expected Summer 2016
PhD in Information Technology — GPA 3.92/4.0

George Mason University, Fairfax, VA — December 2014
MSc in Information Security and Assurance — GPA 3.97/4.0

University of Peradeniya, Sri Lanka — August 2009
BSc (Honors) in Electrical and Electronic Engineering — GPA 3.8/4.0

COMPUTING SKILLS

- Programming: Python, Bash, Java, C/C++, Matlab, HTML, Servelet, JSP, PICC programming, Assembly language
- Database management: MySQL, MS Access
- Security: Applied cryptography, Security problem and threat analysis, Intrusion detection, Firewalls
  - Tools: Metasploit, Snort, Nmap, Cuckoo Sandbox
- Machine learning: Clustering, Classification, Regression, Matrix factorization
- Networking: NS2, Socket programming, Wireshark, Telnet.
- Wireless network planning: GSM, 3GPP and WiMax
- Software Designed Radios: Ettus USRP2 and GNU Radio.
- Microwave equipment and antenna design, Digital Signal Processing
- Operating environments: Windows, Linux, OS X
- Build tools: Auto tools, Cmake
- Version Control: Subversion, GitHub

WORK EXPERIENCE

Graduate Research Assistant-Information Technology — May 2015-Present
George Mason University, Fairfax, VA
Develop a cognitive radio to efficiently distribute spectrum, detect spectrum abuse and detect cyber threats for Positive Train Control operations – Ettus USRP2 to build the cognitive radio, use GNU radio platform, program using C++ and python

Wireless QA Engineer-Intern June 2014-August 2014
Time Warner Cable, Herndon, VA
Created a tool to extract the system response times for various backend systems (LDAP, WSD, ESD) from Wireshark PCAP files, Participated in throughput and feature testing for Wireless Access Points.

Graduate Teaching Assistant January 2014-May 2015
Department of computer science, George Mason University
Software Testing (Spring 2014), Network security (Spring 2014), Information Security Theory and Practice (Fall 2014 and Spring 2015) and Security Laboratory (Spring 2015).

Graduate Research Assistant-Information Technology August 2011-December 2013
George Mason University, Fairfax, VA
Designed a Matlab model to analyze the wireless bandwidth and power management for the Positive Train Control (PTC) operations and high-speed train operations. Results from the model were used to develop a risk model based on spectrum availability for train operations. Formally verified ZigBee protocol and identified that original ZigBee protocol is vulnerable to man in the middle attack. Verified using Casper, FDR2 and Avispa. Proof of concept using XBee modules. (Java based, XBee-API, Wireshark and KillerBee)

Temporary Lecture/Demonstrator August 2009-December 2010
University of Peradeniya , Sri Lanka
Taught Signals and Systems and Network analysis for 2nd year undergraduates, Instruct students to design microwave equipment and antennas, Instruct students to program embedded systems and Digital Signal Processing.

RECENT PUBLICATIONS

- Damindra Bandara, Tony Melargano, Duminda Wijesekara, Paulo Costa, " Multi-Tiered Cognitive Radio Network for Positive Train Control Operations", Accepted for JRC2016
- Damindra Bandara, Andre Abadie, Duminda Wijesekara, "Cell planning for high-speed train operations in USA", Paper No. JRC2015-5805, pp. V001T03A007. doi:10.1115/ JRC2015-5805
- Damindra Bandara, Andre Abadie, Tony Melaragno, Duminda Wijesekara, "Providing Wireless Bandwidth for High-speed Rail Operations", CENTERIS2014, November 2014, doi:10.1016/j.protcy.2014.10.082
- Andre Abadie, Damindra Bandara, Duminda Wijesekera,"Risk engine design as a key security enhancement to the standard architecture for cognitive radio", IGI Global Disseminator of Knowledge, August 2014
- Andre Abadie, Damindra Bandara, Duminda Wijesekera, "Instituting a Risk Engine as Cognitive Radio Technologies", National Wireless Research Collaborative Symposium, May 14-16, 2014

AWARDS AND ACTIVITIES

- Distinguished Academic Achievement Award -Department of Computer Science, George Mason University
- Outstanding Graduate Teaching Assistant Award- Department of Computer Science, George Mason University, Fairfax, VA - Spring 2014, Fall 2014, Spring 2015
- Fellowship to represent Sri Lanka in "ITU Telecom-Asia Youth forum 2008"
- Student member –Honor committee, George Mason University, Fairfax, VA, Fall 2013 to date