Imani Palmer

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Research Interest   Cyber Security, System Security, Real-Time Streaming Engines, Data Analysis

Education

University of Illinois at Urbana-Champaign, Urbana-Champaign, IL
Ph.D. Computer Science   December 2017
Advisor: Roy Campbell   Thesis: Forensic Analysis of Computer Evidence

University of Pittsburgh, Pittsburgh, PA
B.S. Computer Science   May 2013

Graduate Coursework

Communication Networks	Distributed Systems
Computer Security II	Security Reading Seminar
Privacy in the Internet Age	Advanced Operating Systems
Advanced Distributed Systems	Topics in Software Engineering
Human-Computer Interaction	Advanced Computer Security
Cloud Computing & Software-Defined X	

Professional Experience

Research Programmer

Supervisor: Tim Yardley   Jan. 2018 - Present
University of Illinois at Urbana-Champaign   Information Trust Institute

- Support development and testing efforts of software to facilitate research in information trust, resiliency, and security
- Produce documentation, project reports, and other written material related to software development efforts
- Work with students, faculty, and staff in identification of new features for the developed software

Graduate Research Assistant Intern

Supervisor: Boris Gelfand   May 2016 - August 2016
Los Alamos National Laboratory   Advanced Research Cyber Systems

- Perform a literature survey on evidentiary reasoning techniques
- Design and implement a framework to perform reasoning techniques

Supervisor: Canturk Isci   May 2015 - August 2015
IBM Watson Research Center   Cloud Monitoring, Operational & Security Analytics

- Investigate the security issues of operating system-based virtualization
- Implement a method for secure communication among operating system-based virtualization

Supervisor: Boris Gelfand   May 2014 - August 2014
Los Alamos National Laboratory   Advanced Computing Solutions
- Survey research on *Pass-The-Hash* attack
- Devise potential solutions to credential theft attacks

Technical Consultant
Supervisor: Sarah Wagner   January 2013 - August 2013

Study Abroad Office   University of Pittsburgh

- Develop a website for the Vira I. Heinz (VIH) scholarship program
- Manage daily operations of the VIH scholarship program

Systems Engineering Intern
Lockheed Martin   May 2012 - August 2012

- Automate the detection of inaccurate error reports information from logs
- Present the results from the automated detection program

Web Development Intern
Supervisor: Max Novelli   January 2010 - May 2010
Learning Research and Development Center   University of Pittsburgh

- Build a website that allowed for the proper dissemination of medical information in a laboratory setting

Research Experience	**Research Assistant** **University of Illinois at Urbana-Champaign**	**Aug. 2013 - Present**

Forensic Analysis of Computer Evidence   Fall 2016 - Present

- Implement various probabilistic models to determine user actions from forensic evidence
- Develop a framework that leverages probabilistic models for digital forensic investigations

Opportunistic Privilege Separation   Fall 2015 - Present

- Collaborate with researchers from both academia and industry to build a privilege separation framework
- Extend the implementation of the nested kernel architecture in order to determine fine-grained access control
- Implement the nested kernel architecture in order to explore the security issues of operating system-based virtualization

Digital Forensic Education Initiative   Fall 2014 - Fall 2015

- Work with a multidisciplinary team from the areas of law, information science, computer engineering, information technology & education services
- Establish a digital forensics curriculum for undergraduate students at the University of Illinois at Urbana-Champaign

Credential Theft   Fall 2014 - Present

- Mentor undergraduate students interested in security
- Compare the effectiveness of current credential theft detection methods
- Evaluate potential solutions towards credential theft

LibVMI Intrusion Detection Tool   Fall 2013 - Spring 2014

- Investigate the detection of rootkits in virtual environments
- Maintain a limited degradation in performance

Teaching Experience	**CS 598 - Ethical Thinking in Cyber Space** Fall 2017 - Present

Teaching Experience

CS 598 - Ethical Thinking in Cyber Space   Fall 2017 - Present
Instructors: Jane Blanken-Webb, Prof. Nicolas Burbles, Prof. Roy Campbell, Prof. Masooda Bashir

- Effectively work with various subject matter experts in the development of courses
- Create new course content meeting standards set by team
- Identify and suggest ways to improve course material

CS 498 - Digital Forensics I   Fall 2017
Instructors: John Bambeneck CISSP, Prof. Roy Campbell, Prof. Jay Kesan

- Instruct students during the laboratory sessions on their assignments

CS 498 - Digital Forensics II   Fall 2015
Instructor: Prof. Roy Campbell

- Present a lecture on the topic of the quantification of digital forensic analysis

Cloud Computing Applications - Coursera Course   Fall 2015
Instructors: Prof. Roy Campbell & Reza Farivar

- Create lectures, write homework assignments and develop exams for a Coursera course focused on cloud computing applications

CS 591 - Security Reading Seminar   Fall 2014, Spring 2015, Fall 2015, Fall 2016
Instructor: Roy Campbell

- Run a discussion group on the various security topics

CS 498 - Cloud Computing   Spring 2013
Instructors: Prof. Roy Campbell & Rez Farivar

- Tutor, hold office hours, invigilate exams, and assist the professors

Publications

Palmer, Imani., Gelfand, Boris., Campbell, Roy. *Exploring Digital Evidence with Graph Theory.* Annual Conference on Digital Forensics, Security & Law, (2017).

Palmer, Imani, et al. *Digital Forensics Education: A Multidisciplinary Curriculum Model.* International Conference on Digital Forensics and Cyber Crime. Springer International Publishing, 2015.

Nagy, Stefan, **Palmer, Imani**, et al. *An Empirical Study On Current Models for Reasoning about Digital Evidence.*

Lamps, Jereme, **Imani Palmer**, and Read Sprabery. *WinWizard: Expanding Xen with a LibVMI Intrusion Detection Tool.* 2014 IEEE 7th International Conference on Cloud Computing. IEEE, 2014.

Presentations

Tapia Doctoral Consortium, August 2017
Forensic Analysis of Computer Evidence

- Present my thesis research to a panel of judges in order to receive feedback and improve my dissertation research

International Forensic Science Error Management Symposium, July 2017
Forensic Analysis of Computer Evidence

- Present my continuing research in the application of reasoning models to the analysis of digital evidence

Cyber Defense and Disaster Recovery Conference, March 2016
The Quantification of Digital Forensic Analysis

- Present my continuing research in the application of reasoning models to the analysis of digital evidence

CAE Tech Talk, January 2016
An Empirical Study on Current Models for Reasoning about Evidence

- Online presentation about the application of current probabilistic models to reasoning about digital evidence

The 19th Colloquium for Information Systems Security Education, Summer 2015
Utilizing a Workshop Format to Foster Discussion: Multidisciplinary Undergraduate Curriculum in Digital Forensics Development

- Aid in the development of a presentation on the results collected from the *1st International Workshop on Digital Forensic Curriculum Standards*

2nd International Workshop on Digital Forensic Curriculum Standards, August 2014

- Aid in the discussion of a digital forensics curriculum standardization, by bringing together representatives from digital forensics standardization organizations, practicing digital forensics professionals, and educators from universities and colleges that have established digital forensics curricula or are considering adopting them

Vira I. Heinz Leadership Development Retreat, September 2013, September 2014

- Enrich a group of female study abroad scholarship recipients about the role of women in industry, academia, and society

Articles	Innes, Elizabeth. *I-STEM Education Initiative.* I-STEM-Imani Palmer. I-STEM, 15 May 2014. Web. 24 Aug. 2016.
Technical Skills	**Proficient Languages**: Android, Java, Python **Familiar Languages**: C, C++, Perl, Bash, SQL **Version Control Systems**: Git, SVN **Distributed System Technology**: Spark, Storm, MapReduce, Hadoop, MongoDB, Redis **Operating Systems**: Unix, Linux, Mac OSX, Windows, Android **Applications**: Emacs, Eclipse, Vim, Docker, VMWare, VirtualBox, Volatility, Nmap, Sleuthkit, Metasploit, tcpdump, Wireshark
Awards	**Student Scholarship to attend the Center of Trustworthy Scientific Cyberinfrastructure Summit** A full travel and participation scholarship in order to share in building a trusting, collaborative community with goals to address the community's core cybersecurity challenges August 2017 **Microsoft Diversity Travel Scholarship**

A full travel and registration scholarship designed to empower the students that study Computer Science and related STEM fields to attend diversity conferences
September 2017

University of Illinois SURGE Fellowship
A fellowship designed to increase diversity within the engineering student body
2013 - 2018

University of Pittsburgh, University Scholarship
A full tuition scholarship awarded based on academic performance in high school, including criteria in weight grade point average, strength of curriculum, class rank, and results of the SAT or ACT
Fall 2009 - Spring 2013

Volunteer Work	**Graduate Mentor**	2014, 2015, 2016
	Graduate Ambassador	2014, 2015, 2016
	SURGE Ambassador	2014, 2015, 2016
	Webmaster for I-Trek	Fall 2013 - Present

References Available Upon Request