Michael K. Mabey

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LinkedIn

EDUCATION

PhD Computer Science — Information Assurance *(expected) May 2017*
Arizona State University Tempe, AZ
Research Topics: Email forensics, Chrome OS forensics, Collaborative forensics

M.S. Computer Science — Information Assurance *Aug 2011*
Arizona State University Tempe, AZ
Committee: Gail-Joon Ahn (Chair), Stephen S. Yau, Dijiang Huang
Thesis: Collaborative Digital Forensics: Architecture, Mechanisms, and Case Study

B.S. Computer Science — Information Systems *May 2009*
Utah State University Logan, UT

EXPERIENCE

Research Assistant *Nov 2009 – Present*
Security Engineering for Future Computing (SEFCOM) Lab, ASU Tempe, AZ
Lab Directors: Gail-Joon Ahn, Adam Doupé
Sponsors: Department of Energy, National Science Foundation

· Recipient of the Department of Defense Information Assurance Scholarship Program (IASP) from 2012–2016 (4 school years).
· Researched forensic techniques for **Chrome OS/Chromium OS** by creating tools in **Python** and using **libvirt** to interface with a **KVM/QEMU** hypervisor. (In progress)
· Developed a web email forensic acquisition approach that reestablishes persistent cookie sessions stored by a browser, and automated the process using **Python** and **Selenium**.
· Designed and implemented the core components of a modular, highly scalable, collaboration-centric digital forensic framework built on the **OpenStack** cloud architecture. Functions of the components included distributed job scheduling, storage management, and concise evidence representation and transmission.

Teaching Assistant *Aug 2010 – Dec 2015*
Arizona State University Tempe, AZ

· CSE 465 Information Assurance with Dr. Gail-Joon Ahn: Fall 2010, Fall 2015.
· CSE 469 Computer and Network Forensics with Dr. Gail-Joon Ahn: Spring 2015.
· FSE 100 Introduction to Engineering with Dr. Ryan Meuth: Spring 2014.
· CSE 423/424 Capstone I and CSE 485/486 Capstone II with Dr. Debra Calliss: Spring 2014.
· CSE 467 Data & Information Security with Dr. Gail-Joon Ahn: Spring 2011.

SAT/ACT Instructor *Sep 2015 – Oct 2015*
Minerva Learning, LLC Chandler, AZ

· Individual tutor for a high school student preparing for the PSAT.

Summer Intern *Jul 2015 – Sep 2015*
Arizona Cyber Threat Response Alliance (ACTRA) Phoenix, AZ

· Designed an operationalized workflow for AZ Infragard member organizations to share **threat intelligence** through a common **STIX/TAXII** platform.

Teaching Assistant (Instructor of Record)   *Aug 2011 – Dec 2014*
Arizona State University   *Tempe, AZ*

· CSE 465 Information Assurance: Fall 2014.
· FSE 100 Introduction to Engineering: Fall 2011 – Fall 2013 (5 semesters).

Student Trainee (Civilian)   *Jun 2013 – Aug 2013, Jun 2014 – Aug 2014*
US Army   *Fort Meade, MD*

· Summer internships in connection with DoD IASP scholarship.

Graduate Student Summer Intern   *May 2011 – Jul 2011*
Sandia National Laboratories   *Albuquerque, NM*

· Helped design a dynamic malware analysis framework built on **OpenStack**, allowing incident responders to define customizable analysis environments and use arbitrary analysis tools in triage or manual analysis mode.
· Wrote **Python** scripts to automate the setup process for using a SheevaPlug computer as a wireless intrusion detection agent running **Kismet**.

PUBLICATIONS (SELECTED)

[1] **Mike Mabey**, Adam Doupé, Ziming Zhao, and Gail-Joon Ahn. "dbling: Identifying Extensions Installed on Encrypted Web Thin Clients". In: *Digital Investigation* (2016). The Proceedings of the Sixteenth Annual DFRWS Conference (In Press).

[2] **Mike Mabey** and Gail-Joon Ahn. "Towards Collaborative Forensics". In: *Information Reuse and Integration in Academia and Industry*. Ed. by Tansel Özyer, Keivan Kianmehr, Mehmet Tan, and Jia Zeng. Springer Vienna, 2013, pp. 237–260. ISBN: 978-3-7091-1537-4. DOI: 10.1007/978-3-7091-1538-1_12 .

[3] Justin Paglierani, **Mike Mabey**, and Gail-Joon Ahn. "Towards Comprehensive and Collaborative Forensics on Email Evidence". In: *Collaborative Computing: Networking, Applications and Worksharing (Collaboratecom), 2013 9th International Conference Conference on*. October 2013, pp. 11–20. DOI: 10.4108/icst.collaboratecom.2013.254125 .

[4] **Mike Mabey** and Gail-Joon Ahn. "Towards Collaborative Forensics: Preliminary Framework". In: *Information Reuse and Integration (IRI), 2011 IEEE International Conference on*. August 2011, pp. 94–99. DOI: 10.1109/IRI.2011.6009527 .

TECHNICAL STRENGTHS & QUALIFICATIONS

Research Interests	Digital Forensics, Cyber Security
Programming Languages	Python, C/C++, HTML, CSS, LaTeX
Forensic Tools	FTK, Sleuth Kit & Autopsy, dd, HxD, etc.
Protocols & APIs	JSON, XML, REST, STIX/TAXII
Network Administration/Security	OpenVPN, Wireshark, ufw, Apache, lighttpd
Operating Systems	Windows, Linux, Chrome OS
Databases	MySQL, SQLite

AWARDS AND ACTIVITIES

· DoD Information Assurance Scholarship Program (IASP) Recipient (4 years)   *2012 – 2016*
· Inducted into Eta Kappa Nu (HKN) Engineering Honors Society   *Nov 2010*
· Team Leader — ASU team in the UCSB International CTF   *2009, 2010, 2014, 2015*
· Eagle Scout, Boy Scouts of America   *2002*
· Tallest Graduate Student at ASU   (not an actual award)