

# Michael K. Mabey

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## EDUCATION

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- PhD Computer Science – Information Assurance** (expected) May 2017  
Arizona State University | GPA 3.76  
Tempe, AZ  
*Research Topics:* Email forensics, Chrome OS forensics, Collaborative forensics
- M.S. Computer Science – Information Assurance** Aug 2011  
Arizona State University | GPA 3.58  
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 | GPA 3.25  
Logan, UT

## EXPERIENCE

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- 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 2012–2017 (5 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.
- Civilian Reserve/Intern** May 2016 – Aug 2016  
Arizona Department of Public Safety  
Phoenix, AZ
- Updated the content, layout, and topics of the security policy for the Arizona Counter Terrorism Information Center (ACTIC) for clarity and to be in compliance with recommendations from the Department of Homeland Security.
  - Created training slides to accompany the new security policy.
- 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.
- 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

Sandia National Laboratories

May 2011 – Jul 2011

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**.

## Graduate Student Recruitment Specialist/Webmaster

Electrical & Computer Engineering Department, USU

Jul 2006 – Aug 2009

Logan, UT

- Primary responsibilities included maintaining and augmenting the department website using **PHP**, **MySQL**, and other basic web technologies like **CSS**, **JavaScript**, and an **SMTP** server.
- Completed multiple graphics design projects for the department using **Photoshop**, **Illustrator**, and **GIMP**.

## 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* 18 (August 2016). The Proceedings of the Sixteenth Annual DFRWS Conference, S55–S65. ISSN: 17422876. DOI: 10.1016/j.diin.2016.04.007 [↗](#).
- [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. (Extended version of [4]). 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

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

## AWARDS AND ACTIVITIES

- DoD Information Assurance Scholarship Program (IASP) Recipient (5 years) 2012 – 2017
- 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)