Michael K. Mabey

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LinkedIn

EDUCATION

PhD Computer Science — Information Assurance *(expected) May 2017*
Arizona State University Tempe, AZ

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

> In order to catch the smartest criminals in the world, digital forensics examiners need a means of collaborating and sharing information that is not prohibitively difficult and that complies with standard operating procedures and the rules of evidence. In this work I present the design and implementation of the Collaborative Forensic Framework (CUFF) which is designed to include collaboration-facilitating components. I also give the details of a realization of CUFF, which uses a combination of Java, the Google Web Toolkit, Django with Apache for a RESTful web service, and an Ubuntu Enterprise Cloud using Eucalyptus.

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

RESEARCH EXPERIENCE

Research Assistant *Nov 2009 – Present*
Security Engineering for Future Computing (SEFCOM) Laboratory at ASU Tempe, AZ
Lab Directors: Gail-Joon Ahn, Adam Doupé

RESEARCH INTERESTS

- Digital Forensics
- Web and Email Forensics

PUBLICATIONS

Peer-Reviewed Book Chapters & Journal Papers

[1] Wonkyu Han, Mike Mabey, Gail-Joon Ahn, and Tae Sung Kim. Simulation-Based Validation for Smart Grid Environments: Framework and Experimental Results. In Thouraya Bouabana-Tebibel and Stuart H. Rubin, editors, *Integration of Reusable Systems*, volume 263 of *Advances in Intelligent Systems and Computing*, pages 27–44. Springer International Publishing, 2014. ISBN 978-3-319-04716-4. DOI:10.1007/978-3-319-04717-1_2.

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

Conference Proceedings

[1] 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*, pages 11–20. October 2013.

[2] Wonkyu Han, Mike Mabey, and Gail-Joon Ahn. Simulation-Based Validation for Smart Grid Environments. In *Information Reuse and Integration (IRI), 2013 IEEE 14th International Conference on*, pages 14–21. August 2013. DOI:10.1109/IRI.2013.6642448.

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

Poster Presentations

[1] Mike Mabey, Jeremy Whitaker, Gail-Joon Ahn, and Adam Doupé. Towards Forensics for Web Thin Clients. *Symposium on Information Assurance Research and Education, ASU*, November 2015.

[2] Jeremy Whitaker, Mike Mabey, Gail-Joon Ahn, and Adam Doupé. Forensic Analysis on Mobile Devices. *Symposium on Information Assurance Research and Education, ASU*, October 2014.

[3] Mike Mabey, Justin Paglierani, and Gail-Joon Ahn. Towards Collaborative Forensics. *Workshop on Information Assurance Research and Education, ASU*, April 2012.

Blog Posts

[1] Mike Mabey. Fixing repo init to check out Chromium OS code. http://mikemabey.blogspot.com/2015/01/fixing-repo-init-to-check-out-chromium.html, January 2015.

[2] Mike Mabey. Getting into Developer Mode on the HP Pavilion 14 Chromebook. http://mikemabey.blogspot.com/2013/05/getting-into-developer-mode-on-hp.html, May 2013.

[3] Mike Mabey. Debian on Android and my quest for a full-fledged terminal Python IDE. http://mikemabey.blogspot.com/2012/06/debian-on-android-and-my-quest-for-full.html, June 2012.

[4] Mike Mabey. OpenVPN Update: Fixed! http://mikemabey.blogspot.com/2012/06/openvpn-update-fixed.html, June 2012.

Works in Progress

- "Forensics for Web Thin Clients" — Presents a technique for fingerprinting Chrome OS extensions and identifying which extensions are installed on an encrypted file system.

TEACHING EXPERIENCE

Teaching Assistant *Aug 2010 – Present*
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.

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, Spring 2012, Fall 2012, Spring 2013, and Fall 2013.

TEACHING INTERESTS

- Computer and Network Forensics
- Advanced Topics in Digital Forensics
- Information Assurance
- Security Toolkit Programming with Python
- Cryptography
- Software Security

SERVICE

Department

- Team Leader: ASU team in the UCSB International CTF *2009, 2010, 2014, 2015*
- Panelist: PhD Open House Student Panel *Feb 2014, Feb 2015*

Profession

- Student Program Committee Member:
  - IEEE Security & Privacy *2016*
- Conference Proceedings Subreviewer:
  - ACM CODASPY *2013, 2014, 2015, 2016*
  - SACMAT *2014*
  - ASIACCS *2014*

PROFESSIONAL EXPERIENCE

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** information through a common platform.
- Created a presentation introducing the basics and benefits of **STIX/TAXII**.

Student Trainee *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.

HONORS AND AWARDS

- DoD Information Assurance Scholarship Program (IASP) Recipient (4 years) *2012 – 2016*
- Inducted into Eta Kappa Nu (HKN) Engineering Honors Society *Nov 2010*
- Eagle Scout, Boy Scouts of America *2002*

PROFESSIONAL MEMBERSHIPS

- IEEE (Student Member)
- IEEE Computer Society

PROFESSIONAL DEVELOPMENT

- Preparing Future Faculty (GRD 791 at ASU) *Aug 2015 – Present*
  The Preparing Future Faculty (PFF) program is a year-long series of seminars, discussions and activities designed to expose graduate students and postdocs more fully to the realities of teaching, research and service in higher education.
- Writing Effectively: The Art of Argument (Workshop at ASU) *Oct 2015*