

Michael K. Mabey

(480) 788-3411 ♦ mmabey@asu.edu ♦ mikemabey.com



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

In order to catch the smartest criminals in the world, digital forensic examiners need a means of collaborating and sharing information that is not prohibitively difficult to use 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 a cloud-based forensic analysis environment that facilitates collaboration among examiners and their trusted colleagues. CUFF makes a positive impact on forensic examiners' efficiency by helping them leverage their network of subject matter experts while also tapping into the scalability and power of the cloud.

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

EXPERIENCE SUMMARY

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

Teaching Assistant, Teaching Assistant (Instructor of Record) Aug 2010 – Dec 2015
Arizona State University Tempe, AZ

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

Student Trainee Jun 2013 – Aug 2013, Jun 2014 – Aug 2014
US Army Fort Meade, MD

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

Graduate Student Recruitment Specialist/Webmaster Jul 2006 – Aug 2009
Electrical & Computer Engineering Department USU Logan, UT

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

RESEARCH EXPERIENCE

Research Assistant

Security Engineering for Future Computing (SEFCOM) Laboratory at ASU
Lab Directors: Gail-Joon Ahn, Adam Doupé

Nov 2009 – Present
Tempe, AZ

RESEARCH INTERESTS

- Digital Forensics
 - Web and Email Forensics
 - Forensics on Non-Traditional Devices
- Cyber Security
 - Threat Intelligence Sharing
 - Web Security

PUBLICATIONS

Peer-Reviewed Conference Proceedings

- [C1] 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 on, pages 11–20. October 2013.
- [C2] 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.
- [C3] **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.

Peer-Reviewed Book Chapters & Journal Papers

- [J1] 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.
- [J2] **Mike Mabey** and Gail-Joon Ahn. Towards Collaborative Forensics. In Tansel Özyer, 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.

Poster Presentations

- [P1] **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.
- [P2] 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.
- [P3] **Mike Mabey**, Justin Paglierani, and Gail-Joon Ahn. Towards Collaborative Forensics. *Workshop on Information Assurance Research and Education, ASU*, April 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 INTERESTS

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

TEACHING EXPERIENCE

Teaching Assistant

Arizona State University

Aug 2010 – Dec 2015

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)

Arizona State University

Aug 2011 – Dec 2014

Tempe, AZ

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

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*
- Student Volunteer:
 - ACM CCS *2014*

Technical Blog Posts

- [B1] **Mike Mabey**. How to check out an old version of Chromium OS. <http://mikemabey.blogspot.com/2016/02/how-to-check-out-old-version-of.html>, February 2016.
- [B2] **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.
- [B3] **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.
- [B4] **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.
- [B5] **Mike Mabey**. OpenVPN Update: Fixed! <http://mikemabey.blogspot.com/2012/06/openvpn-update-fixed.html>, June 2012.

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.

Graduate Student Recruitment Specialist/Webmaster

Jul 2006 – Aug 2009

Electrical & Computer Engineering Department USU

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**.

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*

REFERENCES

Please feel free to contact any of my references.

Gail-Joon Ahn

Director, Center for Cybersecurity and Digital Forensics

Professor of Computer Science and Engineering

Fulton Entrepreneurial Professor

School of Computing, Informatics and Decision Systems Engineering

Ira A. Fulton Schools of Engineering, Arizona State University

Brickyard Engineering (BYENG) Bldg, Room 486

699 S. Mill Avenue

Tempe, AZ 85281



Phone: (480) 965-9007

Fax: (480) 965-2751


<http://www.public.asu.edu/~gahn1/>

gahn@asu.edu



Adam Doupe

Assistant Professor of Computer Science and Engineering
School of Computing, Informatics and Decision Systems Engineering
Ira A. Fulton Schools of Engineering, Arizona State University
Brickyard Engineering (BYENG) Bldg, Room 472
699 S. Mill Avenue
Tempe, AZ 85281
Fax: (480) 965-2751
<http://adamdoupe.com> 
doupe@asu.edu 

Frank J. Grimmelmann

President & CEO/Intelligence Liaison Officer
Arizona Cyber Threat Response Alliance (ACTRA)
Phone: (623) 551-1526
Fax: (623) 551-4221
fgrimmelmann@actraaz.org 

Stephen S. Yau

Director, Information Assurance Center 
Professor of Computer Science and Engineering
School of Computing, Informatics and Decision Systems Engineering
Ira A. Fulton Schools of Engineering, Arizona State University
Brickyard Engineering (BYENG) Bldg, Room 488
699 S. Mill Avenue
Tempe, AZ 85281
Phone: (480) 965-2647
Fax: (480) 965-2751
<http://dpse.eas.asu.edu/yau/> 
yau@asu.edu 