Anastasia Shuba

PERSONAL INFORMATION	Website: https://nshuba.github.io/	E-mail: ashuba22@gmail.com

RESEARCH INTERESTS

Mobile Security and Privacy, Ad-blocking, Mobile Data Analytics

EDUCATION

University of California, Irvine

Ph.D in Computer Engineering — *Sept. 2014 – Jun. 2019*
- Thesis: "Mobile Data Transparency and Control"
- Advisor: Athina Markopoulou
- GPA: 3.7

M.S. in Computer Engineering — *Sept. 2014 – Jun. 2016*
- Thesis: "AntMonitor: A System for Mobile Network Monitoring"
- Advisor: Athina Markopoulou
- GPA: 3.7

B.S. in Computer Engineering — *Sept. 2010 – Jun. 2014*
- Thesis: "Home Automation with Android"
- Advisor: Kwei-Jay Lin
- GPA: 3.8
- Graduated with Cum Laude

WORK EXPERIENCE

Broadcom Inc.

R&D Engineer — *Nov. 2019 – present*

Working on network security solutions for Windows, OS X, and Linux.

Symantec Corporation

Sr. Software Engineer — *Aug. 2019 – Nov. 2019*

Worked on network security solutions for Windows, OS X, and iOS.

Software Engineering Intern — *Jun. 2018 – Sept. 2018*
Worked on network security solutions for Android and iOS.

Metronome Software

Graduate Software Engineering Intern — *Jun. 2016 – Sept. 2016*

Graduate Software Engineering Intern — *Jun. 2015 – Aug. 2015*

Software Engineering Intern — *Oct. 2012 – Sept. 2014*
Designed and implemented a system aimed toward automatic forensic analysis using Volatility, The Sleuth Kit, LibVMI, and various virtualization platforms. Designed and implemented Android applications using Java and SQLite. Implemented web servers using Java, Hibernate, PostgreSQL, and Python.

Praxis BioSciences

Software Engineering Intern   *June 2012 – Sept. 2012*

Developed medical systems that involved Android devices and microcontrollers.

ACADEMIC
EXPERIENCE

University of California, Irvine

Graduate Research Assistant   *Sept. 2014 – Jun. 2019*

Advisor: Athina Markopoulou
Designed and implemented Android applications aimed at helping users preserve their privacy. Developing machine learning models to predict presence of personal information, trackers, and advertisement in mobile network traffic.

Undergraduate Research Assistant   *Sept. 2013 – Jun. 2014*
Advisor: Kwei-Jay Lin
Designed and implemented an Android app used to control a home automation system.

Undergraduate Research Assistant   *Apr. 2012 – Jun. 2012*
Advisor: Rainer Doemer
Enhanced system level design in C++ for a SpecC reference compiler and simulator.

HONORS AND
AWARDS

PETS 2018: The Andreas Pfitzmann Best Student Paper Award
ARCS Foundation Scholar Award 2016-2018
University of California, Irvine EECS Fellowship 2014-2016
MobiHoc 2018: Student Travel Grant Award
SIGCOMM 2017: N2 Women Student Travel Grant Award
SIGCOMM 2017: Student Travel Grant Award
PETS 2017: Student Travel Grant Award
MobiCom 2015: Student Travel Grant Award
University of California, Campuswide Honors Program 2011-2014
Edison Scholarship 2010-2014

PUBLICATIONS

Peer-Reviewed Publications

1. <u>A. Shuba</u>, A. Markopoulou, "NoMoATS: Towards Automatic Detection of Mobile Tracking," *to appear in Proceedings of the Privacy Enhancing Technologies Symposium (PoPETs), 2020*

2. J. Varmarken, H. Le, <u>A. Shuba</u>, A. Markopoulou, Z. Shafiq, "The TV is Smart and Full of Trackers: Measuring Smart TV Advertising and Tracking," *to appear in Proceedings of the Privacy Enhancing Technologies Symposium (PoPETs), 2020*

3. <u>A. Shuba</u>, Z. Shafiq, A. Markopoulou, "NoMoAds: Effective and Efficient Cross-App Mobile Ad-Blocking," *Proceedings of the Privacy Enhancing Technologies Symposium (PoPETs), 2018*, **The Andreas Pfitzmann Best Student Paper Award**

4. <u>A. Shuba</u>, E. Bakopoulou, A. Markopoulou, "Privacy Leak Classification on Mobile Devices," *IEEE International Workshop on Signal Processing Advances in Wireless Communications (SPAWC), 2018*

5. <u>A. Shuba</u>, A. Le, M. Gjoka, J. Varmarken, S. Langhoff, A. Markopoulou, "AntMonitor: Network Traffic Monitoring and Real-Time Prevention of Privacy Leaks in Mobile Devices," *Proceedings of ACM S3 Workshop on Mobile Computing and Networking, 2015*

6. A. Le, J. Varmarken, S. Langhoff, <u>A. Shuba</u>, M. Gjoka, A. Markopoulou, "AntMonitor: A System for Monitoring from Mobile Devices," *Proceedings of ACM SIGCOMM Workshop on Crowdsourcing and Crowdsharing of Big Internet Data, 2015*

Demos

5. <u>A. Shuba</u>, A. Markopoulou, "Demo: AntWall - A System for Mobile Adblocking and Privacy Exposure Prevention," *Proceedings of the 18th ACM International Symposium on Mobile Ad Hoc Networking and Computing, 2018*

6. <u>A. Shuba</u>, A. Le, M. Gjoka, J. Varmarken, S. Langhoff, A. Markopoulou, "Demo: AntMonitor - A System for Mobile Traffic Monitoring and Real-Time Prevention of Privacy Leaks," *Proceedings of 21st International Conference on Mobile Computing and Networking, 2015*

7. <u>A. Shuba</u>, A. Le, M. Gjoka, J. Varmarken, S. Langhoff, A. Markopoulou, "Demo: AntMonitor - Network Traffic Monitoring and Real-Time Prevention of Privacy Leaks in Mobile Devices," *Proceedings of ACM S3 Workshop on Mobile Computing and Networking, 2015*, **Best Demo Award**

Teaching Experience

University of California, Irvine

Teaching Assistant   *Fall 2016, Fall 2017, Spring 2019*
EECS 148/CS 132 - Computer Networks

Ikazuchi Dojo

Technical Director   *Dec. 2017 – present*
Instructor   *Dec. 2014 – Dec. 2017*
Assistant Instructor   *Sept. 2014 – Dec. 2014*
In charge of curriculum development and test requirements. Leading weekly Aikido classes for groups of various ages and backgrounds. Mentoring students who are preparing for belt testing. Providing private training sessions for individuals wishing to accelerate their development.

Blizzard Entertainment

Visiting Martial Arts Instructor   *May 2015 – present*
Leading Aikido training courses for groups of gaming industry professionals.

Anteater Recreation Center

Martial Arts Instructor   *Sept. 2014 – Jun. 2016*
Designing and leading 10-week Aikido courses for groups of 10-35 university students.

Newport Harbor High School

Tutor   *Sept. 2010 – March 2012*

Tutored groups of 20-40 students of different backgrounds in advanced math and physics.

Discovery Science Center

Presenter   *July 2011 – Sept. 2011*

Explained scientific concepts to children in a fun and engaging way.

Computing
Skills

Programming Languages: Java, Python, JavaScript, Swift, C/C++
Mobile Development: Android and iOS
Miscellaneous: socket programming and network protocols (TCP/IP, DNS, HTTP)

Professional
Activities

Student Volunteer: ACM CoNEXT 2016, PETS 2017, N2 Women Workshop 2017, SIGMETRICS 2018