

GÜLİZ SERAY TUNCAY

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Education

UNIVERSITY OF ILLINOIS, AT URBANA-CHAMPAIGN

Ph.D. in Computer Science, GPA: 3.96 / 4.0

UNIVERSITY OF FLORIDA

M.Sc. in Computer Engineering, GPA: 3.86 / 4.0

December 2013

MIDDLE EAST TECHNICAL UNIVERSITY (METU), Ankara, Turkey

B.Sc. in Computer Engineering, GPA: 3.94 / 4.0, Ranked first

June 2010

Technical Skills

- *Programming languages:* Java, C, C++, Python, MATLAB
- *Database:* MySQL, Oracle
- *Other:* Android Programming, Android Framework Programming, Internet of Things devices (ARM Cortex-M microcontrollers: mbed, Nordic platforms), Arduino, Ember-CLI

Honors & Awards

- Cyber Security Awareness Worldwide (CSAW) applied research competition finalist Nov 2018
- Distinguished Paper Award at Network and Distributed System Security Symposium (NDSS) Feb 2018
- Heidelberg Laureate Forum Young Researcher Sept 2017
- Android Security Bug bounty (high and medium severity bugs) Mar. 2017
- ACM MobiCom App competition finalist Sept 2014
- ACM MobiCom Student Research Competition Participant 2012, 2013, 2014
- Internet Society (ISOC) scholarship, Grace Hopper Celebration of Women in Computing Aug. 2012
- Top 5 in ACM MobiCom Student Research Competition Aug. 2012
- University of Florida Graduate School Fellowship Award, *University of Florida* Aug. 2010
- Outstanding Achievement Award, METU, Computer Engineering 2009, 2010

Selected Projects

- **Multi-user aware spell checker services (Google internship project)** (*May – Aug 2017*)
Extended Android text services to fully support multiple users simultaneously and resolved numerous bugs of the existing implementation. *Tools/Technologies/Languages:* Android (*framework, app development*), Java
- **Local Authorization (Google internship project)**. (*May – Aug 2016*)
Developed an API service which enables authorization of client devices on target devices by performing verification locally and offline. The web service provides storage for target devices, access control list management, and authorization credential retrieval to its clients.
Tools/Technologies/Languages: Java, One Platform, Zanzibar, Spanner
- **Draco: Uniform and Fine-grained Access Control for Web Code on Android.** (*Jan – May 2016*)
Designed and developed an origin-based access control system for JavaScript interfaces, event handlers and HTML5 APIs for Android WebView in Google's open source Chromium project.
Tools/Technologies/Languages: Android, Java, JavaScript, Python.
- **Incognito: Privacy-preserving architecture for the Internet of Things** (*June – Dec 2015*); *Team Size: 2*
Designed and developed an architecture that helps preserve user privacy in IoT.
Tools/Technologies/Languages: Android, Java, Python, Google Cloud, C on Nordic & mbed platforms
- **Smart store/vending machine demo at Google IoT expedition** (*June – Dec 2015*); *Team Size: 2*
Developed an IoT system to demonstrate the use of proximity in smart store scenarios.
Tools/Technologies/Languages: C on Nordic & mbed platforms, Python
- **Wi-Fi Direct Security on Android** (Aug-Dec. 2014)
Identified the side channel attacks that can be performed via Wi-Fi Direct on Android and developed a defense

mechanism based on labeling the resources. *Tools/Technologies/Languages*: Android Open Source Project, Java

- **Event Analysis on Yahoo's MX3 pipeline (Yahoo internship project)** (May-Aug. 2014)

Developed a web-based tool for event analysis on Yahoo's MX3 data pipeline. It allows users to enter rules on their browsers to filter invalid data from the pipeline/hdfs/local storage. Backend runs a Jetty web server that processes user requests. Rules are entered into Esper CEP engine, which filters out unsatisfying events for each rule. Results are presented in graphical format to the user. *Tools/Technologies/Languages*: Ember-CLI, NVD3, Esper Complex Event Processing engine, Jetty, Java, JavaScript, HTML, CSS

Internships

Google Inc., Mountain View, California

- Internship at Android framework team May-Aug. 2017
- Internship at Android authentication team May-Aug. 2016

Yahoo! Inc., Champaign, Illinois

- Internship at Advertising data systems team May-Aug. 2014

Research Experience

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, Department of Computer Science

- Research Assistant at the Security Lab and Mobius Group 2014 - 2017

UNIVERSITY OF FLORIDA, Department of Computer & Information Science & Engineering

- Research Assistant at Mobile Networking Research Lab. Fall 2011- 2013
- Research Assistant at Bioinformatics Research Lab. Spring 2011

MIDDLE EAST TECHNICAL UNIVERSITY, Department of Computer Engineering, Ankara, Turkey

- Internship on Swarm Robotics at Kovan Research Lab. June–Aug. 2009
- Internship on Ontology Engineering at Intelligent Systems Lab. June–Aug. 2008

Teaching Assistantship Experience

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, Department of Computer Science

- “Wireless Networks” (Fall 2013), “Communication Networks” (Spring 2015), “System Programming” (Spring 2016)
- Guest lecturer for Computer Security 2 course. Taught 2 lectures on Mobile Security

UNIVERSITY OF FLORIDA, Department of Computer & Information Science & Engineering

- “Computer Programming Using C” (Summer 2013), “Mobile Networking” (Spring 2013), “Computer Networks” (Fall 2012), “Distributed Operating Systems” (Summer 2012), “Computer Programming Using C” (Spring 2012), “Legal and Social Issues in Computing” (Fall 2010, 2011), “Software Testing and Verification” (Summer 2011)

MIDDLE EAST TECHNICAL UNIVERSITY, Ankara, Turkey, Department of Computer Engineering

- “Introduction to C Programming” Fall 2008, 2009

Selected Publications

- Güliz Seray Tuncay, Soteris Demetriou, Karan Ganju, Carl Gunter. **Resolving the Predicament of Android Custom Permissions**. Network and Distributed System Security Symposium (NDSS '18). Received *Distinguished Paper Award*.
- Güliz Seray Tuncay, Soteris Demetriou, Carl Gunter. **Draco: A System for Uniform and Fine-grained Access Control for Web Code on Android**. ACM Computer and Communications Security (CCS '16)
- Albert F Harris, Vansh Khanna, Güliz Seray Tuncay, Robin Kravets. **Bluetooth Low Energy in Dense IoT Environments**. IEEE Communications Magazine
- Albert F Harris, Vansh Khanna, Güliz Seray Tuncay, Robin Kravets. **Smart LaBLEs: Proximity, Autoconfiguration and a Constant Supply of Gatorade**. IEEE/ACM International Symposium on Edge Computing 2016
- Robin Kravets, Guliz S. Tuncay, Hari Sundaram. **For Your Eyes Only**. Mobile Cloud Computing and Services, MobiCom 2015
- Guliz S. Tuncay, Kirill Varshavskiy, and Robin Kravets, Klara Nahrstedt. **Poster-SaveAlert: Efficient and Scalable Sensor-driven Danger Detection System**, MobiCom 2014 (SRC Participant)
- Guliz S. Tuncay, Kirill Varshavskiy, and Robin Kravets. **Demo: SaveAlert: Design for a Sensor-driven CrowdWatch Danger Detection System**, MobiSys 2014
- Guliz S. Tuncay, Giacomo Benincasa, and Ahmed Helmy. **Participant recruitment and data collection framework for opportunistic sensing: a comparative analysis**. ACM MobiCom Workshop on Challenged Networks 2013
- Guliz S. Tuncay, Giacomo Benincasa, and Ahmed Helmy. 2013. **Autonomous and distributed recruitment and data collection framework for opportunistic sensing**. *SIGMOBILE Mob. Comput. Commun. Rev.* 16, 4 (February 2013) (Journal)