

GÜLİZ SERAY TUNCAY

Android Security, Google

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Research Interests

Mobile security, IoT security, mobile computing, wireless networks

Education

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN (UIUC) *Urbana, IL* August 2019
Ph.D. in Computer Science, GPA: 3.96 / 4.0


UNIVERSITY OF FLORIDA (UF) *Gainesville, Florida* December 2013
M.Sc. in Computer Engineering, GPA: 3.86 / 4.0

MIDDLE EAST TECHNICAL UNIVERSITY (METU) *Ankara, Turkey* June 2010
B.Sc. in Computer Engineering, GPA: 3.94 / 4.0, Ranked 1st

Selected Honors & Awards

- Rising Star in EECS Oct 2019
- Android Security Reward & Acknowledgement 2017, 2019, 2020
- Cyber Security Awareness Worldwide (CSAW) applied research competition finalist Nov 2018
- UIUC CS Celebration of Excellence Distinguished Paper Award Apr 2018
- Distinguished Paper Award at Network and Distributed System Security Symposium (NDSS) Feb 2018
- Heidelberg Laureate Forum Young Researcher Sept 2017
- Android Security Reward & Acknowledgement 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
- Graduate School Fellowship Award, *University of Florida* 2010 - 2013
- Outstanding Achievement Award, *METU, Computer Engineering* 2009, 2010

Selected Publications

- Güliz Seray Tuncay, Jingyu Qian, Carl Gunter. **See No Evil: Phishing for Permissions with False Transparency**. *USENIX Security 2020*. Awarded security vulnerabilities: CVE-2019-2221
- Güliz Seray Tuncay, Soteris Demetriou, Karan Ganju, Carl Gunter. **Resolving the Predicament of Android Custom Permissions**. *Network and Distributed System Security Symposium (NDSS) 2018*. Awarded security vulnerabilities: CVE-2017-0593, CVE-2019-2200
 **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) 2016*.
- Albert F Harris, Vansh Khanna, Güliz Seray Tuncay, Robin Kravets. **Bluetooth Low Energy in Dense IoT Environments**. *IEEE Communications Magazine* 2016.
- Albert F Harris, Vansh Khanna, Güliz Seray Tuncay, Robin Kravets. **Smart LaBLEs: Proximity, Autoconfiguration and a Constant Supply of Gatorade**. *IEEE/ACM Symposium on Edge Computing*

(SEC) 2016.

- Robin Kravets, Güliz Seray Tuncay, Hari Sundaram. **For Your Eyes Only**. *Workshop on Mobile Cloud Computing and Services (MCS), MobiCom 2015*.
- Güliz Seray Tuncay, Kirill Varshavskiy, and Robin Kravets, Klara Nahrstedt. **Poster-SaveAlert: Efficient and Scalable Sensor-driven Danger Detection System**. *ACM Mobile Computing and Networking (MobiCom) 2014 (SRC Participant)*.
- Güliz Seray Tuncay, Kirill Varshavskiy, and Robin Kravets. **Demo: SaveAlert: Design for a Sensor-driven CrowdWatch Danger Detection System**. *ACM Mobile Systems (MobiSys) 2014*.
- Güliz Seray Tuncay, Giacomo Benincasa, and Ahmed Helmy. **Participant recruitment and data collection framework for opportunistic sensing: a comparative analysis**. *ACM MobiCom Workshop on Challenged Networks (CHANTS) 2013*.
- Güliz Seray Tuncay, Giacomo Benincasa, and Ahmed Helmy. 2013. **Autonomous and distributed recruitment and data collection framework for opportunistic sensing**. *SIGMOBILE Mobile Computing and Communications Review*. (MC2R) Journal 16, 4 (February 2013).

Industry Experience

GOOGLE INC., Mountain View, California

- **Software Engineer, Android Security** Oct 2019 -
Security researcher currently focusing on Android permissions
- **Software Engineer Intern, Android Framework** May-Aug. 2017
Project: Multi-user aware spell checker services. Extended Android text services to fully support multiple users simultaneously and resolved numerous bugs of the existing implementation.
Tools/Technologies/Languages: Android framework development, Android app development, Java
- **Software Engineer Intern, Android Authentication** May-Aug. 2016
Project: Local Authorization. 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

YAHOO! INC., Champaign, Illinois

- **Software Engineer Intern, Advertising Data Systems** May-Aug. 2014
Project: Event Analysis on Yahoo's MX3 pipeline. Developed a web-based tool for event analysis on Yahoo's MX3 data pipeline, which allowed for filtering out invalid data from Yahoo's ad pipeline.
Tools/Technologies/Languages: Ember-CLI, NVD3, Esper Complex Event Processing engine, Jetty, Java, JavaScript, HTML, CSS

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

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

Teaching Experience

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

- Teaching assistant for several undergraduate and graduate courses
 - Advanced Computer Security Fall 2018
 - System Programming Spring 2016
 - Communication Networks Spring 2015
 - Wireless Networks Fall 2013

Highlights: For system programming, I taught weekly lab lectures for 2 sections on operating systems and programming concepts, prepared programming assignments, and helped with the implementation of automated tools for grading.
- Guest lecturer for Advanced Computer Security course Fall 2018
 - Taught a lecture on Mobile Security
- Guest lecturer for Computer Security 2 course Spring 2017, Spring 2019
 - Taught two lectures that cover mobile security basics on iOS and Android and some of the infamous attacks on the Android platform along with a discussion of proposed defense mechanisms.

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

- Teaching assistant for several undergraduate and graduate courses
 - 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, Fall 2011
 - Software Testing and Verification Summer 2011

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

- Teaching assistant for “Introduction to C Programming” Fall 2008, Fall 2009

Service

External Speaker

- Topic Preview talk on Android Security at ACM MobiCom (N2Women workshop) Sept 2020

Technical Program Committee

- Cyber Security Awareness Worldwide (CSAW) applied research paper competition 2019, 2020
- ACM Mobile Systems (MobiSys) Ph.D. Forum 2014
- Computer Science Student Workshop, Sabanci University 2012

External Reviewer

- Workshop on Mobile Computing Systems and Applications (HotMobile) 2016
- ACM Mobile Computing and Networking (MobiCom) 2015
- ACM Mobile Systems (MobiSys) 2014
- IEEE International Conference on Computer Communications (INFOCOM) 2013

Impact

- Identification and responsible disclosure of serious security vulnerabilities on Android (CVE-2017-0593, CVE-2019-2200, CVE-2019-2221) with detailed reports that discuss the root causes and provide possible countermeasures. These issues were acknowledged in the Android Security bulletin and rewarded with Android security rewards by Google.
- Directly impacting the design and implementation of Android with the discoveries of the aforementioned issues as well as with the proposed solutions. My work has led to changes in the official Android releases.
- Contributions to the Android Open Source Project (AOSP) with an updated implementation of text services system service that was released in Android 9.0