GÜLİZ SERAY TUNCAY

Platforms Security and Privacy, Google E-mail: <u>gulizseray@google.com</u> Website: <u>https://www.gulizseray.com/</u>

Education

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN (UIUC) Urbana, IL Ph.D. in Computer Science, GPA: 3.96 / 4.0	August 2019
UNIVERSITY OF FLORIDA (UF) <i>Gainesville, Florida</i> 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 1st	June 2010

Selected Honors & Awards

•	ACM SIGSAC Doctoral Dissertation Award Runner-up	2021
٠	Android Security Rewards & Acknowledgement	2017, 2019, 2021
•	Rising Star in EECS	Oct 2019
•	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 (N	NDSS) Feb 2018
•	Heidelberg Laureate Forum Young Researcher	Sept 2017
•	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

- ScopeVerif: Analyzing the Security of Android's Scoped Storage via Differential Analysis. Zeyu Lei, <u>Güliz Seray Tuncay</u>, Beatrice Carissa Williem, Antonio Bianchi, Z. Berkay Celik. ISOC *Network and Distributed System Security Symposium (NDSS) 2025*.
- Android Permissions: Evolution, Attacks, and Best Practices. <u>Güliz Seray Tuncay</u>. *IEEE Security & Privacy 2024*.
- With Great Power Comes Great Responsibility: Security and Privacy Issues of Modern Browser Application Programming Interfaces. Harun Oz, Daniele Cono D'Elia, <u>Güliz Seray Tuncay</u>, Abbas Acar, Riccardo Lazzeretti, Selcuk Uluagac. *IEEE Security & Privacy 2024*.
- Beyond the Upload Button: A 10-Year Retrospective on Security Issues Within File Upload. Harun Oz, <u>Güliz Seray Tuncay</u>, Ahmet Aris, Amin Kharraz, Selcuk Uluagac. *IEEE Communications 2024*.
- (In)Security of File Uploads in Node.js. Harun Oz, Abbas Acar, Ahmet Aris, <u>Güliz Seray Tuncay</u>, Amin Kharraz, Selcuk Uluagac. ACM Web Conference (WWW) 2024. (Accepted)
- On the Robustness of Image-based Malware Detection against Adversarial Attacks. Yassine Mekdad, Faraz Naseem, Ahmet Aris, Harun Oz, Abbas Acar, Leonardo Babun, Selcuk Uluagac, *Güliz Seray Tuncay*, and Nasir Ghan. *Network Security Empowered by Artificial Intelligence 2024*.
- Wear's my Data? Understanding the Cross-Device Runtime Permission Model in Wearables. Doguhan Yeke, Muhammad Ibrahim, <u>Güliz Seray Tuncay</u>, Habiba Farrukh, Abdullah Imran, Antonio Bianchi, Z. Berkay Celik. *IEEE Symposium on Security and Privacy (S&P) 2024. (Accepted)*
- 50 Shades of Support: A Device-Centric Analysis of Android Security Updates. Abbas Acar, <u>Güliz</u> <u>Seray Tuncay</u>, Esteban Luques, Harun Oz, Ahmet Aris, Selcuk Uluagac. ISOC *Network and Distributed*

System Security Symposium (NDSS) 2024.

- *{RøB}*: Ransomware over Web Browsers. Harun Oz, Ahmet Aris, Abbas Acar, <u>Güliz Seray Tuncay</u>, Leonardo Babun, Selcuk Uluagac. *USENIX Security Symposium (USENIX Security) 2023*.
- Evaluating User Behavior in Smartphone Security: A Psychometric Perspective. Hsiao-Ying Huang, Soteris Demetriou, Muhammad Hassan, <u>Güliz Seray Tuncay</u>, Carl Gunter, Masooda Bashir. USENIX Symposium on Usable Privacy and Security (SOUPS) 2023.
- The Android Platform Security Model (2023). René Mayrhofer, Jeffrey Vander Stoep, Chad Brubaker, Dianne Hackborn, Bram Bonné, <u>Güliz Seray Tuncay</u>, Roger Piqueras Jover, Michael A. Specter. 2023
- See No Evil: Phishing for Permissions with False Transparency. <u>Güliz Seray Tuncay</u>, Jingyu Qian, Carl Gunter. USENIX Security Symposium (USENIX Security) 2020. Awarded security vulnerabilities: CVE-2019-2221
- Resolving the Predicament of Android Custom Permissions. <u>Güliz Seray Tuncay</u>, Soteris Demetriou, Karan Ganju, Carl Gunter. ISOC *Network and Distributed System Security Symposium (NDSS) 2018. Awarded security vulnerabilities:* CVE-2017-0593, CVE-2019-2200

PDistinguished Paper Award.

- Draco: A System for Uniform and Fine-grained Access Control for Web Code on Android. <u>Güliz</u> <u>Seray Tuncay</u>, Soteris Demetriou, Carl Gunter. *ACM Computer and Communications Security (CCS)* 2016.
- Bluetooth Low Energy in Dense IoT Environments. Albert F Harris, Vansh Khanna, <u>Güliz Seray</u> <u>Tuncay</u>, Robin Kravets. IEEE Communications Magazine 2016.
- Smart LaBLEs: Proximity, Autoconfiguration and a Constant Supply of Gatorade. Albert F Harris, Vansh Khanna, <u>Güliz Seray Tuncay</u>, Robin Kravets. *IEEE/ACM Symposium on Edge Computing (SEC)* 2016.
- For Your Eyes Only. Robin Kravets, <u>Güliz Seray Tuncay</u>, Hari Sundaram. *Workshop on Mobile Cloud Computing and Services (MCS), MobiCom 2015.*
- Poster-SaveAlert: Efficient and Scalable Sensor-driven Danger Detection System. <u>Güliz Seray</u> <u>Tuncay</u>, Kirill Varshavskiy, and Robin Kravets, Klara Nahrstedt. ACM Mobile Computing and Networking (MobiCom) 2014 (SRC Participant).
- Demo: SaveAlert: Design for a Sensor-driven CrowdWatch Danger Detection System. <u>Güliz Seray</u> <u>Tuncay</u>, Kirill Varshavskiy, and Robin Kravets. *ACM Mobile Systems (MobiSys) 2014*.
- Participant recruitment and data collection framework for opportunistic sensing: a comparative analysis. <u>Güliz Seray Tuncay</u>, Giacomo Benincasa, and Ahmed Helmy. *ACM MobiCom Workshop on Challenged Networks (*CHANTS) 2013.
- Autonomous and distributed recruitment and data collection framework for opportunistic sensing. <u>Güliz Seray Tuncay</u>, Giacomo Benincasa, and Ahmed Helmy. 2013. *SIGMOBILE Mobile Computing and Communications Review*. (MC2R) Journal 16, 4 (February 2013).

Industry Experience

GOOGLE INC., Mountain View, California	
• Senior Research Scientist, Android Security and Privacy	Oct 2022 - Now
Research Scientist, Android Security and Privacy	June-Oct. 2022
• Software Engineer, Android Security and Privacy	Oct 2019 - June 2022
Software Engineer Intern, Android Framework	May-Aug. 2017
Project: Multi-user aware spell checker services. Extended Android text se	rvices to fully support
multiple users simultaneously and resolved numerous bugs of the existing	implementation. Tools/
Technologies/Languages: Android framework development, Android app develop	<i>ment</i> , 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 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 to filtering out invalid data from Yahoo's ad pipeline. Tools/Technologies/Languages: Ember-CLI, NVD3, Esper Complex Event Processing engine. Jettv. Java, JavaScript, HTML, CSS

Research Experience

UNIV	ERSITY	OF	ILLINO	IS A	JT	JRBA	NA-	-CHAMPAIGN	N, 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
- ٠ 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

May-Aug. 2014

- Software Testing and Verification

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

Teaching assistant for Introduction to C Programming
 Fall 2008, Fall 2009

Service

Technical Program Committee	
USENIX Security Symposium	2022, 2024
 ISOC Network and Distributed System Security Symposium (NDSS) 	2024
• ACM Computer and Communications Security (CCS)	2021
• Security and Privacy for Mobile AI Workshop (MAIPS)	2021
 Android Security and Privacy Research (ASPIRE) at Google 	2020, 2021, 2022
• 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
Selected Talks & Presentations	
Selected Talks & Presentations • Wear's my data? IEEE Security and Privacy Symposium (online)	2024
 Selected Talks & Presentations Wear's my data? IEEE Security and Privacy Symposium (online) Topic preview talk on Android Security at ACM MobiCom (N2Women workshop) 	2024 2020
 Selected Talks & Presentations Wear's my data? IEEE Security and Privacy Symposium (online) Topic preview talk on Android Security at ACM MobiCom (N2Women workshop) See No Evil: Phishing for Permissions with False Transparency. 	2024 2020
 Selected Talks & Presentations Wear's my data? IEEE Security and Privacy Symposium (online) Topic preview talk on Android Security at ACM MobiCom (N2Women workshop) See No Evil: Phishing for Permissions with False Transparency. USENIX Security Symposium 	2024 2020 2020
 Selected Talks & Presentations Wear's my data? IEEE Security and Privacy Symposium (online) Topic preview talk on Android Security at ACM MobiCom (N2Women workshop) See No Evil: Phishing for Permissions with False Transparency. USENIX Security Symposium University of Wisconsin-Madison 	2024 2020 2020 2020
 Selected Talks & Presentations Wear's my data? IEEE Security and Privacy Symposium (online) Topic preview talk on Android Security at ACM MobiCom (N2Women workshop) See No Evil: Phishing for Permissions with False Transparency. USENIX Security Symposium University of Wisconsin-Madison Florida International University 	2024 2020 2020 2020 2020 2021
 Selected Talks & Presentations Wear's my data? IEEE Security and Privacy Symposium (online) Topic preview talk on Android Security at ACM MobiCom (N2Women workshop) See No Evil: Phishing for Permissions with False Transparency. USENIX Security Symposium University of Wisconsin-Madison Florida International University Resolving the Predicament of Android Custom Permissions 	2024 2020 2020 2020 2021
 Selected Talks & Presentations Wear's my data? IEEE Security and Privacy Symposium (online) Topic preview talk on Android Security at ACM MobiCom (N2Women workshop) See No Evil: Phishing for Permissions with False Transparency. USENIX Security Symposium University of Wisconsin-Madison Florida International University Resolving the Predicament of Android Custom Permissions Midwest Security Workshop 	2024 2020 2020 2020 2021 2019
 Selected Talks & Presentations Wear's my data? IEEE Security and Privacy Symposium (online) Topic preview talk on Android Security at ACM MobiCom (N2Women workshop) See No Evil: Phishing for Permissions with False Transparency. USENIX Security Symposium University of Wisconsin-Madison Florida International University Resolving the Predicament of Android Custom Permissions Midwest Security Workshop CSAW Applied Research Competition 	2024 2020 2020 2020 2021 2019 2018
 Selected Talks & Presentations Wear's my data? IEEE Security and Privacy Symposium (online) Topic preview talk on Android Security at ACM MobiCom (N2Women workshop) See No Evil: Phishing for Permissions with False Transparency. USENIX Security Symposium University of Wisconsin-Madison Florida International University Resolving the Predicament of Android Custom Permissions Midwest Security Workshop CSAW Applied Research Competition Draco: A System for Uniform and Fine-grained Access Control for Web Code on Android Custom Permissions 	2024 2020 2020 2020 2021 2019 2018 droid.
 Selected Talks & Presentations Wear's my data? IEEE Security and Privacy Symposium (online) Topic preview talk on Android Security at ACM MobiCom (N2Women workshop) See No Evil: Phishing for Permissions with False Transparency. USENIX Security Symposium University of Wisconsin-Madison Florida International University Resolving the Predicament of Android Custom Permissions Midwest Security Workshop CSAW Applied Research Competition Draco: A System for Uniform and Fine-grained Access Control for Web Code on Andon ACM Computer and Communications Security (CCS) 	2024 2020 2020 2020 2021 2019 2018 droid. 2016

Impact

- Identification and responsible disclosure of serious security vulnerabilities on Android (CVE-2017-0593, CVE-2019-2200, CVE-2019-2221, CVE-2021-0486) 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) that were released in official Android releases