Konstantinos Solomos

ksolom6@uic.edu | (312) 508-9667 | Chicago, IL

Linkedin : kostas-solomos | Google Scholar : Konstantinos Solomos

Research Interests

My research interests encompass various areas of security and privacy, with a particular focus on understanding the security limitations of the web ecosystem, exploring the privacy threats users face, and designing robust countermeasures. I have also explored the online advertising ecosystem, its evolution, and its inherent privacy implications. Additionally, I am interested in different aspects of network security, large-scale Internet measurements for detection and analysis of cyber threats, and understanding security threats in desktop and mobile apps.

Education

Ph.D. in Computer Science   University of Illinois Chicago
Dissertation: Exploring online tracking and other web privacy attacks in modern browsers   Aug 2019 – May 2025
Advisor: Jason Polakis

M.Sc. in Computer Science and Engineering   University of Crete
Thesis: Investigating the privacy implications of cross-device tracking   Sep 2016 – Dec 2018
Advisor: Sotiris Ioannidis

B.Sc. in Computer Science and Engineering   University of Crete
Thesis: analysis of the security and privacy threats in mobile apps   Sep 2010 – June 2016
Advisor: Sotiris Ioannidis

Research Experience

Research Assistant University of Illinois Chicago, BITS Lab   Aug 2019—Present
Research Intern Telefónica I+D, Barcelona, Spain   April 2018—July 2018
Research Assistant Foundation of Research and Technology Hellas   Sept 2016–Aug 2019

Teaching Experience

Created and graded homework assignments, midterms, and final exams; prepared project material, recitations, and gave lectures.

Network Security	Spring 2021-2022, Fall 2023 UIC
Technologies for Big Data Applications	Spring 2019 UOC
Security and Cryptography	Spring 2018, Fall 2018 UOC
Advanced Topics in Databases	Fall 2017 UOC
Introduction to Programming	Spring 2017 UOC
Internet Measurements and Monitoring	Fall 2016 UOC

Mentorship

University of Illinois Chicago
Umang Chaudman (M.Sc.), Security Analysis of SSO in Electron Apps	2023
Claudio Paloscio (M.Sc.), Differential Security Analysis of Electron Apps	2023–Present
Andrea Infantino (M.Sc.), Security Analysis of Password Managers in Desktop Native Applications	2023–Present

University of Crete
Manos Chatzimpiros (Undergraduate), Exploring the Privacy Threats of Registration Forms	2018–2019

Service

External Reviewer / Sub-Reviewer
- ACM Transactions on the Web (**TWEB**)   2023
- **SecWeb**   202
- IEEE Security and Privacy (**S&P**)   2022

- International Symposium on Research in Attacks, Intrusions and Defenses (**RAID**) 2018–2021
- International World Wide Web Conference (**WWW**) 2018

Presentations and Conferences

ACM Conference on Computer and Communications Security (CCS) 2022, Los Angeles, CA

USENIX Security Symposium 2022, Boston, MA

Network and Distributed System Security Symposium (NDSS) 2021, Online

Network Traffic Measurement and Analysis Conference(TMA) 2020, Online

Information and Operational Technology Security Systems (IOSEC) 2019, Heraklion, Crete

11th Fosscomm 2018, Heraklion, Crete Invited talk on the privacy implications of online ad ecosystem.

Honors and Awards

CVE-2021-1861 vulnerability identification by Apple. Recognition for discovering an HTTP cache vulnerability in
Safari browser. 2021

Bug bounty award by Brave browser 2021

Media Coverage

Browser Favicons Can Be Used as Undeletable Supercookies to Track You Online Coverage on the privacy
implications of persistent tracking using favicons. *Vice*, 2021

New Browser-Tracking Hack Works Even When You Flush Caches or Go Incognito Highlighting research
findings on favicon tracking techniques. *Ars Technica*, 2021

Publications

1. Harnessing Multiplicity: Granular Browser Extension Fingerprinting through User Configurations
   Konstantinos Solomos, Nick Nikiforakis, Jason Polakis
   Annual Computer Security Applications Conference (**ACSAC**), 2024

2. Escaping the Confines of Time: Continuous Browser Extension Fingerprinting Through Ephemeral Modifications
   Konstantinos Solomos, Panagiotis Ilia, Nick Nikiforakis, Jason Polakis
   ACM Conference on Computer and Communications Security (**CCS**), 2022

3. The Dangers of Human Touch: Fingerprinting Browser Extensions through User Actions
   Konstantinos Solomos, Panagiotis Ilia, Soroush Karami, Nick Nikiforakis, Jason Polakis
   USENIX Security Symposium (**SEC**), 2022

4. Tales of Favicons and Caches: Persistent Tracking in Modern Browsers
   Konstantinos Solomos, John Kristoff, Chris Kanich, Jason Polakis
   Network and Distributed System Security Symposium (**NDSS**), 2021

5. Carnus: Exploring the Privacy Threats of Browser Extension Fingerprinting
   Soroush Karami, Panagiotis Ilia, Konstantinos Solomos, Jason Polakis
   Network and Distributed System Security Symposium (**NDSS**), 2020

6. Clash of the Trackers: Measuring the Evolution of the Online Tracking Ecosystem
   Konstantinos Solomos, Panagiotis Ilia, Sotiris Ioannidis, Nicolas Kourtelis
   Network Traffic Measurement and Analysis Conference (**TMA**), 2019

7. You Shall Not Register! Detecting Privacy Leaks Across Registration Forms
   Manolis Chatzimpiros, Konstantinos Solomos, Sotiris Ioannidis
   Information and Operational Technology Security Systems (**IOSEC**), 2020

8. TALON: An Automated Framework for Cross-Device Tracking Detection
   Konstantinos Solomos, Panagiotis Ilia, Sotiris Ioannidis, Nicolas Kourtelis
   International Symposium on Research in Attacks, Intrusions and Defenses (**RAID**), 2019

9. Automated Measurements of Cross-Device Tracking
   Konstantinos Solomos, Panagiotis Ilia, Sotiris Ioannidis, Nicolas Kourtelis
   Information and Operational Technology Security Systems (**IOSEC**), 2019