

# Soteris Demetriou, PhD

Associate Professor, Department of Computing, Imperial College London

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## Areas of Specialization

Security and Privacy; Operating Systems; Mobile Computing

## Current Appointments and Roles

**Associate Professor**, Department of Computing, Imperial College London

**Director** of the Imperial College London Academic Centre of Excellence in Cyber Security Research (ACE-CSR)

**Lead** of Applications, Platforms, and Systems Security research group (APSS)

## Education

University of Illinois at Urbana-Champaign

CHAMPAIGN, ILLINOIS, USA

### Ph.D. in Computer Science

PhD Thesis Title: *Analyzing and Designing the Security of Shared Resources on Smartphone Operating Systems* | Advisor: Dr. Carl A. Gunter

University of Illinois at Urbana-Champaign

CHAMPAIGN, ILLINOIS, USA

### MSc. in Computer Science

Masters Thesis Title: *Android at Risk: Current Threats Stemming from Unprotected Local and External Resources* | Advisor: Dr. Carl A. Gunter

University of Patras

PATRA, ACHAIA, GREECE

### Diploma (5-year Engineering Degree) in Electrical and Computer Engineering

Diploma Thesis Title: *Development and Evaluation of Collaborative Applications for Mobile Devices* | Advisor: Dr. Nikolaos Avouris

## Teaching and Supervision

### Teaching

[**COMP70004/COMP97109/COMP97110 Advanced Computer Security; Role: Co-Leading Instruction**] Spring 2025, Spring 2024, Spring 2023, Fall 2021, Fall 2020, Fall 2019, Department of Computing, Imperial College London. (<https://comp97109.doc.ic.ac.uk>).

[**COMP70088 Computer Systems; Role: Co-Leading Instruction**] Fall 2024, Department of Computing, Imperial College London (<https://www.imperial.ac.uk/computing/current-students/courses/70088/>)

[**COMP40009 Computing Practical 1; Role: Co-Leading Instruction**] Spring 2023, Department of Computing, Imperial College London. (<https://www.imperial.ac.uk/computing/current-students/courses/40009/>).

[**COMP7003 Computer Architecture; Role: Co-Leading Instruction**] Fall 2021, Fall 2020, Fall 2019, Department of Computing, Imperial College London. [https://www.doc.ic.ac.uk/~sdemetri/comp97069\\_autumn21/](https://www.doc.ic.ac.uk/~sdemetri/comp97069_autumn21/).

[**Advanced Security for Smartphones and IoT Systems; Role: Led Instruction**] Spring 2019, Department of Computing, Imperial College London.

### Supervision

[**UROP/IROP**] Supervised 3 undergraduate summer research projects, one from Imperial, one from EPFL, and one from MIT.

[**MEng/MSc**] Supervised/ing >17 Master's theses. 2 contributed to published articles. 1 received a distinguished project award.

[**PhD**] I'm currently the first supervisor for 4 PhD students, and I've worked closely with 3 more. Graduated 2 PhD students.

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## Conference Publications

Acceptance rates given when made available; citations from Google Scholar as of September 2023.

1. [Interspeech] Dominika Woszczyk, Ranya Aloufi, Soteris Demetriou. "ClaritySpeech: Dementia Obfuscation in Speech". In the Proceedings of the 26<sup>th</sup> Interspeech conference (Interspeech '25).
2. [Interspeech] Mansi, Anastasios Lepipas, Dominika Woszczyk, Yiyang Guan, Soteris Demetriou. "Understanding Dementia Speech Alignment with Diffusion-Based Image Generation". In the Proceedings of the 26<sup>th</sup> Interspeech conference (Interspeech '25).
3. [PETS] Anastasios Lepipas, Marios Charalambides, Jiani Liu, Yiyang Guan, Dominika Woszczyk, Mansi, Hai Le, Soteris Demetriou. "Leaky Diffusion: Attribute Leakage in Text-Guided Image Generation". In the Proceedings of the 25<sup>th</sup> Privacy Enhancing Technologies Symposium (PETS '25).
4. [PETS] Dominika Woszczyk, Soteris Demetriou. "DiDOTS: Knowledge Distillation from Large-Language-Models for Dementia Obfuscation in Transcribed Speech". In the Proceedings of the 25<sup>th</sup> Privacy Enhancing Technologies Symposium (PETS '25).
5. [IROS] Richard Capraru, Emil C. Lupu Soteris Demetriou, Jian-Gang Wang, Boon Hee Soong. "Rain-Reaper: Unmasking LiDAR-based Detector Vulnerabilities in Rain". 2024 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS '24).
6. [NSDI] Matt Guo, Soteris Demetriou, Joey Yang, Michael Leighton, Diedi Hu, Tong Bao, Amit Adhikari, Thawan Kooburat, Annie Kim, Chunqiang Tang. "MobileConfig: Holistic Configuration Management for Mobile Apps". At the 21<sup>st</sup> USENIX Symposium on Networked Systems Design and Implementation (NSDI '24).
7. [AsiaCCS] Anastasios Lepipas, Anastasia Borovykh, Soteris Demetriou. "Username Squatting on Online Social Networks: A Study on X". At the 19th ACM Asia Conference on Computer and Communications Security (ACM ASIACCS '24).
8. [SOSP] Alireza Sahraei, Soteris Demetriou, Haoran Zhang, Abhigna Nagaraja, Amirali Sobhgol, Neeraj Pathak, Girish Joshi, Carla Souza, Bo Huang, Wyatt Cook, Andrii Golovei, Pradeep Venkat, Andrew McFague, Dimitrios Skarlatos, Vipul Patel, Ravinder Thind, Ernesto Gonzalez, Yun Jin, Chunqiang Tang. "XFaaS: Hyperscale and Low Cost Serverless Functions at Meta". At the 29th ACM Symposium on Operating Systems Principles (SOSP 2023). *Acceptance rate=18.5% (43/232)*.
9. [OSDI] Harshit Saokar, Soteris Demetriou, Nick Magerko, Max Kontorovich, Josh Kirstein, Margaut Leibold, Dimitrios Skarlatos, Hitesh Khandelwal, Chunqiang Tang. "ServiceRouter: Hyperscale and Minimal Cost Service Mesh at Meta". 17th USENIX Symposium on Operating Systems Design and Implementation (OSDI), 2023. *Acceptance rate=19.6% (50/255).Cited by 3*.
10. [OSDI] Boris Grubic, Yang Wang, Tyle Petrochko, Ran Yaniv, Brad Jones, David Callies, Matt Clarke-Lauer, Dan Kelley, Soteris Demetriou, Kenny Yu, Chunqiang Tang. "Conveyor: One-Tool-Fits-All Continuous Software Deployment at Meta". 17th USENIX Symposium on Operating Systems Design and Implementation (OSDI), 2023. *Acceptance rate=19.6% (50/255).Cited by 3*.
11. [SOUPS] Hsiao-Ying Huang, Soteris Demetriou, Muhammad Hassan, Güliz Seray Tuncay, Carl A. Gunter, Masooda Bashir. "Evaluating User Behavior in Smartphone Security: A Psychometric Perspective". 19th USENIX Symposium on Usable Privacy and Security (SOUPS), 2023.
12. [INTERSPEECH] Dominika Woszczyk, Anna Hledikova, Alican Akman, Soteris Demetriou, Björn Schuller. "Data Augmentation for Dementia Detection in Spoken Language". Proc. Interspeech 2022, pp.2858–2862, 2022. *Cited by 3*.
13. [EuroUSEC] Cecilia Loureiro-Koehlin, Jose-Rodrigo Cordoba-Pachon Jose-Rodrigo Cordoba-Pachon, Lynne Coventry, Soteris Demetriou, Charles Weir, "Vision: Design Fiction for Cybersecurity: Using Science Fiction to Help Software Developers Anticipate Problems". In Proceedings of the 2022 European Symposium on Usable Security.
14. [ACSAC] Sojhal Ismail Khan, Chengzeng You, Dominika Woszczyk, Soteris Demetriou, Muhammad Naveed. "Characterizing Improper Input Validation Vulnerabilities of Mobile Crowdsourcing Services". The 2021 Annual Computer Security Applications Conference (ACSAC), December 2021.

15. [ESORICS] Zhongyuan Hau, Soteris Demetriou, Luis Muñoz-González, Emil C. Lupu, “Shadow-Catcher: Looking Into Shadows to Detect Ghost Objects in Autonomous Vehicle 3D Sensing”, In the Proceedings of the 26th European Symposium on Research in Computer Security (ESORICS), October 2021. *Acceptance rate=20.2% (71/351)*. Cited by: 17. [Finalist (Europe) at the 2021 Applied Research Competition - CSAW’21].
16. [MobiSys] Fan Mo, Ali Shahin, Kleomenis Katevas, Soteris Demetriou, Ilias Leontiadis, Andrea Cavallaro, Hamed Haddadi. “DarkneTZ: Towards Model Privacy at the Edge using Trusted Execution Environments”. 18th ACM International Conference on Mobile Systems, Applications, and Services (ACM MobiSys), June 2020. *Acceptance rate=19.4% (34/175)*; Cited by 119.
17. [HoTSoS] Avesta Hojjati, Yunhui Long, Soteris Demetriou, Carl A. Gunter. “BEEER: Distributed Record and Replay for Medical Devices in Hospital Operating Rooms”. 6th Annual Hot Topics in the Science of Security (HoTSoS), April 2019.
18. [INFOCOM] Soteris Demetriou, Puneet Jain, Kyu-Han Kim. “CoDrive: Improving Automobile Positioning via Collaborative Driving”. IEEE International Conference on Computer Communications (IEEE INFOCOM ’18), Honolulu, HI, USA. April 2018. *Acceptance rate=19.2% (309/1606)*; Cited by: 16. [Best-In-Session Presentation Award]
19. [NDSS] Güliz Seray Tuncay, Soteris Demetriou, Karan Ganju and Carl A. Gunter. “Resolving the Predicament of Android Custom Permissions”. ISOC Network and Distributed System Security Symposium (NDSS ’18). San Diego, CA, USA. February 2018. *Acceptance rate=21.4% (71/331)*; Cited by: 49. [Distinguished Paper Award at NDSS ’18]. [Finalist at the Cybersecurity Awareness Worldwide (CSAW) applied research competition.]
20. [SenSys] Animesh Srivastava, Puneet Jain, Soteris Demetriou, Landon Cox, Kyu-Han Kim. “CamForensics: Understanding Visual Privacy Leaks in the Wild”. ACM Conference on Embedded Networked Sensor Systems (SenSys ’17), Delft, The Netherlands. November 2017. *Acceptance rate=17.2% (26/151)*; Cited by 14.
21. [WiSec] Soteris Demetriou, Nan Zhang, Yeonjoon Lee, Xiaofeng Wang, Carl A. Gunter, Xiaoyong Zhou, and Michael Grace. “HanGuard: SDN-Driven Protection of Smart Home WiFi Devices from Malicious Mobile Apps”. ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec ’17), Boston, MA, USA. July 2017. *Acceptance rate=22.3%*; Cited by 74.
22. [DSN] Yeonjoon Lee, Tongxin Li, Nan Zhang, Soteris Demetriou, Mingming Zha, Xiaofeng Wang, Kai Chen, Xiaoyong Zhou, Xinhui Ha and Michael Grace. “Ghost Installer in the Shadow: Security Analysis of App Installation on Android”. IEEE/IFIP International Conference on Dependable Systems and Networks (DSN ’17), Denver, CO, USA. June 2017. *Acceptance rate=22.3% (49/220)*; Cited by 10.
23. [CCS] Güliz Seray Tuncay, Soteris Demetriou and Carl A. Gunter. “Draco: A System for Uniform and Fine-Grained Access Control for Web Code on Android”. ACM Conference on Computer and Communications Security (CCS ’16), Vienna, Austria. November 2016. *Acceptance rate=16.5% (137/831)*; Cited by 52.
24. [NDSS] Soteris Demetriou, Whitney Merrill, Wei Yang, Aston Zhang and Carl A. Gunter. “Free for All! Assessing User Data Exposure to Advertising Libraries on Android”. ISOC Network and Distributed System Security Symposium (NDSS ’16). San Diego, CA, USA. February 2016. *Acceptance rate=15.4% (60/389)*; Cited by 107.
25. [NDSS] Soteris Demetriou, Xiaoyong Zhou, Muhammad Naveed, Yeonjoon Lee, Xiaofeng Wang and Carl A. Gunter. “What’s in Your Dongle and Bank Account? Mandatory and Discretionary Protection of Android External Resources”. ISOC Network and Distributed System Security Symposium (NDSS ’15). San Diego, CA, USA. February 2015. *Acceptance rate=16.9% (51/302)*; Cited by 476.
26. [NDSS] Muhammad Naveed, Xiaoyong Zhou, Soteris Demetriou, Xiaofeng Wang and Carl A. Gunter. “Inside Job: Understanding and Mitigating the Threat of External Device Mis-Bonding on Android”. ISOC Network and Distributed System Security Symposium (NDSS ’14). San Diego, CA, USA. February 2014. *Acceptance rate=18.6% (55/295)*; Cited by 95.
27. [CCS] Xiaoyong Zhou, Soteris Demetriou, Dongjing He, Muhammad Naveed, Xiaorui Pan, Xiaofeng Wang, Carl A. Gunter and Klara Nahrstedt. “Identity, location, disease and more: Inferring your secrets from android public resources”. ACM Conference on Computer and Communications Security (CCS ’13). Berlin, Germany. November 2013. *Acceptance rate=19.8% (105/530)*; Cited by 239.

## Journal Publications

28. [IxD&A] Christos Sintoris, Nikoleta Yiannoutsou, *Soteris Demetriou* and Nikolaos Avouris. “Discovering the invisible city: Location-based games for learning in smart cities”. *Interaction Design and Architecture(s) Journal* ([IxD&A]). July 2013. *Cited by 30*.

## Workshop Publications

29. [SafeThings] Chengzeng You, Zhongyuan Hau, Binbin Xu, *Soteris Demetriou*. “Adversarial 3D Virtual Patches using Integrated Gradients”. IEEE workshop on the Internet of Safe Things - co-located with 45th IEEE Symposium on Security and Privacy, May 2024. [*Best paper award*]
30. [SafeThings] Zhongyuan Hau, *Soteris Demetriou*, Emil Lupu, “Using 3D Shadows to Detect Object Hiding Attacks on Autonomous Vehicle Perception”, IEEE workshop on the Internet of Safe Things - co-located with 43rd IEEE Symposium on Security and Privacy, May 2022. *Cited by 1*.
31. [MAISP@MobiSys] Chengzeng You, Zhongyuan Hau, *Soteris Demetriou*, “Temporal Consistency Checks to Detect LiDAR Spoofing Attacks on Autonomous Vehicle Perception”, 1st Workshop on Security and Privacy for Mobile AI - co-located with ACM MobiSys, June 2021. *Cited by 8*.
32. [MAISP@MobiSys] Dominika Woszczyk, Alvin Lee, *Soteris Demetriou*, “Open, Sesame! Introducing Access Control to Voice Services”, 1st Workshop on Security and Privacy for Mobile AI - co-located with ACM MobiSys, June 2021. *Cited by 1*.
33. [DPML@ICLR] Fan Mo, Anastasia Borovykh, Mohammad Malekzadeh, Hamed Haddadi, *Soteris Demetriou*. “Layer-wise Characterization of Latent Information Leakage in Federated Learning”, Distributed and Private Machine Learning workshop - co-located with ICLR, May 2021. *Cited by 17*.
34. [AutoSec] Zhongyuan Hau, Kenneth T Co, *Soteris Demetriou*, Emil Lupu. “Object Removal Attacks on LiDAR-based 3D Object Detectors”. 3rd International Workshop on Automotive and Autonomous Vehicle Security (AutoSec) - co-located with NDSS, 2021. *Cited by 15*. [*Runner-Up for Best Short Paper Award*]
35. [IoTSec] *Soteris Demetriou*, Nathaniel D. Kaufman, Jonah Baim, Adam J. Goldsher and Carl A. Gunter. “Toward an Extensible Framework for Redaction”. 1st International Workshop on Security and Privacy for the Internet-of-Things (IoTSec). March 2018.
36. [ARV] Christos Sintoris, Nikoleta Yiannoutsou, *Soteris Demetriou* and Nikolaos Avouris. “Discovering the invisible city: Game design for learning in technology enhanced places”. ARV Workshop on Smart Cities Learning. June 2013. *Cited by 2*.
37. [IS-EUSD] Christos Sintoris, Dimitrios Raptis, Nikoleta Yiannoutsou, *Sotirios Dimitriou* and Nikolaos Avouris. “Content creation by end users for location-sensitive mobile educational games”. IS-EUD Workshop Involving End Users and Domain Experts in Design of Educational Games. Jun 2011.

## Preprints

38. [arXiv] Hsiao-Ying Huang, *Soteris Demetriou*, Rini Banerjee, Güliz Seray Tuncay, Rini Banerjee, Carl A. Gunter, Masooda Bashir. “Smartphone Security Behavioral Scale: A New Psychometric Measurement for Smartphone Security”. *arXiv preprint arXiv:2007.01721* (2020) *Cited by 2*.
39. [arXiv] Nan Zhang, *Soteris Demetriou*, XiangHang Mi, Wenrui Diao, Kan Yuan, Peiyuan Zong, Feng Qian, Xiaofeng Wang, Kai Chen, Yuan Tian, Carl A. Gunter, Kehuan Zhang, Patrick Tague, Yue-Hsun Lin. “SoK: Understanding IoT Security Through the Data Crystal Ball: Where We Are Now and Where We Are Going To Be”. *arXiv preprint arXiv:1703.09809*. *Cited by 65*.

## Grants and Funding

- [EPSRC/JST] *NeSyDebates: Neuro-Symbolic Debates for Safeguarded Generative AI*. **Role:** Co-I. UK PI: Prof. Francesca Toni (Imperial College London). Funder: EPSRC (UK) & Japan Science and Technology Agency (JST) — ASPIRE Japan–UK Joint Programme on Advancing Human-Centered AI. Period: January 2026 – March 2031.
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## Patents

2020. Soteris Demetriou, Puneet Jain. "Determination of a Next State of Multiple IoT devices within an Environment". US Patent No: US 10,778,516. Date of Patent: September 15, 2020. *Cited by 4.*
2020. XiaoFeng Wang, Kan Yuan, Xiaoyong Zhou, Muhammad Naveed, Soteris Demetriou, Carl Gunter. "External Resource Control of Mobile Devices". US Patent No: US 10,685,142 B2. Date of Patent: June 16, 2020. *Cited by 11.*
2019. Puneet Jain, Soteris Demetriou, Kyu-Han Kim "Determining Car Positions". US Patent No: US 10,380,889 B2. Date of Patent: August 13, 2019. *Cited by 3.*

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## Honors & Awards

**Best Paper Award:** Our paper titled "Adversarial 3D Virtual Patches using Integrated Gradients" was bestowed a best paper award at the eighth IEEE/ACM Workshop on the Internet of Safe Things (SafeThings) - co-located with IEEE S&P '24. (*SafeThings, May 2024*)

**Finalist at CSAW '21** Our paper titled "Shadow-Catcher: Looking Into Shadows to Detect Ghost Objects in Autonomous Vehicle 3D Sensing" was a finalist (Europe) at the CSAW'21 Applied Research Competition.

**Runner-Up for Best Short Paper Award:** Our short paper titled "Object Removal Attacks on LiDAR-based 3D Object Detectors" was a Runner-Up for the best short paper award at the Third International Workshop on Automotive and Autonomous Vehicle Security (AutoSec) - co-located with NDSS '21. (*AutoSec, February 2021*)

**Best-In-Session Presentation Award:** I was awarded a best-in-session presentation award for my presentation of "CoDrive: Improving Automobile Positioning via Collaborative Driving" at the "Vehicular Networks" session at IEEE INFOCOM 2018. (*IEEE INFOCOM 2018 Technical Program Committee, May 2018*)

**Travel Award:** I was awarded a conference travel grant by the Graduate College at the University of Illinois at Urbana-Champaign. (*UIUC Graduate College, March 2018*)

**Distinguished Paper Award:** Our paper "Resolving the Predicament of Android Custom Permissions" received the distinguished paper award at NDSS '18. (*NDSS, February 2018*)

**Sponsorship and Travel Award:** Received sponsorship and travel support to the 5th Heidelberg Laureate Forum. (*Oak Ridge Associated Universities (ORAU) and National Science Foundation (NSF), May 2017*)

**HLF Young Researcher:** I was selected as one of the 200 most qualified young researchers in the field of Mathematics and Computer Science, to participate in the 5th Heidelberg Laureate Forum (HLF). (*Scientific Committee of the Heidelberg Forum Foundation, April 2017*)

**FADEx Laureate:** I was selected to participate in the French-American Doctorate Exchange (FADEx) Program in Cybersecurity. (*Office for Science & Technology at the Embassy of France in the United States, April 2017*)

**Best in class award:** I was awarded the Best in Class Award during the 2016 Intern Project Fair at Hewlett-Packard Enterprise. This was the highest award bestowed. (*Hewlett-Packard Enterprise, Aug 2016*)

**Best Pitch Award:** I won the Best Pitch Award at the Samsung Innovation Jam. I led the only team with just interns to win an award. (*Samsung Research America, Jun 2015*)

**Video of the Month Award:** One of our video demos for our paper titled "Inside Job: Understanding and Mitigating the Threat of External Device Mis-Bonding on Android" has won the video of the month award granted by the Coordinated Science Lab at the University of Illinois at Urbana-Champaign. (*Coordinated Science Lab, May 2015*)

**Fulbright Scholarship 2012-2014:** I was awarded a highly competitive scholarship targeting outstanding scholars. (*J William Fulbright Foreign Scholarship Board (JWFBSB), Feb 2012*)

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## Service

### Program and Organisation Committees

[**IEEE S&P**] 46th IEEE Symposium on Security and Privacy (IEEE S&P) (2026). Role: Technical Program Committee

[**SECURITY**] 34th USENIX Security Symposium (USENIX SECURITY) (2025). Role: Technical Program Committee

[**CCS**] ACM Conference on Computer and Communications Security (2019, 2024). Role: Cyberphysical Security Session Chair (2019); Technical Program Committee (2019, 2024).

[**AsiaCCS**] ACM Asia Conference on Computer and Communications Security (2024, 2025). Role: Technical Program Committee.

[**COINS**] IEEE International Conference on Omni-layer Intelligent Systems (IEEE COINS) (2024). Role: Technical Program Committee - Security and Privacy Track.

[**PETS/POPETS**] Privacy Enhancing Technologies Symposium (2022,2023,2025). Role: Technical Program Committee of PETS and member of the Editorial Board of the Proceedings on PETS (PoPETS).

[**VehicleSec**] Symposium on Vehicle Security and Privacy-co-located with NDSS (2023,2024). Role: Technical Program Committee.

[**AutoSec**] International Workshop on Automotive and Autonomous Vehicle Security (2022). Role: Technical Program Committee.

[**IEEE SafeThings**] IEEE Workshop on the Internet of Safe Things (IEEE SafeThings 2022, IEEE SafeThings 2024). Co-located with the IEEE Symposium on Security and Privacy (IEEE S&P '22, IEEE S&P '24). Role: General Co-Chair (2022, 2024).

[**ACM MobiCom**] 26th ACM Conference on Mobile Computing and Networking. (2020). Role(s): Organisation Committee (Financial Co-Chair)

[**UK-SPS**] UK Security and Privacy Seminar Series. (2021). Role(s): Organisation Committee).

- [CCS] ACM Conference on Computer and Communications Security. (2015, 2016, 2017,2019,2024)
- [NDSS] ISOC Network and Distributed System Security Symposium. (2014, 2016, 2017)
- [S&P] IEEE Symposium on Security & Privacy. (2012)
- [Security] USENIX Security Symposium. (2014,2015,2017,2025)
- [PETS] Privacy Enhancing Technologies Symposium. (2016,2022,2023,2025)
- [AsiaCCS] ACM Asia Conference on Computer and Communications Security. (2015,2016,2024,2025)
- [CODASPY] ACM Conference on Data and Application Security and Privacy. (2012,2014)
- [TDSC] IEEE Transactions on Dependable and Secure Computing. (2016,2017,2018,2019,2020,2022)
- [TMC] IEEE Transactions on Mobile Computing. (2016,2017,2018,2019,2020,2022,2023)
- [TMSCS] IEEE Transactions on Multi-Scale Computing Systems. (2017)
- [JISA] Journal of Information Security and Applications. (2017)

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## Media and External Visibility

1. [Media] Title: "Imperial sets out cyber security research priorities". Worked with Anissa Alifandi (Communications Manager, ISST) to publicize a media piece on Imperia's cybersecurity mission and participation in the Annual Academic Centres of Excellence in Cyber Security Research (ACE-CSR) conference ( [media piece](#)).
2. [SPRITE+] Invited for a SPRITE+ Expert Fellow Spotlight interview appeared in the SPRITE+ network's website ([read here](#)), October 2020.
3. [Standards] Invited to give a talk in the [Nurturing the Era of e2e Mobility as a Service \(MaaS\): Standards for Connected and Autonomous Transportation](#) organized by IEEE. Munich, Germany, December 2019.
4. [Media] Interview with Joe Tidy, Cyber security reporter at *BBC News*, August 2019.  
*Related Article Title:* "Why phones that secretly listen to us are a myth".  
*Related Article Published:* BBC News, September 2019.  
*Published Online:* <https://www.bbc.co.uk/news/technology-49585682>
5. [Media] Interview with Ceri Stanaway on behalf of *Which? Money*, April 2019.  
*Related Article Title:* "Outfox the phone scammers".  
*Related Article Published:* The Times, March 2019; Which? Money, April 2019.
6. [Standards] Invited and participated in the [Standards for Connected and Autonomous Transportation. Nurturing the Era of e2e Mobility as a Service \(MaaS\)](#) organized by IEEE. Munich, Germany, December 2018.
7. [Workshop] Invited and participated in the [Workshop with Industry](#) organized by CRITICS (Critical Transitions in Complex Systems) to contribute in the discussion about *Cyber-security for connected and automated vehicles: Data poisoning in machine learning algorithms*. Imperial College London, December 2018.
8. [Media] Interview with Amit Katwala on behalf of *Wired*, October 2018.  
*Related Article Title:* "Google is finally fixing Android's biggest security problem".  
*Published Online:* <https://www.wired.co.uk/article/android-phone-updates-security-google>
9. [Media] Interview with Duncan M, Swinscow Hall on behalf of the Institute for Security Science and Technology (ISST), Imperial College London, September 2018.  
*Related Article Title:* "Getting smart on smartphone cybersecurity".  
*Published Online:* <http://www.imperial.ac.uk/news/188367/getting-smart-smartphone-cyber-security/>

## Presentations and Talks

1. [**Invited Talk - International**] Talk title: "Toward secure, privacy-preserving dementia detection on mobile devices" at the workshop on Mobile Systems Security and Privacy, co-located with the 23rd International Conference on Cryptology And Network Security (CANS '24) , September, 2024, Cambridge, UK.
2. [**Invited Talk - National**] Talk title: "Data Poisoning and Fakes in Mobile, Web and Cyber Physical Systems" at the Cambridge University [Computer Laboratory Security Seminar](#), March, 2024.
3. [**SOSP '23 Paper Presentation – International**] I co-presented "XFaaS: Hyperscale and Low Cost Serverless Functions at Meta" at the 29th ACM Symposium on Operating Systems Principles (SOSP), October 2023.
4. [**OSDI '23 Paper Presentation – International**] I presented "ServiceRouter: Hyperscale and Minimal Cost Service Mesh at Meta" at the 17th USENIX Symposium on Operating Systems Design and Implementation (OSDI), July 2023.
5. [**Invited Lecture on Mobile OS Security at CMU – International**] Delivered a lecture on Mobile OS Security at the [Security for Software and Hardware Systems](#) course at the School of Computer Science, Carnegie Mellon University, February, 2023.
6. [**Meta Core Systems Faculty Summit – International**] Talk title: "ServiceRouter: Meta's Scalable and Low Cost Global Service Mesh ". Presenting one of the projects I've been working on during my visit at Meta, at the [Meta Core Systems Faculty Summit](#), November, 2022.
7. [**Keynote Talk – International**] Talk title: "Analyzing and Designing the Security of a Mobile Platform". Invited for a keynote talk at the [2nd ACNS Workshop on Security in Mobile Technologies](#), June, 2021.
8. [**Invited Talk and Panel Discussion – International**] Invited to attend a panel discussion and delivering a short talk on [Workshop on Privacy Aspects of Contact Tracing](#), University of California, Irvine, October, 2020.
9. [**Invited Talk – Internal**] "apss Lab: Security and Privacy Challenges in User-Facing, Complex, Interconnected Environments". Great UK cyber deep dive, organised by the British Embassies in France and Israel, Imperial College London, UK, January 2020.
10. [**Invited Talk – International**] "Data Poisoning Threats on CAV Visual and Distance Sensors". Nurturing the Era of e2e Mobility as a Service (MaaS): Standards for Connected and Autonomous Transportation, organized by IEEE SA. Munich, Germany, December 2019.
11. [**Invited Talk – National**] "Security and Privacy Challenges in User-Facing, Complex, Interconnected Environments". Academic Centres of Excellence in Cybersecurity Research ACE-CSR Conference, Stratford upon Avon, Warwickshire, UK, June 2019.
12. [**Invited Talk – National**] "Security and Privacy Challenges in User-Facing, Complex, Interconnected Environments". InfoSec and ACE Seminars, University College London, London, UK, January 2019.
13. [**Invited Talk – National**] "Connected and Autonomous Vehicle Security". [Workshop with Industry](#), Imperial College London, December 2018.
14. [**Invited Talk – Internal**] "Security and Privacy Challenges in User-Facing, Complex, Interconnected Environments". Computational Privacy Group , Imperial College London, London, UK, December 2018.
15. [**Invited Talk – Internal**] "Security and Privacy Challenges in User-Facing, Complex, Interconnected Environments". Security and Privacy Reading Group, Imperial College London, London, UK, November 2018. **Participating groups:** Systems and Algorithms Laboratory (SysAl), led by Dr Hamed Haddadi (Dyson School of Design Engineering); Information Processing and Communications Lab, led by Dr Deniz Gunduz (Electrical and Electronic Engineering). Applications and Systems Security Lab (apss), led by Dr Soteris Demetriou (Computing).
16. [**Invited Talk**] "Security and Privacy Challenges in User-Facing, Complex, Interconnected Environments". Hewlett Packard Labs, Palo Alto, CA, USA, May 2018.
17. [**Invited Talk**] "Security and Privacy Challenges in User-Facing, Complex, Interconnected Environments". VISA Research, Palo Alto, CA, USA, May 2018.
18. [**Invited Talk**] "Security and Privacy Challenges in User-Facing, Complex, Interconnected Environments". Indiana University, Bloomington, IN, USA, March 2018.

19. [**Invited Talk**] “Security and Privacy Challenges in User-Facing, Complex, Interconnected Environments”. Symantec Research Labs, Los Angeles, CA, USA, February 2018.
  20. [**Conference Talk**] CoDrive: Improving Automobile Positioning via Collaborative Driving. *INFOCOM '18*, Honolulu, HI, USA, April 2018.
  21. [**Conference Talk**] Resolving the Predicament of Android Custom Permissions. *NDSS '18*, San Diego, CA, USA, February 2018.
  22. [**Poster Presentation**] Tackling Emerging Security and Privacy Threats in the Internet of Things. *HUAWEI*, Research Park, Champaign, IL, USA, October 2017.
  23. [**Young Researcher Pitch and Poster Presentation**] Tackling Emerging Security and Privacy Threats in the Internet of Things. *5th Heidelberg Laureate Forum (HLF)*, Heidelberg Germany, September 2017.
  24. [**Conference Talk**] HanGuard: SDN-Driven Protection of Smart Home WiFi Devices from Malicious Mobile Apps. *WiSec '17*, Boston, MA, USA, July 2016.
  25. [**Laureate Talk and Poster Presentation**] Tackling Emerging Security and Privacy Threats in the Internet of Things. *French-American Doctoral Exchange Program (FADEx) in Cybersecurity '17*, LORIA Nancy, France, June 2017; IRISA, Rennes, France, June 2017; INRIA, Paris, France, June 2017.
  26. [**Conference Talk**] Free for All! Assessing User Data Exposure to Advertising Libraries on Android. *NDSS '16*, San Diego, CA, USA, February 2016.
  27. [**Poster Presentation**] Free for All! Assessing User Data Exposure to Advertising Libraries on Android. *NDSS '16*, San Diego, CA, USA, February 2016.
  28. [**Poster Presentation**] Free for All! Assessing User Data Exposure to Advertising Libraries on Android. 11th Coordinated Science Lab Student Conference *CSLSC*, Champaign, IL, USA, February 2016.
  29. [**NSF Review**] Free for All! Assessing User Data Exposure to Advertising Libraries on Android. Trustworthy Health & Wellness NSF Review, Johns Hopkins University, Baltimore, MD, USA, January 2016.
  30. [**NSF Review**] What’s in your Dongle and Bank Account? Mandatory and Discretionary Protection of Android External Resources. Trustworthy Health & Wellness NSF Review, Dartmouth College Hanover, NH, USA, September 2015.
  31. [**Invited Talk**] What’s in your Dongle and Bank Account? Mandatory and Discretionary Protection of Android External Resources. Student Knowledge Exchange on Privacy Related Topics, Notre Dame University, Notre Dame, IN, USA, Aug 2015.
  32. [**Invited Talk**] What’s in your Dongle and Bank Account? Mandatory and Discretionary Protection of Android External Resources. Stanford Research Institute (*SRI*) International, Palo Alto, CA, USA, August 2015.
  33. [**Invited Talk**] What’s in your Dongle and Bank Account? Mandatory and Discretionary Protection of Android External Resources. Mobile Systems Seminar, University of Illinois at Urbana-Champaign, Champaign, IL, USA, March 2015.
  34. [**Conference Talk**] What’s in your Dongle and Bank Account? Mandatory and Discretionary Protection of Android External Resources. *NDSS '15*, San Diego, CA, USA, February 2015.
  35. [**Conference Talk**] Security and Privacy for Mobile Health Apps. *AMIA '14*, Washington, DC, USA, Nov 2014.
  36. [**NSF Review**] mHealth Applications and Privacy. Trustworthy Health & Wellness NSF Review, Dartmouth College, Hanover, NH, USA, September 2014.
  37. [**Diploma Thesis Defense**] Development and Evaluation of Collaborative Applications for Mobile Devices, University of Patras, Greece, Nov 2010.
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## Academic Experience

### Imperial College London

	LONDON, UK
Associate Professor in Computer Systems Security	Oct '24 – present
Assistant Professor in Computer Systems Security	Jan '23 – Oct '24
Assistant Professor in Computer Systems Security	Sep '18 – Dec '21
Director of the Imperial ACE-CSR Centre	Jan '24 – present
Lead of the Applications, Platforms and Systems Security (APSS) group	Sep '18 – present
Department's Sustainability Champion	Oct '24 – present
Department's PhD Scholarship Committee	Oct '24 – present
Department's PhD Tutor	May '23 – Oct '24
Co-leading instruction of Advanced Computer Security (COMP97109/COMP97110)	Fall '19, Fall '20, Fall '21, Spring '23, Spring '24, Spring '25
Co-leading Instruction of Computer Systems (COMP70088)	Fall '24
Co-led instruction of Computing Practical 1 (COMP40009)	Spring '23
Co-leading instruction of Computer Architecture (COMP97069)	Fall '19, Fall '20, Fall '21
Led instruction of CO447H	Spring '19
DoC Public Engagement Champion	Sep '20 – Jan '22
UG Admissions Vice-Director	Sep '19 – Jan '22
Reviewed 412 applications and interviewed 43 candidates to date.	
Personal Tutor	Sep '18 – present
Personal Programming Tutor	Sep '18 – present

### University of Illinois at Urbana-Champaign - Department of Computer Science CHAMPAIGN, IL, USA

<b>Research Assistant</b>	Aug '12 – May '18
– Assisted in writing the “Thrustworthy Health and Wellness (THaW)” proposal. THaW was awarded a frontier award (the highest bestowed by NSF SaTC in 2013). The award is of \$10,000,000 in total (2013-2018). Institutions: Dartmouth College, University of Michigan, University of Illinois at Urbana-Champaign (CNS 13-30491), Johns Hopkins University, Vanderbilt University. I am currently funded by this award.	
– Funded by HHS 90TR0003-01; Title: “Strategic Healthcare IT Advanced Research Projects on Security (SHARPS)”; Granted by: Office of the National Coordinator for Health IT (ONC) and Department of Health and Human Services (HHS); multi-institutional award (\$10,000,000 total).	
<b>Guest Lecturer</b>	Spring 2018
CS463/ECE424 - Computer Security II	Presented two 75-minute lectures on Mobile Security. Designed a machine problem on targeted advertising attacks on Android.
<b>Guest Lecturer</b>	Fall 2017
CS563/ECE525 - Advanced Computer Security	Presented a 75-minute lecture on IoT Security.
<b>Guest Lecturer</b>	Fall 2016
CS563/ECE525 - Advanced Computer Security	Presented a 75-minute lecture on Mobile Advertising.
<b>Guest Lecturer</b>	Spring 2016
CS463/ECE424 - Computer Security II	Presented two 75-minute lectures on Mobile Security. Designed a machine problem on targeted advertising attacks on Android.
<b>Teaching Assistant</b>	Spring 2015
CS463/ECE424 - Computer Security II	Presented two 75-minute lectures on Mobile Security. Designed and graded a new machine problem on targeted advertising. Graded homeworks, midterms and final exams. Held office hours twice per week and coordinated discussions on an online Q&A web platform (Piazza).
<b>Guest Lecturer</b>	Fall 2014
CS563/ECE525 - Advanced Computer Security	Presented a 75-minute lecture on Mobile Advertising.
<b>Guest Lecturer</b>	Spring 2014
CS463/ECE424 - Computer Security II	Presented a 75-minute lecture on Mobile Security. Designed and graded a new machine problem on side-channel attacks on Android.

## Industry Experience

Meta Platforms, Inc.

SEATTLE (WA), USA

### Visiting Professor - Core Systems

Jan '22 – Jun '23

- Led projects related to service routing and load balancing, continuous development, serverless compute, and mobile configurations.
- Mobile Configuration Management [paper](#) accepted at NSDI '24.
- Service Mesh paper accepted at OSDI '23.
- Continuous Deployment paper accepted at OSDI '23.
- Function-as-a-Service paper accepted at SOSP '23.

Hewlett Packard Labs

PALO ALTO (CA), USA

### Research Intern - Networking and Mobility Lab

Jun '16 – Jan '17

- Designed an Internet of Things (IoT) automation framework. Related Patent: [US10778516B2](#).
- Designed and evaluated a location optimization algorithm for connected cars. The solution reduces positioning errors by 9x. Related Patent: [US10380889B2](#). Conference paper accepted at IEEE INFOCOM '18.
- Worked on user privacy violations through vision libraries used by Android apps. Conference paper accepted at ACM SenSys '17.
- Won the *best in class award* during the HPE Intern Project Fair.

Samsung Research America

MOUNTAIN VIEW (CA), USA

### Research Intern - Mobile Payments and Security Lab

Jun '15 – Aug '15

- Designed, implemented and evaluated a secure access control and management system for internet-of-things (IoT) devices. Conference paper accepted at WiSec '17.
- Worked on a security analysis on application installation on the Android operating system. Conference paper accepted at IEEE/IFIP DSN '17.
- Won the *best pitch award* during the Samsung Innovation Jam.

Future Worlds Center

NICOSIA, CYPRUS

### Research Associate

Feb '11 – Aug '12

- Assisted in writing and acquisition of the [e-hoop](#) EU-funded grant. Title: “Unified e-Hoop approach to learning differences”. Funding Agency: Lifelong Learning Programme. Contract Number: 530931-LLP-1-2012-1-CY-KA1-KA3MP.
- Also worked on the following projects: [Cyberethics](#), [SimSafety](#), [Moblang](#), [IdentifEYE](#), [TeachMDGs](#).
- I have set-up, designed and maintained the organization’s [FWC-pedia](#).
- **Trainer:** led various employee training sessions on creating content for the organization’s [FWC-pedia](#).

EKKOTEK

[www.ekkotek.com](http://www.ekkotek.com)

### Software Engineer

Feb '11 – Aug '12

- **Technical:** helped designed and developed a website for a hair salon; built an online video voting platform; developed various websites and modules for mobile applications.
  - **Business:** weekly representation of the company in a reputable international business network ([BNI](#)).
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