

## Contact Info

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## Research Interests

Summary Privacy, Ads & Tracking Ecosystems, Filter Rule Generation, Network Measurements

## Education

- Fall 2018 – **Doctor of Philosophy, UC Irvine.**  
ongoing Electrical Engineering and Computer Science (EECS)  
○ Advisor: Athina Markopoulou  
○ Expected Graduation: June 2023
- 2021 **Master of Science in Computer Engineering, UC Irvine**, GPA–3.96/4.0.  
○ Advisor: Athina Markopoulou  
○ Thesis: Characterizing the Fire TV Advertising and Tracking Ecosystem
- 2009 **Bachelor of Computer Science and Engineering, UC Irvine**, GPA–3.6/4.0.  
Campuswide Honors Program – Undergrad research on watershed extraction.  
○ Undergrad Advisor: David Eppstein  
○ Senior Research Report: Watershed Extractions

## Publications

- 4 **H. Le**, S. Elmalaki, A. Markopoulou, Z. Shafiq, “AutoFR: Automated Filter Rule Generation for Adblocking,” *To appear in the Proceedings of the 32nd USENIX Conference on Security Symposium*, August 2023, preprint [arXiv:2202.12872](https://arxiv.org/abs/2202.12872).
- 3 R. Trimananda, **H. Le**, H. Cui, J. Ho, A. Shuba, A. Markopoulou, “OVRseen: Auditing Network Traffic and Privacy Policies in Oculus VR,” *Proceedings of the 31st USENIX Conference on Security Symposium*. August 2022.  
○ Presented by R. Trimananda at PrivacyCon 2022 (1:46:52), and Duck Duck Go.
- 2 **H. Le**, A. Markopoulou, Z Shafiq, “CV-INSPECTOR: Towards Automating Detection of Adblock Circumvention,” *Proceedings of Network and Distributed System Security Symposium 2021*.

- 1 J. Varmarken<sup>†</sup>, **H. Le<sup>†</sup>**, A. Shuba, A. Markopoulou, Z. Shafiq, "The TV is Smart and Full of Trackers: Measuring Smart TV Advertising & Tracking," in *Proceedings of Privacy Enhancing Technologies Symposium (PETS/PoPETS) 2020*, Issue 2, pp. 129-154, May 2020. (<sup>†</sup>: co-first authors)
  - Presented by J. Varmarken at PrivacyCon 2021 (15:50), and to Consumer Reports and Duck Duck Go.
- \* Anastasia Shuba, Evita Bakopoulou, Milad Asgari Mehrabadi, **Hieu Le**, David Choffnes, Athina Markopoulou, "AntShield: On-Device Detection of Personal Information Exposure," arXiv:1803.01261.

## Work Experience

- Sept. 2018 – **Graduate Student Researcher, UC Irvine.**  
Present My research focuses on the cat-and-mouse game between publishers & advertisers vs. adblockers. My work aims to facilitate the adblocking community by automating bottlenecks in the generation of filter rules.
- June 2021 – **Automation Engineer Intern, eyeo.**  
Sept. 2021 Worked with the Anti-CV team to deal with ad-circumvention by customizing CV-Inspector to detect when sites circumvent adblockers.
- Aug. 2017 – **Senior Software Developer, Internet Brands, El Segundo, CA.**  
June 2020 Architect technical solutions for new features for websites, integrate with third-party partners, and plan production deployments for high traffic sites.
- Aug. 2016 – **Technical Consultant, with Prof. Markopoulou's group, UC Irvine, Calit2.**  
May 2018 Software development for the AntMonitor project (<https://athinagroup.eng.uci.edu/projects/antmonitor/>): Android UI design, automated APK collection, contributing to research paper (TR1).
- Aug. 2013 – **Lead Software Developer, Metronome Software, Laguna Hills, CA.**  
Aug. 2017 Lead in software development for multiple projects funding by government contracts, related to web development.
- April 2011 – **Software Developer, Metronome Software, Laguna Hills, CA.**  
Aug. 2013 Involved in web development of multiple projects funded by government contracts.
- July 2009 – **Software Developer, InQuira (Oracle), Torrance, CA.**  
April 2011 Development of Adobe Flex applications.

## Invited Talks

- Oct. 2022 "AutoFR: Automated Filter Rule Generation for Adblocking", Ad-Filtering Dev Summit 2022, Amsterdam, Netherlands.
- Oct. 2021 "Towards Automatic Generating and Testing of Filter Rules", Adblocker Dev Summit 2021, Virtual.
- Oct. 2020 "Revisiting Adblock Circumvention", Adblocker Dev Summit 2020, Virtual.
- Sept. 2019 "Measuring and Mitigating Adblock Circumvention in the Wild", Adblocker Dev Summit 2019, Amsterdam, Netherlands.

## Service and Outreach

- 2022-present Co-founder of Nothing to Hide? A Data Privacy Podcast.
- This initiative aims to raise awareness of privacy issues to a general audience and is led by PhD students and postdocs across multiple institutions within the ProperData NSF Frontier project.
- 2022-present Elected Officer of Society of Graduate Electrical Engineers & Computer Scientist.
- 2022-2023 USENIX Security Artifact Reviewer.
- 2022-2023 PoPETs Artifact Reviewer.
- Nov. 2022 Contributed to FTC Request for Comments on Commercial Surveillance and Data Security. Submitted by Northeastern's Institute on Cybersecurity and Privacy.
- June 2022 Graduate Students Panel for Privacy and IoT Research Exploration Workshop 2. Hosted by the ProperData NSF Frontier project.

## Awards and Honors

- 2018 UCI EECS Department Fellowship Award
- 2009 UCI Campuswide Honors Program

## Skills

- Languages Python, HTML, CSS, JavaScript, Java
- Tools Selenium, scikit-learn, Chrome Extensions, AWS EC2, Docker
- OS Mac OS, Ubuntu, Android