Abbas Razaghpanah, PhD

Address:
International Computer Science Institute
1947 Center St,
Suite 600,
Berkeley, California 94704

Website: http://abbas.rpanah.ir
Email: abbas@icsi.berkeley.edu

Research Interests Computer Networks, Network Measurement, Privacy, Security

Education

- PhD in Computer Science — *2013 - 2019*
Stony Brook University (SUNY Stony Brook)
Co-Advisers: Phillipa Gill, PhD and Narseo Vallina-Rodriguez, PhD

- M.Sc. in Computer Science — *2013 - 2015*
Stony Brook University (SUNY Stony Brook)
Adviser: Phillipa Gill, PhD

- B.Sc. in Computer Science — *2008 - 2013*
Amirkabir University of Technology (Tehran Polytechnic)

Awards

- French Data Protection Authority (CNIL) and Inria Privacy Protection Award winner *Jan. 2020*
- Emilio Aced Personal Data Protection Research Prize from the Spanish Data Protection Agency (AEPD) *Jan. 2020*
- Distinguished Paper Award winner at ACM IMC 2018 — *Nov. 2018*
- Awarded Information Controls Fellowship offered by OTF and the Citizen Lab — *Nov. 2014*
- Best poster award in Stony Brook Technology Day poster competition — *Sep. 2014*
- Runner up in the ACM Student Research Competition at SIGCOMM 2014 — *Aug. 2014*

Publications

Selected Technical Reports

- "Haystack: In Situ Mobile Traffic Analysis in User Space" — *Oct. 2015*
Abbas Razaghpanah, Narseo Vallina-Rodriguez, Srikanth Sundaresan, Christian Kreibich, Phillipa Gill, Mark Allman, and Vern Paxson

- "Exploring the Design Space of Longitudinal Censorship Measurement Platforms" — *Jun. 2016*
Abbas Razaghpanah, Anke Li, Arturo Filastò, Rishab Nithyanand, Vasilis Ververis, Will Scott, and Phillipa Gill

Conference Papers

- "Apps, Trackers, Privacy, and Regulators: A Global Study of the Mobile Tracking Ecosystem"
Abbas Razaghpanah, Rishab Nithyanand, Narseo Vallina-Rodriguez, Srikanth Sundaresan, Mark Allman, Christian Kreibich, and Phillipa Gill
The Network and Distributed System Security Symposium (NDSS). San Diego, CA. *Feb. 2018*

- "Studying TLS Usage in Android Apps"
Abbas Razaghpanah, Arian Akhavan Niaki, Narseo Vallina-Rodriguez, Srikanth Sundaresan, Johanna Amann, and Phillipa Gill
Conference on emerging Networking EXperiments and Technologies (ACM CoNEXT). Seoul/Incheon, South Korea. *Dec. 2017*

- "Coming of Age: A Longitudinal Study of TLS Deployment"

Platon Kotzias, **Abbas Razaghpanah**, Johanna Amann, Kenneth G. Paterson, Narseo Vallina-Rodriguez, and Juan Caballero
Internet Measurement Conference (ACM IMC). Boston, MA. *Nov. 2018* (**Distinguished Paper**)

- "liberate (n): A library for exposing (traffic-classification) rules and avoiding them efficiently"
Fangfan Li, **Abbas Razaghpanah**, Arash Molavi Kakhki, Arian Akhavan Niaki, David Choffnes, Phillipa Gill, and Alan Mislove
Internet Measurement Conference (ACM IMC). London, UK. *Nov. 2017* (Accept rate 26%)

- "Identifying Traffic Differentiation in Mobile Networks"
Arash Molavi Kakhki, **Abbas Razaghpanah**, Hyungjoon Koo, Anke Li, Rajeshkumar Golani, David Choffnes, Phillipa Gill, and Alan Mislove
Internet Measurement Conference (ACM IMC). Tokyo, Japan. *Oct. 2015* (Accept rate 26%)

- "Internet Outages, the Eyewitness Accounts: Analysis of the Outages Mailing List"
Ritwik Banerjee, **Abbas Razaghpanah**, Luis Chiang, Akassh Mishra, Vyas Sekar, Yejin Choi, and Phillipa Gill
In Proc. of the *Passive and Active Measurement Conference (PAM)*. New York, USA. *Mar. 2015* (Accept rate 27%)

- "An Analysis of Pre-installed Android Software"
Julien Gamba, Mohammed Rashed, **Abbas Razaghpanah**, Juan Tapiador, Narseo Vallina-Rodriguez
IEEE Symposium on Security and Privacy (Oakland). San Francisco, CA. *May 2020*

- ""Won't Somebody Think of the Children" Privacy Analysis at Scale: A Case Study With COPPA"
Irwin Reyes, Primal Wijesekera, Joel Reardon, Amit Elazari, **Abbas Razaghpanah**, Narseo Vallina Rodriguez, and Serge Egelman
PETS. Barcelona, Spain. *July. 2018*

- "The Cloud that Runs the Mobile Internet"
Foivos Michelinakis, Hossein Doroud, **Abbas Razaghpanah**, Andra Lutu, Narseo Vallina-Rodriguez, Phillipa Gill, and Joerg Widmer
IEEE INFOCOM. Honolulu, HI. *Apr. 2018*

- "A Churn for the Better: Localizing Censorship using Network-level Path Churn and Network Tomography"
Shinyoung Cho, Rishab Nithyanand, **Abbas Razaghpanah**, and Phillipa Gill
Conference on emerging Networking EXperiments and Technologies (ACM CoNEXT). Seoul/Incheon, South Korea. *Dec. 2017*

- "ICLab: A Global, Longitudinal Internet Censorship Measurement Platform"
Arian Akhavan Niaki, Shinyoung Cho, Zachary Weinberg, Nguyen Phong Hoang, **Abbas Razaghpanah**, Nicolas Christin, and Phillipa Gill
IEEE Symposium on Security and Privacy (Oakland). San Francisco, CA. *May 2020*

Journal Publications

- "Meddle: Enabling Transparency and Control for Mobile Internet Traffic"
Ashwin Rao, Arash Molavi Kakhki, **Abbas Razaghpanah**, Anke Li, David Choffnes, Arnaud Legout, Alan Mislove, and Phillipa Gill
Journal of Technology Science (JoTS). *Oct. 2015*

Workshop Publications

- ""Is Our Children's Apps Learning?" Automatically Detecting COPPA Violations"
Irwin Reyes, Primal Wijesekera, **Abbas Razaghpanah**, Joel Reardon, Narseo Vallina-Rodriguez, Serge Egelman, and Christian Kreibich
Workshop on Technology and Consumer Protection (ConPro) *March. 2017*

Posters

- "A client-side analysis of TLS usage in mobile apps"
Abbas Razaghpanah, Narseo Vallina-Rodriguez, and Phillipa Gill
In *USENIX Security Poster Session*. Austin, Texas. *Aug. 2016*

- "Haystack: *In Situ* Mobile Traffic Analysis in User Space"
Abbas Razaghpanah, Narseo Vallina-Rodriguez, Srikanth Sundaresan, Christian Kreibich, Phillipa Gill, Mark Allman, and Vern Paxson
In *ACM HotMobile Poster & Demo Session*. St. Augustine, Florida. *Feb. 2016*

- "Identifying Traffic Differentiation on Cellular Data Networks"
Arash Molavi Kakhki, **Abbas Razaghpanah**, Rajesh Golani, David Choffnes, Phillipa Gill, and Alan Mislove
In *ACM SIGCOMM Poster & Demo Session*. Chicago, Illinois. *Aug. 2014*
Runner up in the *ACM Student Research Competition at SIGCOMM 2014*

Projects	- **In Situ Mobile Privacy Leaks Detection and Measurement Platform** As part of my work as a graduate student intern at ICSI, I helped develop a mobile application that enables detection of private information exfiltration by applications without requiring root access by implementing a VPN interface on the device. I developed the module responsible for intercepting encrypted communication on the device (TLS proxy), reimplemented and revamped the core of the system in C++, and implemented various other modules and components of the app over the course of more than two years. The mobile application, called "Lumen", is available to download from the Google Play Store. - **Information Controls Lab (ICLab)** ICLab is a platform designed for repeatable measurements to detect and analyze information controls and Internet interference at scale. It's a joint work between The Citizen Lab, Stony Brook University, and Princeton University. I have been working on developing and deploying the open-source ICLab software platform called Centinel. The software platform supports running custom measurements across any collection of vantage points across the globe and analyzing measurement results using the ICLab data management platform (DMP). - **Mobile Middlebox Detection** A joint effort between Northeastern University and Stony Brook University, the mobile middlebox detection project aims at detecting interference introduced by middleboxes in the mobile environment by running active measurements from the edge. These measurements include detecting traffic differentiation for different applications using a novel record-replay method. The differentiation detection application is available to download from the Google Play Store.
Professional Experience	- **Research Intern** International Computer Science Institute (ICSI) at UC Berkeley *Summer 2015, 2017, and 2018* I worked on developing a mobile privacy measurement application with Narseo Vallina-Rodriguez,

Srikanth Sundaresan, and Christian Kreibich under the supervision of Vern Paxson. Later I worked with my collaborators at ICSI to analyze data collected by our mobile measurement platform to better understand the mobile ecosystem from the edge, resulting in a number of paper submissions.
- **Seasonal OTF Research Fellow**
The Citizen Lab at University of Toronto *Spring 2015*
Worked on ICLab, a platform to measure Internet interference under supervision of Ronald Dibert.

Teaching Experience	• **Teacher's Assistant**, Stony Brook University *Feb. 2014 - May 2014* Principles of Programming Languages presented by Prof. Yanhong Annie Liu • **Teacher's Assistant**, Stony Brook University *Sep. 2013 - Dec. 2014* Database Design and Practice presented by Prof. Robert Kelly • **Teacher's Assistant**, Stony Brook University *Sep. 2013 - Dec. 2014* Introduction to Computer Organization presented by Prof. Robert Kelly • **Teacher's Assistant**, Amirkabir University of Technology *Sep. 2012 - Jun. 2013* Introduction to C Programming, presented by Mr. Lavassani. • **Tutor**, Amirkabir University of Technology *Sep. 2012 - Jun. 2013* Introduction to Linux Operating System. • **Teacher**, Allame Helli II Middle School, Tehran, Iran *Sep. 2012 - Jun. 2013* A branch of the National Organization for Development of Exceptional Talents (NODET). Computer programming basics in Pascal. Introduction to Artificial Intelligence teacher. • **Teacher**, Allame Helli IV High School, Tehran, Iran *Sep. 2011 - Apr. 2012* A branch of the National Organization for Development of Exceptional Talents (NODET). Computer programming basics in C++. • **Teacher**, AbouAli Sina High School, Tehran, Iran *Sep. 2011 - March 2012* Computer programming and AI development for 2D soccer simulation agents. • **Teacher's Assistant**, Amirkabir University of Technology *Feb. 2011 - Jul. 2011* Introduction to Database Systems and Analysis, presented by Professor Parham Moradi. • **Teacher**, Allame Helli High School, Tehran, Iran *Sep. 2010 - Jun. 2011* Part of the National Organization for Development of Exceptional Talents (NODET). Computer programming basics in C++. • **Tutor**, Amirkabir University of Technology *Fall 2009 - Spring 2010* AI development for 2D soccer simulation agents, tactics and strategies.