

Kevin Liao

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Research Interests

Security & privacy, programming languages, cryptography, distributed systems

Education

[M.S. in Computer Science](#), University of Illinois at Urbana-Champaign Aug. 2017 - May 2019
Advisor: Andrew Miller

[B.S. in Computer Science with Honors](#), Arizona State University Aug. 2013 - May 2017
Advisor: Adam Doupé

Honors & Awards

[National Science Foundation Graduate Research Fellowship](#) Aug. 2017 - Present

[Outstanding Graduate in Computer Science](#), Arizona State University May 2017

[Moeur Award](#), Arizona State University May 2017

Research Funding

[SaUCy: Modular Testing and Verification for Distributed Cryptography](#) 2018
Facebook, \$50,000
PI: Andrew Miller, Co-PI: [Kevin Liao](#)

Publications

* = alphabetical authorship

Refereed Conferences

[ILC: A Calculus for Composable, Computational Cryptography](#)
[Kevin Liao](#), Matthew Hammer, and Andrew Miller
Proceedings of the Conference on Programming Language Design and Implementation (PLDI), June 2019.

[Behind Closed Doors: Measurement and Analysis of CryptoLocker Ransoms in Bitcoin](#)
[Kevin Liao](#), Ziming Zhao, Adam Doupé, and Gail-Joon Ahn
Proceedings of the Symposium on Electronic Crime Research (eCrime), June 2016.

Refereed Workshops

[Incentivizing Blockchain Forks via Whale Transactions](#)
[Kevin Liao](#) and Jonathan Katz
Proceedings of the Workshop on Bitcoin and Blockchain Research (BITCOIN), April 2017.

Books & Chapters

[Ransomware and Cryptocurrency: Partners in Crime](#)
Gail-Joon Ahn, Adam Doupé, Ziming Zhao, and [Kevin Liao](#)
Book chapter in *Cybercrime Through an Interdisciplinary Lens* ed. by Thomas J. Holt.

Manuscripts In Submission

[A Probabilistic Separation Logic](#)
Gilles Barthe, Justin Hsu, [Kevin Liao](#)*

[Logging to the Danger Zone: In-Memory Attacks and Defenses on System Auditing Frameworks](#)
Riccardo Paccagnella, [Kevin Liao](#), Adam Bates, Dave (Jing) Tian

[Black-Box Web Vulnerability Analysis Using White-Box Techniques](#)
[Kevin Liao](#), Connor Nelson, Zackary Crosley, and Adam Doupé

Professional Experience

Researcher , Max Planck Institute for Security & Privacy Advisor: Gilles Barthe	Aug. 2019 - Present
Research Assistant , University of Illinois at Urbana-Champaign Advisor: Andrew Miller	Aug. 2017 - Aug. 2019
Research Assistant , Arizona State University Advisor: Adam Doupé	May 2017 - Aug. 2017
Undergraduate Research Assistant , University of Maryland Advisor: Jonathan Katz	Jun. 2016 - Aug. 2016
Undergraduate Research Assistant , Arizona State University Advisors: Gail-Joon Ahn, Adam Doupé, Ziming Zhao	Mar. 2015 - May 2017

Teaching

Teaching Assistant , University of Illinois at Urbana-Champaign CS498: Applied Cryptography	Fall 2018
Undergraduate Teaching Assistant , Arizona State University CSE220: Programming for Computer Engineering	Spring 2017
Undergraduate Teaching Assistant , Arizona State University CSE240: Introduction to Programming Languages	Fall 2016
Undergraduate Teaching Assistant , Arizona State University CSE110: Introduction to Programming	Fall 2014

Advising & Mentoring

Dhruv Bohra, Eunice Zhou	Fall 2018
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Talks

ILC: A Calculus for Composable, Computational Cryptography Conference on Programming Language Design and Implementation (Phoenix, AZ)	Jun. 2019
Incentivizing Blockchain Forks via Whale Transactions Workshop on Bitcoin and Blockchain Research (Sliema, Malta)	Apr. 2017
Measurement and Analysis of CryptoLocker Ransoms in Bitcoin Symposium on Electronic Crime Research (Toronto, CA)	Jun. 2016

Service & Outreach

Program Committee , IEEE International Conference on Blockchain and Cryptocurrency (ICBC)	2019
Course Developer , First Gen Scientists	Fall 2016