

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 Advisor: Andrew Miller	Aug. 2017–May 2019
B.S. in Computer Science with Honors , Arizona State University Advisor: Adam Doupe	Aug. 2013–May 2017

Honors & Awards

National Science Foundation Graduate Research Fellowship	2017
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 Facebook, \$50,000 PI: Andrew Miller, Co-PI: Kevin Liao	2018
Inductive Reverse Engineering of Web Applications Fulton Undergraduate Research Initiative, \$3,000 Advisor: Adam Doupe	2016–2017

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 Doupe, 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 Doupe, 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 Aug. 2019–Present
Advisor: Gilles Barthe

[Research Assistant](#), University of Illinois at Urbana-Champaign Aug. 2017–Aug. 2019
Advisor: Andrew Miller

[Research Assistant](#), Arizona State University May 2017–Aug. 2017
Advisor: Adam Doupé

[Undergraduate Research Assistant](#), University of Maryland Jun. 2016–Aug. 2016
Advisor: Jonathan Katz

[Undergraduate Research Assistant](#), Arizona State University Mar. 2015–May 2017
Advisors: Gail-Joon Ahn, Adam Doupé, Ziming Zhao

Teaching

[Teaching Assistant](#), University of Illinois at Urbana-Champaign Fall 2018
CS498: Applied Cryptography

[Undergraduate Teaching Assistant](#), Arizona State University Spring 2017
CSE220: Programming for Computer Engineering

[Undergraduate Teaching Assistant](#), Arizona State University Fall 2016
CSE240: Introduction to Programming Languages

[Undergraduate Teaching Assistant](#), Arizona State University Fall 2014
CSE110: Introduction to Programming

Advising & Mentoring

Dhruv Bohra, Eunice Zhou (PURE program) Fall 2018

Talks

[ILC: A Calculus for Composable, Computational Cryptography](#) Jun. 2019
Conference on Programming Language Design and Implementation (Phoenix, AZ)

[Incentivizing Blockchain Forks via Whale Transactions](#) Apr. 2017
Workshop on Bitcoin and Blockchain Research (Sliema, Malta)

[Measurement and Analysis of CryptoLocker Ransoms in Bitcoin](#) Jun. 2016
Symposium on Electronic Crime Research (Toronto, CA)

Service & Outreach

[Program Committee](#), IEEE International Conference on Blockchain and Cryptocurrency (ICBC) 2019

[Course Developer](#), First Gen Scientists Fall 2016