Enze Liu

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alexliu0809.github.io

Research Interests

Security, Usability, and Transparency of Composite Systems and Emerging Technologies.

Education

– Ph.D. in Computer Science, University of California at San Diego, 2025 (expected)

  Advisors: Stefan Savage and Geoffrey M. Voelker

  Thesis Committee: Terrence August, KC Claffy (CAIDA), and David D. Clark (MIT)

– M.S. in Computer Science, University of Chicago, 2018

  Advisor: Blase Ur

– B.S. in Software Engineering, Beijing Institute of Technology, 2016

Awards & Honors

– Best Paper Award, the IEEE European Symposium on Security and Privacy (2023)

– Finalist, CSAW Applied Research Competition (2023)

– IRTF Applied Networking Research Prize (2021)

Publications

Work in Progress

[A1] A. Bellon, M. Haller, A. Labunets, **Enze Liu**, and S. Savage, *An Empirical Analysis on the Use and Reporting of National Security Letters*, Under Submission, 2024. [Online]. Available: https://arxiv.org/pdf/2403.02768,
– **Short Presentation at CSLAW 24**.

[A2] **Enze Liu**, E. Luo, J. C. Yan, K. Izhikevich, S. Grant, D. Stefan, G. M. Voelker, and S. Savage, *Count of Monte Crypto: Accounting-based Defenses for Cross-Chain Bridges*, Under Submission, 2024. [Online]. Available: https://arxiv.org/pdf/2410.01107.

Conference and Journal Publications

[C1] **Enze Liu**, G. Kappos, E. Mugnier, L. Invernizzi, S. Savage, D. Tao, K. Thomas, G. M. Voelker, and S. Meiklejohn, "Give and Take: An End-To-End Investigation of Giveaway Scam Conversion Rates," in *Proceedings of the ACM Internet Measurement Conference (IMC)*, 2024.

[C2]   S. Rao, **Enze Liu**, G. Ho, G. M. Voelker, and S. Savage, "Unfiltered: Measuring Cloud-based Email Filtering Bypasses," in *Proceedings of the ACM Web Conference (WWW)*, 2024,
  – **Oral Presentation**.

[C3]   L. Sun, H. Zhang, **Enze Liu**, M. Liu, and K. Vaccaro, "NewsGuesser: Using Curiosity to Reduce Selective Exposure," *Proceedings of the ACM on Human-Computer Interaction (CSCW)*, 2024.

[C4]   **Enze Liu**, G. Akiwate, M. Jonker, A. Mirian, G. Ho, G. M. Voelker, and S. Savage, "Forward Pass: On The Security Implications of Email Forwarding Mechanism and Policy," in *Proceedings of the IEEE European Symposium on Security and Privacy (EuroS&P)*, IEEE, 2023,
  – **Best Paper Award.**
  – **Finalist, CSAW Applied Research Competition 2023**.

[C5]   **Enze Liu**, S. Rao, S. Havron, G. Ho, S. Savage, G. M. Voelker, and D. McCoy, "No Privacy Among Spies: Assessing the Functionality and Insecurity of Consumer Android Spyware Apps," *Proceedings on Privacy Enhancing Technologies (PoPETS)*, 2023,
  – **FTC PrivacyCon 2024**.

[C6]   **Enze Liu**, L. Sun, A. Bellon, G. Ho, G. M. Voelker, S. Savage, and I. N. Munyaka, "Understanding the Viability Of Gmail's Origin Indicator for Identifying the Sender," in *Proceedings of the Symposium on Usable Privacy and Security (SOUPS)*, 2023.

[C7]   **Enze Liu**, G. Akiwate, M. Jonker, A. Mirian, S. Savage, and G. M. Voelker, "Who's Got Your Mail? Characterizing Mail Service Provider Usage," in *Proceedings of the ACM Internet Measurement Conference (IMC)*, 2021, pp. 122–136.

[C8]   A. Randall, **Enze Liu**, R. Padmanabhan, G. Akiwate, G. M. Voelker, S. Savage, and A. Schulman, "Home is Where the Hijacking is: Understanding DNS Interception by Residential Routers," in *Proceedings of the ACM Internet Measurement Conference (IMC)*, 2021, pp. 390–397.

[C9]   A. Randall, **Enze Liu**, G. Akiwate, R. Padmanabhan, G. M. Voelker, S. Savage, and A. Schulman, "Trufflehunter: Cache Snooping Rare Domains at Large Public DNS Resolvers," in *Proceedings of the ACM Internet Measurement Conference (IMC)*, 2020,
  – **IRTF Applied Networking Research Prize**.

[C10] **Enze Liu**, A. Nakanishi, M. Golla, D. Cash, and B. Ur, "Reasoning Analytically about Password-Cracking Software," in *Proceedings of the IEEE Symposium on Security and Privacy (S&P)*, IEEE, 2019.

Workshop Publications

[W1] A. Yelam, S. Grant, **Enze Liu**, R. N. Mysore, M. K. Aguilera, A. Ousterhout, and A. C. Snoeren, "Limited Access: The Truth Behind Far Memory," in *Proceedings of the Workshop on Resource Disaggregation and Serverless (WORDS)*, 2023.

Service

Technical Program Committees

– External Reviewer, ACM Internet Measurement Conference, 2024

– Reviewer, ACM Web Conference, 2024

– External Reviewer, EAI SecureComm, 2023

– Artifact Evaluation Committee, SIGCOMM, 2022

Department and University Service

– UCSD CSE Ph.D. Visit Day Organizing Committee, 2020 - 2024

　　Department-wide Lead, 2022 - 2024

　　Lead for Systems, Networking, and Security Areas, 2021 - 2022

– UCSD CSE Ph.D. Student Admissions Committee, 2020 – 2023

Advising and Mentoring

Research

– Jian Chen Yan (Undergraduate student at UCSD, 2023 - 2024)

　　Publication: [A2]

– Elisa Luo (Ph.D. student at UCSD, 2023 - 2024)

　　Publication: [A2]

– Sumanth Rao (Master then Ph.D. student at UCSD, 2021 - 2023)

　　Publication: [C2] and [C5]

Graduate School Application

– Detravious Jamari Brinkley

　　B.S. at Claflin University, M.S. at USC, now Ph.D. student at University of Florida.

– Lucas Resck

　　B.S. and M.S. at Fundação Getulio Vargas, now Ph.D. student at University of Cambridge.

Selected Invited Talks

– Forward Pass: On the Security Implications of Email Forwarding Mechanism and Policy

　　Cornell Tech Security Seminar, Oct. 2023

　　M3AAWG 59th (one-hour talk), Sep. 2023

　　Stanford Security Seminar, May 2023

　　Google, Mar. 2023

　　M3AAWG 57th (lightning talk), Feb. 2023

　　ICANN DNS Workshop, Mar. 2022

Teaching Experience

- Teaching Assistant, Blockchain Security (CSE 291), UCSD   Spring 2024
- Guest Lecture, Blockchain Security (CSE 291), UCSD   Spring 2024
  Security of Cross-chain Bridges
- Guest Lecture, Social Aspects of Information Technology (IS 202), UIUC   Spring 2024
  Privacy 101

References

Stefan Savage

Professor of Computer Science and Engineering

University of California, San Diego

Geoffrey M. Voelker

Professor of Computer Science and Engineering

University of California, San Diego

Deian Stefan

Associate Professor of Computer Science and Engineering

University of California, San Diego

Damon McCoy

Professor of Computer Science and Engineering

New York University