

Research Interests: Cryptography, threshold signatures, digital credentials, multiparty computation

Academic Positions

- July 2025 – **Assistant Professor**, *Computer Science Department*, Barnard College, NYC, USA.
Present
- Aug. 2023 – **Postdoctoral Research Associate**, *Data Science Institute*, Brown University, Providence, USA.
July 2025 ◦ Advisor: Anna Lysyanskaya

Academic Degrees

- July 2023 **PhD in Computer Science**, *Khoury College of Computer Sciences*, Northeastern University, Boston, MA.
◦ Advisor: abhi shelat
◦ Thesis Title: *Securely Computing Threshold Variants of Signature Schemes (and More!)*
- May 2017 **Bachelor of Science in Computer Science**, *College of Natural Sciences*, The University of Texas at Austin, Austin, TX.
Bachelor of Science in Mechanical Engineering, *Cockrell School of Engineering*, The University of Texas at Austin, Austin, TX.

Research Experience

- June 2022 – **Quantum Computing Summer Associate**, *Future Lab for Applied Research and Engineering*,
Aug. 2022 JPMorgan Chase, NYC, USA.
- May 2019 – **Research Intern**, Visa Research, Palo Alto, USA.
Aug. 2019 ◦ Host: Peter Rindal
- June 2018 – **Intern in Summer Program in Applied MPC and Implementations**, Bar-Ilan University,
July 2018 Ramat Gan, IL.

Teaching and Advising

- Fall 2024 **Brown University**.
Fall 2024: Guest lecturer for the data privacy module of Data, Ethics and Society (DATA 0080).
- Fall 2022, **Northeastern University**.
Spring 2021, Graduate Teaching Assistant:
Spring 2020 ◦ Fall 2022: Network Fundamentals (CS 4700/5700). Instructor: David Choffnes.
◦ Spring 2021: Cryptography (CY 4770). Instructor: Ran Cohen.
◦ Spring 2020: Cryptography (CY 4770). Instructor: Daniel Wicks.
- Summer 2017 **Girls Who Code**.
Instructor for an 8-week outreach program ("Summer Immersion Program") teaching computer science to 19 rising junior and senior high school women

Service

- 2025 **PC Member**, *IEEE Symposium on Security and Privacy 2026 (S&P)*.
- 2025 **PC Co-Chair**, *The Conference for Failed Approaches and Insightful Losses in Cryptology (CFAIL)*.
IACR CRYPTO 2025 Affiliated Workshop
- 2025 **External Reviewer**, *CRYPTO*.
- 2024 **PC Member**, *IEEE European Symposium on Security and Privacy 2025 (Euro S&P)*.
- 2024 **PC Member**, *Financial Cryptography and Data Security Conference 2025 (FC)*.

- 2024 **Research Ethics Committee Member**, *IEEE Symposium on Security and Privacy 2025 (S&P)*.
- 2024 **PC Member**, *IEEE Symposium on Security and Privacy 2025 (S&P)*.
- 2024 **Rump Session Co-Chair**, *IACR CRYPTO 2024*.
- 2024 **PC Co-Chair**, *The Conference for Failed Approaches and Insightful Losses in Cryptology (CFAIL)*.
IACR CRYPTO 2024 Affiliated Workshop
- 2024 **PC Member**, *International Conference on Cryptology and Network Security 2024 (CANS)*.
- 2024 **External Reviewer**, *Eurocrypt*.
- 2023 **External Reviewer**, *Eurocrypt, ACM CCS*.
- 2021 **External Reviewer**, *CRYPTO*.
- 2020 **External Reviewer**, *Eurocrypt, IEEE S&P, TCC, CANS, AFT*.
- 2019 **External Reviewer**, *Eurocrypt, CRYPTO, TCC, AFT*.
- 2018 **External Reviewer**, *CRYPTO*.

Industry Adoption

List as of March 2024.

- **Threshold ECDSA in Three Rounds**, [7].
Ongoing implementation efforts at *Copper, Silence Laboratories, Utila, Sodot, Cloudflare*, and others.
- **Threshold BBS+ Signatures for Distributed Anonymous Credential Issuance**, [6].
Implemented and deployed by *Dock Network*.
- **Threshold ECDSA from ECDSA Assumptions: The Multiparty Case**, [3].
Implemented and deployed by *Paypal, BlockDaemon, Web3auth/Torus, Utila, Sodot*, and *Coinbase* (deprecated).
Ongoing implementation efforts at *Vaultody*.
- **Secure Two-Party Threshold ECDSA from ECDSA Assumptions**, [2].
Implemented and deployed by *BlockDaemon, Utila, Sodot*, and *Vaultody*.

Publications

Unless otherwise noted, authors ordered alphabetically, as is convention in cryptography.

Technical Reports

- [T1] **Cryptographers' Feedback on the EU Digital Identity's ARF**.
Carsten Baum, Olivier Blazy, Jan Camenisch, Jaap-Henk Hoepman, Eysa Lee, Anja Lehmann, Anna Lysyanskaya, René Mayrhofer, Hart Montgomery, Ngoc Khanh Nguyen, Bart Praneel, abhi shelat, Daniel Slamanig, Stefano Tessaro, Søren Eller Thomsen, Carmela Troncoso
Available: <https://github.com/eu-digital-identity-wallet/eudi-doc-architecture-and-reference-framework/issues/200>

Journal Publications

- [J1] **Multiparty Generation of an RSA Modulus**.
Megan Chen, Ran Cohen, Jack Doerner, Yashvanth Kondi, Eysa Lee, Schuyler Rosefield, abhi shelat
In *Journal of Cryptology*. Vol. 35(2).
Available: <https://eprint.iacr.org/2020/370>

Conference Papers

- [8] **Multi-Holder Anonymous Credentials from BBS Signatures**.
Andrea Flamini, Eysa Lee, Anna Lysyanskaya
In *Annual International Cryptology Conference (CRYPTO)*, 2025.
Available: <https://eprint.iacr.org/2024/1874>

- [7] **Threshold ECDSA in Three Rounds.**
Jack Doerner, Yashvanth Kondi, Eysa Lee, abhi shelat
In *45th IEEE Symposium on Security and Privacy (S&P, Oakland)*, 2024.
Available: <https://eprint.iacr.org/2023/765>
- [6] **Threshold BBS+ Signatures for Distributed Anonymous Credential Issuance.**
Jack Doerner, Yashvanth Kondi, Eysa Lee, abhi shelat, LaKyah Tyner
In *44th IEEE Symposium on Security and Privacy (S&P, Oakland)*, 2023.
Available: <https://eprint.iacr.org/2023/602>
- [5] **Circuit Amortization Friendly Encodings and their Application to Statistically Secure Multiparty Computation.**
Anders Dalskov, Eysa Lee, Eduardo Soria-Vazquez
In *International Conference on the Theory and Application of Cryptology and Information Security (ASIACRYPT)*, 2020.
Available: <https://eprint.iacr.org/2020/1053>
- [4] **Multiparty Generation of an RSA Modulus.**
Megan Chen, Ran Cohen, Jack Doerner, Yashvanth Kondi, Eysa Lee, Schuyler Rosefield, abhi shelat
In *Annual International Cryptology Conference (CRYPTO)*, 2020.
Available: <https://eprint.iacr.org/2020/370>
- [3] **Threshold ECDSA from ECDSA Assumptions: The Multiparty Case.**
Jack Doerner, Yashvanth Kondi, Eysa Lee, abhi shelat
In *40th IEEE Symposium on Security and Privacy (S&P, Oakland)*, 2019.
Available: <https://eprint.iacr.org/2019/523>
- [2] **Secure Two-Party Threshold ECDSA from ECDSA Assumptions.**
Jack Doerner, Yashvanth Kondi, Eysa Lee, abhi shelat
In *29th IEEE Symposium on Security and Privacy (S&P, Oakland)*, 2018.
Available: <https://eprint.iacr.org/2018/499>
- [1] **Signature Schemes with Randomized Verification.**
Cody Freitag, Rishab Goyal, Susan Hohenberger, Venkata Koppula, Eysa Lee, Tatsuaki Okamoto, Jordan Tran, Brent Waters
In *International Conference on Applied Cryptography and Network Security (ACNS)*, 2017.

Manuscripts

- **An Unstoppable Ideal Functionality for Signatures and a Modular Analysis of the Dolev-Strong Broadcast.**
Ran Cohen, Jack Doerner, Eysa Lee, Anna Lysyanskaya, Lawrence Roy.
Preprint: <https://eprint.iacr.org/2024/1807>
(In Submission)
- **Improved Multi-Party Fixed-Point Multiplication.**
Saikrishna Badrinarayanan, Eysa Lee, Peihan Miao, Peter Rindal.
Preprint: <https://eprint.iacr.org/2024/1047>

Presentations

Talks

- **Are we finally getting anonymous credentials?, [T1].**
3rd Anonymity Day Workshop, April 2025
- **An Unstoppable Ideal Functionality for Signatures and a Modular Analysis of the Dolev-Strong Broadcast.**
Brown Crypto Day, Aug 2024
- **Threshold BBS+ Signatures for Distributed Anonymous Credential Issuance, [6].**
Nordicrypt, Nov. 2023
SPRING Group Meeting at EPFL, Jan. 2023
Northeastern University Theory Seminar, Nov. 2022
Brown University Crypto Reading Group, Nov. 2022
JP Morgan Crypto Group Meeting, Aug. 2022

- **Circuit Amortization Friendly Encodings and their Application to Statistically Secure Multiparty Computation**, [5].
Asiacrypt (pre-recorded conference talk), 2020
- **Secure Two-Party Threshold ECDSA from ECDSA Assumptions**, [2].
IEEE Symposium on Security and Privacy (S&P), 2018
Theory and Practice of Multiparty Computation (TPMPC), 2018

Other Workshop Contributions

- **Saying NO! to Workplace Surveillance: Lessons from the Cybersecurity and Privacy Institute.**
Speakers: Lisa Oakley, xenia dragon, Eysa Lee
Re-Imagining Cryptography and Privacy (ReCAP) Workshop, 2024
- **crypto_doodles: cryptography through comics and jokes.**
Eysa Lee
Re-Imagining Cryptography and Privacy (ReCAP) Workshop, 2024