Elizabeth (Eli) Margolin

✉ ecmargo@seas.upenn.edu | ⌂ ecmargo.github.io

Education

University of Pennsylvania   *Philadelphia, PA*
PHD COMPUTER AND INFORMATION SCIENCE   *2021 - 2026 [anticipated]*
- Advisor: Dr. Sebastian Angel
- Research Focus: Applications of zero knowledge proofs, privacy in large scale distributed systems

Duke University   *Durham, NC*
MS ECONOMICS AND COMPUTATION   *2017 - 2018*
- Advisor: Dr. Charles Becker and Dr. Ashwin Machanavajjhala

Stanford University   *Stanford, CA*
BA POLITICAL SCIENCE WITH HONORS IN INTERNATIONAL SECURITY   *2013 - 2017*

Professional Experience

2025 — **National Team Athlete** USRowing
- Member of the Team USA PR3 Mixed 4+
- 4th place in the World Rowing Championships in Shanghai

Summer 2024 — **Research Intern** Brave Software
- Developed novel Zero Knowledge protocols for efficient fraud detection
- Advanced existing cryptographic tooling to work with modern TLS implementations

2019-2022 — **Security Engineer** Meta Platforms
- Created and maintained company wide tooling for insider threat detection
- Automated existing tooling to scale alert processing, while reducing false positives
- Minimized the privacy impact of security tooling, in conjunction with legal and policy stakeholders
- Returned as a Contingent Worker in 2023 to provide continued support to the Legal Investigations team

2019 — **Research Assistant** Ashwin Machanavajjhala, Duke University
- Analyzed the impact of differential privacy on the Voting Rights Act for the 2020 U.S. Census, in conjunction with U.S. Census Bureau

Publications

S.Angel, S.Celi, **E.Margolin***, P.Mishra, M.Sander, J.Woods. *Coral: Fast Succinct Non-Interactive Zero-Knowledge CFG Proofs*. IEEE Symposium on Security and Privacy 2026, San Francisco, CA, May 2026 (forthcoming)

S.Angel, E.Ioannidis, **E.Margolin***, S.Setty, J.Woods. *Reef: Fast Succinct Non-Interactive Zero-Knowledge Regex Proofs*. USENIX Security 2024, Philadelphia, PA, August 2024

E. Margolin, K. Newatia, E. Roth, T. Luo, A. Haeberlen. *Arboretum: A Planner for Large-Scale Federated Analytics with Differential Privacy*. SOSP 2023, Koblenz, Germany, October 2023

C.Becker, P.Devine, H.Dogo, **E.Margolin***. *Marking Territory: Modeling the Spread of Ethnic Conflict in Bosnia and Herzegovina, 1992-1995*. Economic Research Initiatives at Duke (Erid) Working Paper, no. 266

*Authors presented in alphabetical order

Teaching Experience

Fall 2023	**Introduction To Networks And Security**, TA	*University of Pennsylvania*
Fall 2022	**Introduction to Computer Science**, Instructor	*South Woods State Prison*
Fall 2022	**Software Systems**, TA	*University of Pennsylvania*
Spring 2022	**Ethical Algorithm Design**, TA	*University of Pennsylvania*
Fall 2018	**Elements of Machine Learning**, TA	*Duke University*