

Eli Baum

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Somerville MA

Education

- 2023 – present **Boston University, Boston MA**
Ph.D., Computer Science
Co-advised by: John Liagouris and Mayank Varia
Research Interests: Applied cryptography with a focus on multiparty computation; obfuscation; social and political implications of cryptography
Publications:
- *ORQ: Complex Analytics on Private Data with Strong Security Guarantees*, SOSP 2025 (Distinguished Artifact)
- Relevant Coursework:**
- Advanced Cryptography (*Ran Canetti*)
 - Formal Methods for Security and Privacy (*Marco Gaboardi & Alley Stoughton*)
 - Distributed Systems (*John Liagouris*)
 - Complexity Theory (*Leonid Levin*)
- 2015 – 2019 **Yale University, New Haven CT**
B.S. *cum laude*, Electrical Engineering & Computer Science (GPA: 3.88)
Senior Project: *Dynamic Binary Translation for Optimized Functional Units* (advisor: Rajit Manohar)
Activities:
- Teaching Assistant, *Systems Programming & Computer Organization*
 - Design Lab Assistant, *Yale Center for Engineering, Innovation, and Design*
 - Principal Trumpet, *Yale Concert Band & Davenport Pops Orchestra*

Professional Experience

- 2021 – 2023 **MITRE, McLean VA**
Senior Electrical Engineer, *Naval Division*
- Conducted security analyses of sensitive U.S. Government hardware systems
 - Led 5G cellular radio research effort
 - Inaugural member of MITRE's National Security Accelerator Program
 - Received Trailblazer Award for exceptional security research and rapid prototyping
- 2019 – 2021 **U.S. Department of State, Washington DC**
Information Management Technical Specialist
- Developed, tested, and led training for diplomatic communications systems
 - Designed applications for data analysis, hardware testing, and radio-frequency characterization
 - Served as government technical representative on research, development, and acquisition contracts

Service

- Conference subreviewer**
SIGMOD 2026, USENIX Security 2025, SOSP 2024
- 2023 **MITRE Collegiate Embedded Capture-the-Flag Competition**
Co-organizer
- 2020 – 2023 **DARIA Abortion Fund Case Management Project**
Volunteer Developer

Skills & Interests

Technical expertise: implementation of multiparty computation protocols; reverse engineering, side channel analysis, and security; Linux; embedded systems, digital electronics; experienced with Python, C, C++, Go, and Assembly.

Personal: Avid consumer of local news, investigative podcasts, and remixes of songs that shouldn't be remixed; devotee of public transit and modern design; amateur linguist, urban planner, chef, climber, runner, biker, and mad scientist.