

# 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, including multiparty computation and zero-knowledge; social and political implications of cryptography  
**Relevant Coursework:**
- Formal Methods for Security and Privacy (*Marco Gaboardi & Alley Stoughton*)
  - Fundamentals of Cryptography (*Leo Reyzin*)
  - Distributed Systems (*John Liagouris*)
  - Algorithmic Mechanism Design (*Kira Goldner*)
- 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
  - Maintained Top Secret/SCI clearance
- 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
  - Maintained Top Secret clearance

## Service

- 2020 – 2023 **DARIA Abortion Fund Case Management Project**  
Volunteer Developer
- 2023 **MITRE Collegiate Embedded Capture-the-Flag Competition**  
Co-organizer

## Skills & Interests

**Technical expertise:** implementation of multiparty computation protocols; reverse engineering, side channel analysis, and security; Linux; embedded systems, digital electronics; cellular networks and software-defined radio

**Languages:** Python, C, C++; Go, Assembly; EasyCrypt proof assistant

**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, and mad scientist.