Kyle Hogan

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EDUCATION

MIT
EECS PhD Student

BOSTON UNIVERSITY
BA in Computer Science
Chemistry Minor
September 2016

SECURITY SEMINAR

(2019-2022) Organizer of the CSAIL security seminar which is a series of invited talks showcasing work from industry and academic researchers.

STANDARDZATION

(2022-) Participate in the W3C PATCG community group on designing and standardizing private advertising technologies.

MENTORSHIP

2016-24 : MIT PRIMES Mentor
Mentor high school students on graduate-level research projects. Students learn to conduct research independently and present their work.

2020-22 : MIT GAAP & Project SHORT
Advise underrepresented students during the graduate school application process. Both programs focus on 1:1 mentorship.

TEACHING

2021-2023: MIT 6.857/6.5610
Served as a lab assistant and teaching assistant in a graduate network security and applied cryptography course. Advised students on their class projects and taught intro to research discussion sections.

Fall 2015: Boston University CS558
Served as a teaching assistant in a graduate network security course.

AWARDS

NSF (GRFP)
2018 Graduate Research Fellowship
Boston University
2016 Excellence in Research Award
2015 Clare Boothe Luce Scholar

ABOUT ME

I am currently a final year PhD student advised by Srini Devadas at MIT. My research focus is on privacy and anonymity for users of real-world systems. In particular, I am interested in providing meaningful privacy guarantees while preserving practical performance/functionality requirements. My latest projects have been in the areas of anonymous communication and privacy preserving targeted advertising. For full list of publications, please see my Google Scholar.

RESEARCH

COMPUTATIONAL STRUCTURES GROUP | MIT
PhD Student | July 2017 – Present
PhD student advised by Professor Srini Devadas. Research is focused on privacy and anonymity on the internet and side-channel leakage.

RESEARCH GROUP | Cloudflare
Intern | June 2023 – August 2023
Summer intern focusing on designing and implementing cryptographic authentication for useful bots. Focus was on allowing bots to prompt authentication without disrupting the browsing experience of human users. Developed an extension for BoringSSL to support TLS Flags to indicate intent to authenticate via mTLS.

SECURITY GROUP | Akamai
Intern | June 2018 – August 2018
Summer intern designing a key management scheme to be used for disaster recovery of encrypted data backups. Proposed protocol was designed to account for failures around the human-in-the-loop nature of the process (such as lost keys or absence of key-holders) as well as distributed hardware/software failures.

MACS PROJECT | Boston University
Research Assistant | September 2015 – May 2017
Worked to apply the Universal Composability framework to construct a proof of security for OpenStack and the Network Time Protocol.

MASSACHUSETTS OPEN CLOUD | Boston University
Research Assistant | January 2016 – May 2017
Core developer on a project designing trustworthy bare metal clouds. Focused on the area of secure boot including use of a TPM for attestation during the boot process.

SECURE RESILIENT SYSTEMS & TECHNOLOGY | MIT LL
Intern | June 2016 – September 2016
Worked as an intern applying MPC to cybersecurity problems. Implemented protocols in VIFF to allow parties to securely compute a joint IP blacklist or aggregate outputs of vulnerability scanners.

SESA LAB | Boston University
UROP | February 2015 – August 2015
Undergraduate researcher on a project modifying a fetal MRI reconstruction algorithm to run in a distributed manner on the cloud.

NMR GROUP | Missouri University of Science & Technology
Undergraduate Research Assistant | May 2014 – July 2014

NEUROMORPHICS LABORATORY | Boston University
UROP | May 2013 – August 2013

MA BIOCHEM LAB | Missouri University of Science & Technology
Student Researcher | March 2012 – June 2012