Kyle Hogan

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EDUCATION

BOSTON UNIVERSITY
BA in Computer Science
Chemistry Minor
September 2016

TEACHING & MENTORING

MIT PRIMES
January 2016 - Present
Mentor two high school students on a project studying network bandwidth as a side channel in the cloud. This work was presented at NENS and published in CANS 2016 as "Moving in Next Door: Network Flooding as a Side Channel in Cloud Environments"

CS558 NETWORK SECURITY
Fall 2015
Teaching Assistant
Covered SQL injection, CSRF, XSS, cracking WEP, ARP spoofing, and web security topics such as HSTS, certificates, and secure cookies. Taught discussion and lab sections, held regular office hours, and maintained a Piazza forum.

BU CODEBREAKERS
Summer 2016
Summer program introducing high school girls to programming and topics in computer security. Gave a guest lecture on DNS and BGP with a focus on DNSSec and BGPSec.

AWARDS

Boston University
- 2016 Excellence in Research Award
- 2015 Clare Boothe Luce Scholar

Missouri S&T
- 2012 Contribution to Research

ACTIVITIES

- practical security seminar
- cryptography reading group
- binary exploitation workshop
- systems security reading group
- Charles River Crypto Day
- BUSec seminar series

PRESENTATIONS & PUBLICATIONS

Ran Canetti, Kyle Hogan, Aanchal Malhotra, and Mayank Varia. "A Universally Composable Treatment of Network Time." *IEEE Computer Security Foundations Symposium*. 2017.

Yatharth Agarwal, Vishnu Murale, Jason Hennessey, Kyle Hogan, and Mayank Varia. "Moving in Next Door: Network Flooding as a Side Channel in Cloud Environments." *International Conference on Cryptology and Network Security*. Springer International Publishing, 2016.

Kyle Hogan, Noah Luther, Nabil Schear, Emily Shen, David Stott, Sophia Yakoubov, and Arkady Yerukhimovich "Secure Multiparty Computation for Cooperative Cyber Risk Assessment" *IEEE SevDev*, 2016.

RESEARCH

MACS PROJECT | Boston University
September 2015 – May 2017
Worked to apply the Universal Composability framework to cloud computing components in order to construct a proof of security for cloud implementations. This work had been presented as a poster at the MOC workshop and at the project's NSF site visit.

MASSACHUSETTS OPEN CLOUD | Boston University
January 2016 – May 2017
Worked as a core developer on a bare metal cloud building a hardware isolation layer and as a member of a group designing trustworthy bare metal clouds. This work was presented at the New England Security Day and the MOC workshop.

SECURE RESILIENT SYSTEMS & TECHNOLOGY | MIT LL
June 2016 – September 2016
Worked as an intern applying MPC to cyber security problems. Implemented protocols in VIFF to allow parties to securely compute a joint IP blacklist or aggregate outputs of vulnerability scanners. This work was presented at IEEE SecDev 2016.

SESA LAB | Boston University
February 2015 – August 2015
Worked on modifying a fetal MRI reconstruction algorithm to run in a distributed manner to improve performance. This work was presented as a poster at BU UROP and the New England Networking and Systems Day.

NMR GROUP | Missouri University of Science & Technology
May 2014 – July 2014
Ran samples on various nuclei for local R&D company, worked on a project studying the effect of pH on fluoride ion shifts, and maintained NMR spectrometers.

NEUROMORPHICS LABORATORY | Boston University
May 2013 – August 2013
Worked in MATLAB on a project studying role of hippocampus and basal ganglia in motion decisions. Helped debug and add additional functionality to existing code. Presented poster at BU UROP.

MA LABORATORY | Missouri University of Science & Technology
March 2012 – June 2012
Responsible for culturing cells, dosing them with nanoparticles, selecting appropriate dyes, staining the cells, photographing them using fluorescence microscopy, and presenting at lab meetings. Trained a high school student in the above.