Evan Downing
PhD Student

Contact Information

Georgia Institute of Technology
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Research Interests

Malware analysis, systems and network security, machine learning

Education

Ph.D.   Computer Science
Specialization: Information Security
Minor: Business Management
Georgia Institute of Technology, August 2014 - Present
Advisor: Dr. Wenke Lee

B.S.   Computer Science
Minor: Mathematics
University of Tennessee in Knoxville, August 2009 - December 2013
GPA: 3.47 / 4.0

Relevant Employment

August 2014 - Present   Graduate Research Assistant & Graduate Teaching Assistant
at Georgia Institute of Technology, Atlanta, GA

Summers 2011, 2012, 2013   Intern at Oak Ridge National Laboratory, Oak Ridge, TN

Publications: Refereed Conferences

Yang Ji, Sangho Lee, Evan Downing, Weiren Wang, Mattia Fazzini, Taesoo Kim, Alessandro Orso, Wenke Lee. "RAIN: Refinable Attack Investigation with On-demand Inter-Process Information Flow Tracking." ACM Conference on Computer and Communications Security (CCS), 2017.

Harrison, Lane, Riley Spahn, Michael Iannacone, Evan Downing, and John R. Goodall. "NV: Nessus Vulnerability Visualization for the Web." Proceedings of the Symposium on Visualization for Computer Security (VizSec), ACM International Conference Proceedings Series, 2012, 25-32.

Publications: Other

Jiménez, Jarilyn M. Hernández, Lee M. Hively, Evan P. Downing, Aaron E. Ferber, Stacy J. Prowell, and Ryan D. Wagner. "Beholder: Phase-Space Detection of Cyber Events," ORNL/TM-2013/294 (Aug 2013).

Harrison, Lane, Jason Laska, Riley Spahn, Michael Iannacone, Evan Downing, Erik M. Ferragut, and John R. Goodall. "situ: Situational Understanding and Discovery for Cyber Attacks". IEEE Symposium on Visual Analytics Science and Technology Challenge Entry, 2012.

Awards

2014, 2015,   Georgia Institute of Technology Presidential Fellowship
2016, 2017

Invited Talks

9/2016	"Ransomware: How to Respond"	Georgia Tech Cyber Security Summit - Breakout Session
9/2016	"Introduction to Malware"	Georgia Tech CS 4235/6035 Guest Lecture
9/2016	"GDB and Buffer Overflows"	Georgia Tech CS 4235/6035 Guest Lecture
4/2016	"Introduction to Malware Analysis"	Georgia Tech CS 4235/6035 Guest Lecture

Service

Conference External Reviewer

Network and Distributed System Security Symposium (NDSS)……………………………………	2016, 2017
Conference on Computer and Communications Security (CCS)…………………………………	2015, 2016
USENIX Security Symposium……………………………………………………………………...............	2015
International Symposium on Research in Attacks, Intrusions, and Defenses (RAID)…..	2017
International Symposium on Cyber Security Cryptography and Machine Learning……. (CSCML)	2017
European Symposium on Security and Privacy (Euro S&P)………………………………………	2018

Teaching Experience

Georgia Institute of Technology

Fall 2016	CS 4235/6035 – Introduction to Information Security	Head Teaching Assistant
	OMS CS 6262 – Network Security	Consultant
Summer 2016	OMS CS 6035 – Introduction to Information Security	Head Teaching Assistant
Spring 2016	CS 4235/6035 – Introduction to Information Security	Teaching Assistant
	CS 4235/6035 – Introduction to Information Security	Consultant
Fall 2015	CS 4235/6035 – Introduction to Information Security	Consultant

Relevant Activities

During Graduate Career (2014 - Present):
- Designed, implemented, distributed, and graded a dynamic malware analysis project, a computer hacking project, and a software exploitation project for two "Introduction to Information Security" classes
- Gave talks on malware analysis, was a conference external reviewer multiple times, and was awarded Georgia Tech's Presidential Fellowship.

During Undergraduate Career (2009 - 2013):
- Tutored students in their computer science and math classes both officially and unofficially throughout entire undergraduate career
- Students & Technology in Academia, Research & Service (STARS) Alliance tutor for the University of Tennessee in Knoxville's (UTK) Electrical Engineering & Computer Science (EECS) Department for two semesters
- Chair of the Association for Computing Machinery (ACM) at UTK for three semesters
- Vice Chair of the ACM at UTK for two semesters
- Chair of the UTK ACM Programming Team for three semesters
- International Computer Programming Competition (ICPC) participant for three years

Memberships

Association for Computing Machinery (ACM)
Sports Car Club of America (SCCA)
BMW Car Club of America (BMWCCA)