

DANIEL J. VOTIPKA

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Education:

University of Maryland **College Park, MD**
Ph.D., Computer Science, GPA: 3.809 2016-Present
Advised by Michelle Mazurek
Selected Coursework: Applied Mechanism Design, Software Testing, Algorithm Analysis

Carnegie Mellon University **Pittsburgh, PA**
M.S. Information Security, Technology, and Management, GPA: 3.94 2010-2012
Thesis: *A General Collection Methodology for Android Devices*
Advised by Nicolas Christin
Selected Coursework: Reverse Engineering, Code Analysis, Information Assurance, Digital Forensics, Pattern Recognition Theory, and Distributed and Embedded Systems

Illinois Institute of Technology **Chicago, IL**
B.S. Computer Science, GPA: 3.97 2006-2010
Selected Coursework: Information Security, Embedded Systems, Mobile Application Development, Cryptography, Graph Theory, Parallel and Distributed Systems'

Awards and Honors:

USENIX Security Distinguished Paper Award. Aug 2018
SOUPS Distinguished Poster Award. Aug 2018
UMD Outstanding Graduate Assistant (Top 2% of 4000). May 2018
Google Student Veterans Association Scholarship. Feb 2018
UMD Graduate Research Appreciation Day, Best Technology Presentation. Apr 2017, Apr 2018
Dean's Fellowship. Aug 2016
Defense Meritorious Service Medal. May 2016
NSA TAO Military Performer of the Year (1 of 85). Dec 2015
Intelligence Community Counterterrorism Analysis Team of the Year. Dec 2015
Distinguished Graduate Air Force Intermediate Network Warfare Training (1 of 37). Apr 2013
Distinguished Graduate Air Force Undergraduate Cyber Training (top 10 of ~1200). Dec 2012
CMU INI Outstanding Student Service Award as a Research Assistant. May 2012
Lockheed Martin Cyber Scholarship. Nov 2010
AFCEA Maj. Gen Robert E. Sadler USAF Honor Award (Top CS/ECE/EE AFROTC senior nationwide). May 2010
The Lincoln Academy of Illinois Student Lincoln Laureate (Top IIT senior undergraduate student). Nov 2009
Illinois Technology Association Fifty of the Future (top 50 undergrad/grad students in Illinois). May 2008

Publications:

Conferences:

Does Being Verified Make You More Credible? The Effect of Account Verification on Tweet Credibility

Tavish Vaidya, Daniel Votipka, Micah Sherr, and Michelle L. Mazurek. In CHI 2019: Conference on Human Factors in Computing Systems. *To Appear.*

User Comfort with Android Background Resource Accesses in Different Contexts

Daniel Votipka, Kristopher Micinski, Seth M. Rabin, Thomas Gilray, Michelle L. Mazurek, and Jeffrey S. Foster. In SOUPS 2018: Symposium on Usable Privacy and Security.

Battle for New York: A Case Study Using Center of Gravity Theory for Digital Threat Modeling (*Distinguished Paper Award*)

Rock Stevens, Daniel Votipka, Elissa M. Redmiles, Patrick Sweeney, and Michelle L. Mazurek. In USENIX Security 2018: USENIX Security Symposium.

Hackers vs. Testers: A Comparison of Software Vulnerability Discovery Processes
Daniel Votipka, Rock Stevens, Elissa M. Redmiles, Jeremy Hu, and Michelle L. Mazurek. In IEEE S&P 2018: IEEE Symposium on Security and Privacy. May 2018

User Interactions and Permission Use on Android
Kristopher Micinski, Daniel Votipka, Rock Stevens, Nikolaos Kofinas, Jeffrey S. Foster, and Michelle L. Mazurek. In CHI 2017: Conference on Human Factors in Computing Systems. May 2017.

Workshops:

Toward a Field Study on the Impact of Hacking Competitions on Secure Development
Daniel Votipka, Hongyi Hu, Bryan Eastes, and Michelle L. Mazurek. In WSIW 2018: Workshop on Security Information Workers. August 2018.

All Your Droid Are Belong To Us: A Survey of Current Android Attacks
Timothy Vidas, Daniel Votipka, Nicolas Christin. In WOOT 2011: USENIX Security Workshop on Offensive Techniques. August 2011.

Journals:

Passe-Partout: A General Collection Methodology for Android Devices
Daniel Votipka, Timothy Vidas, Nicolas Christin. In IEEE Transactions on Information Forensics and Security. December 2013.

Posters:

Hackers vs. Testers: A Comparison of Software Vulnerability Discovery Processes
(Distinguished Poster Award)
Daniel Votipka, Rock Stevens, Elissa M. Redmiles, Jeremy Hu, and Michelle L. Mazurek. In SOUPS 2017: Symposium On Usable Privacy and Security. August 2018.

User Comfort with Android Background Resource Accesses in Different Contexts
Daniel Votipka, Kristopher Micinski, Seth M. Rabin, Thomas Gilray, Michelle L. Mazurek, and Jeffrey S. Foster. In IEEE S&P 2018: IEEE Symposium on Security and Privacy. May 2018

User Interactions and Permission Use on Android
Kristopher Micinski, Daniel Votipka, Rock Stevens, Nikolaos Kofinas, Jeffrey S. Foster, and Michelle L. Mazurek. In SOUPS 2017: Symposium On Usable Privacy and Security. July 2017.

User Interactions and Permission Use on Android
Kristopher Micinski, Daniel Votipka, Rock Stevens, Nikolaos Kofinas, Jeffrey S. Foster, and Michelle L. Mazurek. In HoTSoS Symposium and Bootcamp 2017: Hot Topics in the Science of Security. April 2017.

User Interactions and Permission Use on Android
Kristopher Micinski, Daniel Votipka, Rock Stevens, Nikolaos Kofinas, Jeffrey S. Foster, and Michelle L. Mazurek. In MC2 Symposium 2016: Maryland Cybersecurity Center Symposium. December 2016.

Books:

Contributed the Cyber ISR chapter (approximately 30 pages) to the U.S. Air Force's Air University "Cyber Primer". I coordinated with 3 other USAF officers as subject matter experts to write this chapter. (<http://www.airuniversity.af.mil/CyberCollege/Portal/Article/Article/1238539/isr-and-cyberspace/>)

Presentations:

Conferences:

User Comfort with Android Background Resource Accesses in Different Contexts. SOUPS 2018.

Hackers vs Testers: A Comparison of Vulnerability Discovery Processes. IEEE S&P 2018.

Workshops:

Toward a Field Study on the Impact of Hacking Competitions on Secure Development. WSIW 2018.

All Your Droid Are Belong To Us: A Survey of Current Android Attacks. WOOT 2011.

Invited Talks:

Hackers vs Testers: A Comparison of Vulnerability Discovery Processes. UMD Graduate Research Appreciation Day 2018. (Best Technology Presentation Winner)

Hackers vs Testers: A Comparison of Vulnerability Discovery Processes. DC Area Anonymity/Privacy/Security Summer Seminar 2017.

Hackers vs Testers: A Comparison of Vulnerability Discovery Processes. UMD HCIL Annual Symposium 2017.

User Interactions and Permission Use on Android. UMD Graduate Research Appreciation Day 2017. (Best Technology Presentation Winner)

Employment:

University of Maryland

Research Assistant

May 2016 - Present

Georgetown University

Adjunct Professor

Aug 2017 - Dec 2017

National Security Agency

Mobile Technologies Lead

Sep 2014 - Apr 2016

U.S. Air Force

Cyber Operations Officer

May 2012 - May 2016

Institute of Defense Analyses/Center for Computer Sciences

Research Lead

Jun 2015 - Sep 2015

National Security Agency

Senior Watch Officer

Jul 2013- Sep 2014

Carnegie Mellon University

Research Assistant

Feb 2011 - May 2012

Lockheed Martin

Senior Technical Intern

May 2011 - Aug 2011

SEI CERT Forensics Lab

Graduate Assistant

Aug 2010 - Feb 2011

Teaching and Mentorship:

Adjunct Professor

COSC 235 - Introduction to Network Security. Georgetown University. Fall 2017. Taught a 23 student course focused on securing networks and network communications. Topics included general networking concepts, cryptography, network defenses, and malware.

Guest Lecturer

CMSC 634 - Empirical Research Methods for Computer Science. University of Maryland. Fall 2018. Gave a lecture on survey scale development for graduate-level computer science students. Topics included item generation, factor analysis, and validity and reliability testing.

CMSC 8180 - Advanced Topics in Computer Systems; Computer and Network Security.

University of Maryland. Fall2018. Gave an overview of research in the area of usable security to an audience of graduate-level computer science students. Discussed the need to study the human factors of security, methods commonly used, and exemplar studies.

ENEE 457 - Computer Systems Security. University of Maryland. Fall 2018. Gave an overview of research in the area of usable security to an audience of undergraduate-level electrical and computer engineering students. Discussed the need to study the human factors of security, exemplar studies, and usability rules-of-thumb for systems development.

Teaching Assistantship

ECE 18842 - Distributed Systems. Carnegie Mellon University. Spring 2012. Examined fundamental principles of distributed systems. Topics included synchronization, mutual exclusion, naming, group communication, transactions, cryptography, security, and distributed algorithms.

Undergraduate Students:

Desiree Abrokwa. Summer-Fall 2018. Developed and validated a secure development self-efficacy scale by recruiting and surveying hundreds of software developers.

Seth Rabin. Fall 2017 - Fall 2018. Developed and managed vignette-based survey of Mechanical Turk workers to understand how comfortable users are with different background use scenarios of sensitive resources.

Matthew Hou. Spring 2018. Analyzed and coded vulnerability reports from security-related course to understand what types of vulnerabilities occurred most commonly in student-written software.

Jeremy Hu. Spring 2017. Interviewed white-hat hackers and software testers to understand how the identified software vulnerabilities and how they learned and develop their skills.

Daniel Chen. Summer 2016 - Spring 2017. Applied dynamic analysis to Android apps to understand what data they backed up to cloud storage.

Academic Service:

Organizing Committees:

Workshop on Security Information Workers, 2018

Reviewing for Conferences and Journals:

ACM CHI, 2017, 2018, and 2019 (external review, outstanding review recognition)

NDSS, 2019 (subreview for Michelle Mazurek)

ACM CCS, 2018 (subreview for Michael Hicks)

USENIX Security, 2017 (subreview for Michelle Mazurek)

IEEE Symposium on Security and Privacy, 2017 and 2018 (subreview for Michelle Mazurek and Michael Hicks)

IW3 WWW, 2017 (subreview for Michelle Mazurek)

SOUPS, 2017 and 2018 (subreview for Michelle Mazurek)

SOUPS Poster Jury, 2018

Department Service Positions:

Department Council. 2017-2018. Represented CS graduate students on an advisor committee to the Department Chair. Elected by my peers.

Reading Groups:

MC2 Security Reading Group. Spring 2017. Directed weekly discussions of recent work in computer security.