Jeremy Erickson

jeremy@jeremy-erickson.com

EDUCATION

UNIVERSITY OF MICHIGAN
PhD in Computer Science
Expected May 2020 | Ann Arbor, MI
GPA: 3.96 / 4.0

UC DAVIS
MS in Computer Science
Grad. Mar 2012 | Davis, CA
GPA: 3.95 / 4.0
Thesis: "An Investigation of Privacy Leaks in Android Applications"

BS in Computer Science
Grad. Dec 2010 | Davis, CA
GPA: 3.84 / 4.0

LINKS

Website:// **jeremy-erickson.com**
Github:// **jericks-umich**
Github:// **jenareljam**

SKILLS

PLATFORMS
Linux • Android • OpenWRT
minimega • OpenStack • SGX

PROGRAMMING
Python • C • Bash
Go • C++ • Java (Android) • HTML / CSS

TOOLSETS
Networking:
Iptables • tcpdump • Open vSwitch
aircrack-ng • Hostapd / wpa_supplicant

Virtualization:
KVM • Xen • LibVMI

Databases:
PostgreSQL • MongoDB • SQLite

MISCELLANEOUS
Kerberos • vim • i3wm • git • LaTeX
License-conscious

WORK EXPERIENCE

UNIVERSITY OF MICHIGAN | Graduate Security Researcher
Sept 2015 – Current | Ann Arbor, MI
- Evaluated feasibility of enforceable contracts in autonomous vehicle platooning
- Discovered home router access control mechanism that prevents MAC/ARP/mDNS spoofing attacks with full legacy device compatibility
- Prototyped enclave-based crypto library for use as root of trusted computing on cloud platforms
- Developed technique for transparent RNG subversion using malicious hypervisor

SANDIA NATIONAL LABS | Senior R&D S&E Cybersecurity
Dec 2010 – Aug 2017 | Livermore, CA
- Developed Linux kernel analysis modules for VM introspection
- Virtualized hardware features of Android devices on minimega
- Core developer for FARM, a distributed malware analysis framework
- Performed vulnerability assessments on Sandia infrastructure

UC DAVIS | Graduate Security Researcher
Jan 2011 – Mar 2012 | Davis, CA
- Developed static analysis framework to detect private information leaks in Android applications
- Reverse engineered Android ad provider SDKs to assess vulnerabilities and discover undocumented use of user data

TEACHING

UNIVERSITY OF MICHIGAN | Graduate Student Instructor
Jan 2015 – April 2015 | Ann Arbor, MI
- Rebuilt computer security course networking project as Penetration Test. Students are responsible for the first three phases of the PenTest lifecycle as they break into a WPA-encrypted wireless network and steal "sensitive company information"
- Led discussion section of ~40 undergraduate students

CYBER TECHNOLOGIES ACADEMY | Founder
Oct 2013 – Sept 2015 | Sandia National Labs | Livermore, CA
- Designed and taught classes on Programming, Introduction to Cyber Technologies, and Wireless Penetration Testing
- Managed outreach to local schools and national partner organizations
- Found and supported volunteer teachers at Sandia
- Handled student enrollment, web presence, and program logistics

CENTER FOR CYBER DEFENDERS | Program Lead
Apr 2012 – Sept 2014 | Sandia National Labs | Livermore, CA
- Hired ~15 student interns each summer for a variety of cybersecurity projects
- Served as project lead on several projects each summer and directly mentored students on these projects

PUBLICATIONS

Erickson, Jeremy, Qi Alfred Chen, Xiaochen Yu, Erinjen Lin, Robert Levy and Z. Morley Mao (2018). "No One In The Middle: Enabling Network Access Control Via Transparent Attribution". In: Asia Conference on Computer & Communications Security (AsiaCCS). ACM.

Erickson, Jeremy Lee, Craig Shannon, Kina Winoto, Steven A Hurd, Christopher W Perr and Levi Lloyd (2015). Introduction to Cyber Technologies. Tech. rep. Sandia National Laboratories (SNL-CA), Livermore, CA (United States).

Choe, Yung Ryn, Michael Bierma, Jeremy Lee Erickson, David Jakob Fritz and Eric Gustafson (2014). "Andlantis: Large-scale Android Dynamic Analysis." In: Workshop on Mobile Security Technologies (MoST).

Stevens, Ryan, Clint Gibler, Jon Crussell, Jeremy Erickson and Hao Chen (2012). "Investigating user privacy in android ad libraries". In: Workshop on Mobile Security Technologies (MoST), p. 10.

Gibler, Clint, Jonathan Crussell, Jeremy Erickson and Hao Chen (2012). "AndroidLeaks: automatically detecting potential privacy leaks in android applications on a large scale". In: International Conference on Trust and Trustworthy Computing. Springer Berlin Heidelberg, pp. 291–307.

TALKS

ESCAR USA | Speaker
June 2018 | Ypsilanti, MI
CommPact: Exploring the Feasibility of Autonomous Vehicle Contracts

MERIT MCRCON | Invited Speaker
May 2017 | Dearborn, MI
No one in the Middle: Enabling network access control via transparent attribution

CYBER EDUCATION SYMPOSIUM | Panelist
Nov 2013 | Arlington, VA
Integrating a University Program into the Government and Private Sector

NATIONAL LABS INFORMATION TECHNOLOGY SUMMIT | Speaker
May 2013 | Santa Fe, NM
FARM 5 for Malware Analysis and Collaboration

AWARDS

2015	Award Recipient	Sandia Employee Recognition Award
2014	1st place	SANS NetWars security competition (Virginia Beach)
2013	Award Recipient	Sandia Employee Award for Outstanding Support
2013	Nominee	Sandia Employee Recognition Award
2012	Nominee	Sandia Outstanding Mentor Award
2011	Fellowship Recipient	Sandia Critical Skills Master's Program
2011	Award Recipient	UC Davis Computer Science Department Citation