Jesse Elwell

PhD Candidate and Graduate Teaching Assistant
Department of Computer Science
State University of New York at Binghamton
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EDUCATION

State University of New York at Binghamton
Dissertation Topic: Securing Systems against an Untrusted System Software Layer
Binghamton, NY — Expected PhD in Computer Science in 2016

State University of New York at Binghamton
Binghamton, NY — Awarded B.S. in Computer Science in 2011

PUBLICATIONS

ACM TACO "Rethinking Memory Permissions for Protection Against Cross-Layer Attacks"
Jesse Elwell, Ryan Riley, Nael Abu-Ghazaleh, Dmitry Ponomarev, Iliano Cervesato
ACM Transactions on Architecture and Code Optimization (TACO)

MICRO 2014 "Iso-X: A Flexible Architecture for Hardware-Managed Isolated Execution"
Dmitry Evtyushkin, Jesse Elwell, Meltem Ozsoy, Dmitry Ponomarev, Nael Abu-Ghazaleh, Ryan Riley
47th Annual IEEE/ACM International Symposium on Microarchitecture (MICRO), Cambridge, UK, December 2014

HPCA 2014 "A Non-Inclusive Memory Permissions Architecture for Protection Against Cross-Layer Attacks"
Jesse Elwell, Ryan Riley, Nael Abu-Ghazaleh, Dmitry Ponomarev, in *Proc. 20th International*
Symposium on High Performance Computer Architecture (HPCA) 201-212, Orlando, Florida, February 2014

DAC 2011 "TPM-SIM: A framework for performance evaluation of Trusted Platform Modules"
Jared Schmitz, Jason Loew, Jesse Elwell, Dmitry Ponomarev, Nael Abu-Ghazaleh
48th ACM/EDAC/IEEE Design Automation Conference (DAC) 236-241, San Diego, California, June 2011

ICCD 2010 "A co-processor approach for accelerating data-structure intensive algorithms"
Jason Loew, Jesse Elwell, Dmitry Ponomarev, Patrick Madden
IEEE International Conference on Computer Design (ICCD) 431-438, October 2010

Submissions Under Review:
HPCA 2016 "High-Resolution Side Channels through Last-Level Cache: Attack and Defenses"
Mehmet Kayaalp, Jesse Elwell, Aamer Jaleel, Nael Abu-Ghazaleh, Dmitry Ponomarev
Symposium on High Performance Computer Architecture (HPCA), March 2016; submitted

EXPERIENCE

Graduate Teaching Assistant, SUNY Binghamton
Binghamton, NY — August 2015 - Current

Intern, Applied Communication Sciences
Basking Ridge, NJ — May 2015 - August 2015

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Graduate Research Assistant, SUNY Binghamton

Binghamton, NY — January 2013 - May 2015

Graduate Teaching Assistant, SUNY Binghamton

Binghamton, NY — September 2011 - January 2013

Undergraduate Research Assistant, SUNY Binghamton

Binghamton, NY — May 2010 - September 2011
Partially supported by NSF's REU Program at SUNY Binghamton (May 2010 - September 2010)

RESEARCH INTERESTS

Computer Architecture, Systems Software, Security

TECHNICAL SKILLS

Languages: C++, C, Python

Proficiencies: git, Linux Kernel Programming, Various CPU Simulators

ACTIVITIES/AWARDS/HONORS

- Student Travel Grant Recipient for HPCA 2014
- Student Travel Grant Recipient for Joint Summer Schools on Cryptography and Principles of Software Security 2012 at Penn State University
- Inducted into Upsilon Pi Epsilon (UPE) Honor Society in 2011
- Student Travel Grant Recipient for Trusted Infrastructure Workshop (TIW) 2010 at Carnegie Mellon University