Zachary M. **Wimer**

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Education

Arizona State University (ASU) — **GPA: 4.0**

Doctor of Philosophy: Computer Science — *Aug. 2018 - PRESENT*

Rensselaer Polytechnic Institute (RPI) — **GPA: 4.0**

Master of Science: Computer Science
Bachelor of Science (Dual major) : Computer Science / Computational Mathematics
Minor: Economics — *Sept. 2014 - May 2018*

Experience

ASU	**Scientific Software Engineer**, Design, Development, Testing	*Jan 2021-PRESENT*
Easy Visa	**Software Engineer**, Security, Design, Development, Testing	*May 2017-Jan 2021*
TGS	**Software Engineer**, CI / CD, Sys Admin, Docker, C++	*Jan. 2019-PRESENT*
ASU	**Research Assistant**, SEFCOM lab	*Aug. 2018-Dec 2020*
Private	**Tutor**, Calculus, Data structures, C++, Python, Chemistry, Physics	*Aug. 2013-PRESENT*
Private	**Independent Contractor**, Software Developement, Security Consulting	*May 2019-Aug. 2020*
ASU	**Graduate TA**, Software Security	*Aug. 2019-Mar. 2020*
RPI	**Mentor**, RCOS	*Jan. 2017-Dec. 2017*
Lutron	**Co-op**, Computer Science	*May 2017-July 2017*
RPI	**Undergraduate TA (double load)**, Foundations of Computer Science	*Aug. 2015-Dec. 2015*
RPI	**Undergraduate TA**, Data Structures	*Jan. 2015-May 2015*

Interesting Skills

CTF experience, As I enjoy hacking, I often participate in CTFs. I have played Defcon CTF. *Thrice*!

Hacking, Specifically I am passionate about binary exploitation. I enjoy figuring out subtle or elegant ways to break things, especially when I use a system's own infrastructure to do so.

Linux Internals, Part of hacking is understanding a system very well; to that end I know quite a lot about the internals of Linux. I often read kernel code to figure out how to solve a CTF challenge.

C++ Template Meta-Programming, I enjoy the ability to code in an amazingly versatile, super-fast, compile-time, pure functional sub-language within C++, which is my favorite language.

Computational Mathematics Implementations, I know how to implement mathematics on computers to avoid floating point errors and how to optimize many matrix operations / calculations for speed.

Basic conversational Spanish, Much of my family is fluent in Spanish so I can hold a conversation in it.

Projects

C++,CMake, C, Python	**Claricpp**, Extended / replaced parts of claripy with a native C++ component.	*2019, 2020*
Host, Organizer	**WeCTFinASU**, I singlehandedly organized a seminal workshop at ASU dedicated to sharing interesting presentations between top tier CTFers in 2019 called the Workshop To Explore Cyber Security in Academic Security Utility. For 2020, we have an organizing committee and sponsors.	*2019, 2020*
C++, CMake	**SubNeural**, My research code: A program that can leak the internals of Neural Networks via repeatedly timing evaluations of the network	*Oct. 2018-PRESENT*
C++, CMake	**DrShadowStack**, A software defined dynamically implemented shadow stack via DynamoRIO	*Feb. 2018-Jun. 2018*
Rust, UML	**smllr**, A (very) fast file de-duplicator	*Aug. 2017-Dec. 2017*
C++, QT	**CAPP-Reporter**, A functional CAPP Reporter that works for RPI single and dual majors	*Aug. 2016-Jan. 2017*

Activities

ASU	**Member**, Shellphish	*Aug. 2018-PRESENT*
ASU	**Member**, Pwndevils	*Aug. 2018-PRESENT*
RPI	**Member / Core**, RPISEC	*Jan. 2016-PRESENT*
RPI	**Member**, Upsilon Pi Epsilon	*Oct. 2016-May 2018*
RPI	**Member**, Pi Mu Epsilon	*Feb. 2017-May 2018*
RPI	**Mentor / Member**, Rensselaer Center for Open Source	*Jan. 2017-May 2018*

Honors & Awards

RPI	**Member**, CS honor society	*2016-PRESENT*
RPI	**Member**, Math honor society	*2017-PRESENT*
RPI	**Member**, National honor society	*2016-PRESENT*
RPI	**Member**, RPI Dean's Honor List	*2014-May 2018*
RPI	**Recipient**, Received Leadership Scholarship	*2014-May 2018*
RPI	**Recipient**, RPI's 4.0 Award	*2016, 2017*
RPI	**Recipient**, RPI's Founders Award of Excellence	*2017*