

Zachary M. Wimer

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Education

Arizona State University (ASU)

DOCTOR OF PHILOSOPHY: COMPUTER SCIENCE

GPA: 4.0

Aug. 2018 - PRESENT

Rensselaer Polytechnic Institute (RPI)

MASTER OF SCIENCE: COMPUTER SCIENCE

BACHELOR OF SCIENCE (DUAL MAJOR): COMPUTER SCIENCE / COMPUTATIONAL MATHEMATICS

MINOR: ECONOMICS

GPA: 4.0

Sept. 2014 - May 2018

Experience

Spectrum **Software Engineer**, C++,cmake,gitlab,yaml,Docker

Jan. 2019-PRESENT

ASU **Research Assistant**, SEFCOM lab

Aug. 2018-PRESENT

Private **Tutor**, Calculus, Data structures, C++ basics

Aug. 2013-PRESENT

RPI **Mentor**, RCOS

Jan. 2017-Dec. 2017

Lutron **Co-op**, Computer Science

May 2017-July 2017

RPI **Undergraduate TA (x2)**, 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. When I played with RPISEC we even made it to the world championships of hacking: **Defcon CTF**. *Twice!* We were top 10 in 2018! Currently I primarily play with Shellphish and Pwndevils; we just qualified for DEFCON CTF again!

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 Implementation, 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.

Fun Projects

C++, **DrShadowStack**, A software defined dynamically implemented shadow stack utilizing

Feb. 2018-Jun. 2018

CMake DynamoRIO

Rust, UML **smllr**, A (very) fast file de-duplicator

Aug. 2017-Dec. 2017

C++ **ZNC SelfMsg**, A ZNC module that allows all clients self message capability

Aug. 2017-Dec. 2017

C++, QT **CAPP-Reporter**, A functional CAPP Reporter that works for RPI single and dual majors:
RCOS.io/projects/zwimer/capp-reporter/profile

Aug. 2016-Jan. 2017

Java **RPI-Campus-Paths**, A shortest path finder with GUI for the RPI Troy Campus

Aug. 2015-Dec. 2015

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-PRESENT

RPI **Member**, Pi Mu Epsilon

Feb. 2017-PRESENT

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**, 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