

Zachary M. Wimer

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Objective

To obtain a Ph.D. in the field of Computer Science.

Education

Arizona State University (ASU)

DOCTOR OF PHILOSOPHY: COMPUTER SCIENCE

GPA: N/A

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

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.

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++, CMake	DrShadowStack , A software defined dynamically implemented shadow stack utilizing DynamoRIO	Feb. 2018-Jun. 2018
Rust, UML	smlr , 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 <u>dual</u> 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-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 , 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