

# KEVIN ROBERT LOUGHLIN

*Ph.D. Student*

Computer Science and Engineering  
University of Michigan

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## RESEARCH INTERESTS

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My research is at the intersection of computer architecture and systems. I am interested in creating novel hardware interfaces for software systems, in order to afford the programmer maximal control of the security, performance, and resource utilization of their code. I am also interested in developing provably-secure and efficient techniques for speculative execution in out-of-order processors.

## EDUCATION

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### University of Michigan

*Ann Arbor, MI, USA*

*Ph.D. Pre-Candidate in Computer Science and Engineering (CSE)*

Sep 2018–Present

GPA: 4.0/4.0

Thesis Topic: Provably-Secure Processor Optimizations

Advisor: Prof. Baris Kasikci

### Harvard University

*Cambridge, MA, USA*

*B.A. in Computer Science, magna cum laude*

Sep 2014–May 2018

GPA: 3.85/4.0

Thesis: TEE-BONE: Securing Smartphone Apps Using Hardware-Only Isolation Primitives

Advisor: Prof. James Mickens

## AWARDS AND HONORS

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NSF Graduate Research Fellowship Recipient	2020
College of Engineering Dean’s Fellowship, University of Michigan	2018
Program for Research in Science and Engineering (PRISE) Fellowship, Harvard	2017
Paul F. Gilligan III Fellowship, Harvard	2017
Ruhr Fellowship	2016
Ruhr Fellows Ambassador Scholarship	2016

## PEER-REVIEWED PUBLICATIONS

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1. Jiacheng Ma, Gefei Zuo, **Kevin Loughlin**, Xiaohe Cheng, Yanqiang Liu, Abel Mulugeta Eneyew, Zhengwei Qi, and Baris Kasikci. “A Hypervisor for Shared-Memory FPGA Platforms.” In *International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*. 2020.
2. Ofir Weisse, Ian Neal, **Kevin Loughlin**, Thomas Wenisch, and Baris Kasikci. “NDA: Preventing Speculative Execution Attacks at Their Source.” In *International Symposium on Microarchitecture (MICRO)*. 2019. **IEEE Micro Top Picks 2020 Honorable Mention**.

## TEACHING

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<b>Advanced Operating Systems (EECS 582)</b> GSI for Prof. Baris Kasikci in graduate course at the University of Michigan	<i>Ann Arbor, MI, USA</i> Jan 2020–May 2020
<b>Systems Programming and Machine Organization (CS 61)</b> TA for Prof. Eddie Kohler in undergraduate course at Harvard University	<i>Cambridge, MA, USA</i> Aug 2017–Dec 2017

## PROFESSIONAL ACTIVITIES

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<b>CSEG Social Chair</b> Organize social events for the UMich CSE graduate student organization (CSEG)	<i>Ann Arbor, MI, USA</i> May 2019–Present
<b>Explore Graduate Studies Volunteer</b> Advised prospective students about graduate studies in computer science	<i>Ann Arbor, MI, USA</i> Oct 2019
<b>Lunch and Lab with a Grad Mentor Program Volunteer</b> Mentored a student on how to prepare for graduate school in computer science	<i>Ann Arbor, MI, USA</i> Sep 2019–Oct 2019
<b>Graduate Admissions Recruit@Home Speaker</b> Gave a recruitment talk at Harvard University of behalf of UMich CSE	<i>Cambridge, MA, USA</i> Sep 2019
<b>Xplore Engineering Volunteer</b> Helped run a workshop introducing elementary school students to computer science	<i>Ann Arbor, MI, USA</i> Jun 2019
<b>CSEG Systems Reading Group Co-Chair</b> Ran weekly systems research paper group meetings	<i>Ann Arbor, MI, USA</i> Sep 2018–May 2019
<b>CSEG Security Reading Group Co-Chair</b> Ran weekly security research paper group meetings	<i>Ann Arbor, MI, USA</i> Sep 2018–May 2019
<b>CSEG Vice-President and Treasurer</b> Managed CSEG finances	<i>Ann Arbor, MI, USA</i> Jan 2019–May 2019

## TECHNICAL SKILLS

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Programming Languages: Fluent in C, C++, Java, and Python  
Architectural Simulators: gem5, QEMU

## LANGUAGES

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English: native  
French: advanced proficiency  
Spanish: advanced proficiency  
German: beginner

## REFERENCES

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Available upon request