Andrew Quinn

Curriculum Vitae

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Introduction

I am a computer science researcher interesting in software systems.

My research proposes new tools, frameworks and algorithms to improve software reliability, focusing largely on improving our ability to debug software. In my thesis, I build new cluster-scale systems to accelerate expensive dynamic program analyses such as dynamic information flow tracking and always-on program invariants. I explored automated systems for debugging persistent memory applications and proposed a new software infrastructure for edge computing.

I am a Microsoft Research Fellow and a National Science Foundation Graduate Research Fellow.

Education

University of Michigan — *Ann Arbor, MI*
Ph.D., Computer Science and Engineering — Sep 2015 - Present

University of Michigan — *Ann Arbor, MI*
M.S., Computer Science and Engineering — Sep 2015 - May 2015

Denison University — *Granville, OH*
B.S., Computer Science and B.A., Mathematics — Aug 2010 - May 2014
Honors: *summa cum laude*, Phi Beta Kappa, Deans List

Fellowships and Awards

Microsoft Research Fellowship — 2017
Two year fellowship awarded to nine early-career Ph.D. students

National Science Foundation Graduate Student Research Fellowship — 2017
Three year fellowship awarded to Ph.D. students

John L. Gilpatrick Mathematics Award, Denison University — 2014
Awarded to the most outstanding senior major in the Math and CS department

Ted Barclay Top Five Student Athlete, Denison University — 2014
Awarded to the top five student athletes at Denison based on GPA.

Conference Publications

Ian Neal, Ben Reeves, Ben Stoler, **Andrew Quinn**, Youngjin Kwon, Simon Peter and Baris Kasikci
Agamotto: How Persistent is your Persistent Memory Application?. To appear in Proceedings of the 2020 USENIX Symposium on Operating Systems Design and Implementation (OSDI). November 2020. Acceptance Rate: 70/398 = 17.6%

Andrew Quinn, Jason Flinn, and Michael Cafarella
Sledgehammer: Cluster-fueled Debugging. In Proceedings of the 2018 USENIX Symposium on Operating Systems Design and Implementation (OSDI). October 2018. Acceptance Rate: 47/264 = 17.8%

Andrew Quinn, David Devecsery, Peter M. Chen and Jason Flinn

JetStream: Cluster-scale Parallelization of Information Flow Queries. In Proceedings of the 2016 USENIX Symposium on Operating Systems Design and Implementation (OSDI). November 2016. Acceptance Rate: 47/267 = 17.6%

Workshop Publications

Matt Furlong, **Andrew Quinn**, and Jason Flinn
The case for Determinism on the Edge. In 2nd USENIX Workshop on Hot Topics in Edge Computing (HotEdge). July 2019 Acceptance Rate: 22/39 = 56%

Andrew Quinn, Michael Cafarella, and Jason Flinn
You can't debug what you can't see: Expanding observability with the OmniTable. In Proceedings of the Workshop on Hot Topics in Operating Systems (HotOS). May 2019 Acceptance Rate: 30/125 = 24%

Presentations

You can't debug what you can't see: Expanding Observability with the OmniTable *May 2019*
Workshop on Hot Topics in Operating Systems (HotOS)

Sledgehammer: Cluster-fueled Debugging *Oct 2018*
USENIX Symposium on Operating Systems Design and Implementation (OSDI)

JetStream: Cluster-Scale Parallelization of Information Flow Queries *Nov 2016*
USENIX Symposium on Operating Systems Design and Implementation (OSDI)

Power Management for Malleable Job Scheduling *Apr 2014*
Denison University department of Math and Computer Science FaST talk

Teaching Experience

University of Michigan *Ann Arbor, MI*
Graduate Student Instructor for Data Structures and Algorithms May 2019 - Jun 2019

Denison University *Granville, OH*
Computer Science Tutor for Introduction to Computer Science Jan 2012 - May 2014

Professional Service

External Review Committee Member
Architectural Support for Programming Languages and Operating Systems (ASPLOS) 2021

Conference Shadow Program Committee Member
European Conference on Computer Systems (EuroSys) 2020

Ph.D. Admissions Committee Member
University of Michigan Department of Computer Science and Engineering 2018

Professional Experience

University of Michigan *Ann Arbor, MI*
Graduate Student advised by Dr. Jason Flinn and Dr. Peter Chen Sep 2015 - Present

Microsoft Corp. *Redmond, WA*
Research Intern mentored by Dr. Suman Nath May 2017 - Aug 2017

International Business Machines (IBM) *Dublin, OH*
Software Development Engineer Jun 2014 - Aug 2015

Denison University *Granville, OH*
Research assistant mentored by Dr. Jessen Havill Aug 2013 - May 2014

International Business Machines (IBM) *Dublin, OH*
Software Development Engineering Intern May 2013 - Aug 2013

Denison University *Granville, OH*
Research assistant mentored by Dr. Jessen Havill May 2012 - Aug 2012

Outreach Activities

Discover Engineering, University of Michigan, Ann Arbor, MI Aug 2019

Techie Club, Georgian Heights Elementary, Columbus, OH Aug 2014 - Aug 2015

A Call to College, Newark Elementary Schools, Newark, OH Sep 2012 - Dec 2013