

Daniel W. Barowy

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Education

Ph.D., University of Massachusetts Amherst, 2017 (Advisor: Prof. Emery Berger)

M.S. Computer Science, University of Massachusetts Amherst, 2013 (Advisors: Profs. Emery Berger and Mark Corner)

B.S. Computer Science, Boston University, Metropolitan College, 2010

B.A. Legal Studies and Philosophy, University of Massachusetts Amherst, 2002

Employment

Assistant Professor, Williams College, 2017–present

Research Assistant, PLASMA Lab, University of Massachusetts Amherst, 2011–2017 (Mentor: Emery Berger)

Research Intern, Programming Languages and Software Engineering Group, IBM T.J. Watson (Yorktown Heights, NY), Summer 2015 (Mentor: Rodric Rabbah)

Research Intern, Decision Lab, Microsoft Research (New York City), Summer 2014 (Mentors: Dan Goldstein and Sid Suri)

Research Intern, Architecture Group, Microsoft Research (Silicon Valley), Summer 2013 (Mentors: John Davis and Eric Chung)

Research Intern, RiSE Group, Microsoft Research (Redmond), Summer 2012 (Mentors: Ben Zorn and Sumit Gulwani)

Research Assistant, PRISMS Lab, University of Massachusetts Amherst, 2010–2011 (Mentor: Mark Corner)

Network Engineer, etc., Bedford/St. Martin's (now Macmillan Learning), 2004–2010 (Supervisor: Eugene Chang)

Teaching and Mentoring

Mentor, Williams College, “Swell Williams Entry-Level Language” (SWELL); students Emmie Hine, Alex Taylor, and Kiersten Campbell

Assistant Professor, Williams College, CSCI 334: “Principles of Programming Languages”, Spring 2018 (two sections)

Faculty Sponsor, Williams College, CSCI 398: “flarec: A Compilation Approach to Extracting Relational Data from Spreadsheets”; student Cole Erickson, Spring 2018

Assistant Professor, Williams College, CSCI 331: “Introduction to Computer Security”, Fall 2017

Visiting Instructor, Mount Holyoke College, COMSC 201: “Advanced Object-Oriented Programming”, Spring 2017

Teaching Assistant, UMass Amherst, CMPSCI 220: “Programming Methodology”, Spring 2016 (with Arjun Guha)

Mentor, Google Summer of Code 2015, PLASMA @ UMass, “AutoMan Monitoring and Debugging Plugin for IntelliJ IDEA”; student Bartosz Janota

Mentor, UMass Amherst, Undergraduate Honors Independent Study, “FrameWrangler”; student Kevin Gurney, Fall 2014

Mentor, UMass Amherst, Undergraduate Honors Independent Study, “AutoMan Visual Debugger”; student Bianca Tamaskar, Fall 2014

Teaching Assistant, UMass Amherst, CMPSCI 220: “Programming Methodology”, Spring 2014 (with John Altidor and Jack Wileden)

Mentor, Google Summer of Code 2013, PLASMA @ UMass, “CheckCell for Google Spreadsheet”; student Alexandru Toader

Private C++ Tutor, Summer 2010

Teaching Assistant, UMass Amherst, Legal Studies 497P: “Law and Media”, Legal Studies Department, University of Massachusetts Amherst, Fall 2001 & Fall 2002 (with Alan Gaitenby)

Teaching Assistant, UMass Amherst, Legal Studies H03: “Law and Media Colloquium”, Legal Studies Department, University of Massachusetts Amherst, Fall 2001 & Fall 2002 (with Alan Gaitenby)

Publications

Journal Articles

AUTOMAN: A Platform for Integrating Human-Based and Digital Computation, with Charlie Curtsinger, Emery Berger, and Andrew McGregor, Communications of the ACM, Research Highlights, July 2016 (research paper)

Conference Proceedings

EXCELINT: Automatically Finding Spreadsheet Formula Errors, with Emery D. Berger and Ben Zorn, OOPSLA 2018, Boston, MA November 4–9, 2018 (research paper)

VOXPL: Programming with the Wisdom of the Crowd, with Emery D. Berger, Daniel G. Goldstein, and Siddharth Suri, CHI 2017, Denver, CO May 6–11, 2017 (research paper)

FLASHRELATE: Extracting Relational Data from Semi-Structured Spreadsheets Using Examples, with Sumit Gulwani, Ted Hart, and Ben Zorn, PLDI 2015, Portland, OR June 13–17, 2015 (research paper)

CHECKCELL: Data Debugging for Spreadsheets, with Dimitar Gochev and Emery Berger, OOPSLA 2014, Portland, OR October 20–24, 2014 (research paper)

AUTOMAN: A Platform for Integrating Human-Based and Digital Computation, with Charlie Curtsinger, Emery Berger, and Andrew McGregor, OOPSLA 2012, Tucson, AZ October 19–26, 2012 (research paper)

Theses

Barowy, Daniel W., “Spreadsheet Tools for Data Analysts” (2017). *Doctoral Dissertations*. 1045.
http://scholarworks.umass.edu/dissertations_2/1045

Barowy, Daniel W., “AutoMan: Integrating Human and Silicon Computation” (2013). *Master’s Thesis*.

Workshops & Posters

EXCELINT: Automatically Finding Formula Errors in Spreadsheets, IBM PL Day 2017 (workshop)

VoxPL: Programming with the Wisdom of the Crowd, IBM PL Day 2017 (workshop)

WOCMAN: Programming with the Wisdom of the Crowd, NEPLS Fall 2016 (workshop)

WOCMAN: Harnessing the Wisdom of the Crowd for High-Quality Estimates, ASPLOS WAX 2016 (workshop)

WOCMAN: Harnessing the Wisdom of the Crowd for High-Quality Estimates, POPL 2016 Student Research Competition (poster)

CHECKCELL: Data Debugging for Spreadsheets, OOPSLA 2014 (poster)

Data Debugging, with Dimitar Gochev and Emery Berger, POPL 2014 Off the Beaten Track (workshop)

AUTOMAN: Integrating Human and Silicon Computation, with Emery Berger and Andrew McGregor, NIPS 2011 Second Workshop on Computational Social Science and the Wisdom of Crowds, Sierra Nevada, Spain, December 17–18, 2011. (poster)

Periodicals

Invited article: AUTOMAN: “Programming with People”, appears in “Follow the Crowd”, published Feb. 26, 2013 (<http://crowdresearch.org/blog/?p=5155>).

Verified Software Artifacts

FLASHRELATE: Extracting Relational Data from Semi-Structured Spreadsheets Using Examples, PLDI 2015 Artifact Evaluation Committee, passing grade (**Distinguished Artifact**)

CHECKCELL: Data Debugging for Spreadsheets, OOPSLA 2014 Artifact Evaluation Committee, passing grade

Professional Service

Reviewing

Program Committee Member, IW3C2 The Web Conference 2019, May 2019

Reviewer, Communications of the ACM, July 2016

External Reviewer, PLDI 2016 (37th ACM SIGPLAN Conference on Programming Language Design and Implementation)

External Reviewer, ESOP 2016 (25th European Symposium on Programming)

Reviewer, PLDI 2015 Artifact Evaluation Committee (36th ACM SIGPLAN Conference on Programming Language Design and Implementation)

Reviewer, PLDI 2014 Artifact Evaluation Committee (35th ACM SIGPLAN Conference on Programming Language Design and Implementation)

Co-Reviewer, ICSE 2014 (36th International Conference on Software Engineering)

External Reviewer, TOPLAS 2014 (ACM Transactions on Programming Languages and Systems)

External Reviewer, SIGMOD 2013 (ACM Special Interest Group on Management of Data)

Volunteering

Student Volunteer Co-Chair, PLDI 2016 (37th ACM SIGPLAN Conference on Programming Language Design and Implementation)

Student Volunteer, SPLASH 2015 (ACM SIGPLAN conference on Systems, Programming, Languages and Applications: Software for Humanity)

Student Volunteer Co-Chair, PLDI 2015 (36th ACM SIGPLAN Conference on Programming Language Design and Implementation)

Volunteer, Western Massachusetts Labor Action, Pittsfield, MA (1998-2000)

College/Department Service

Williams Academic Standing Committee, academic year 2018-19.

Williams CS TA Selection Committee, academic year 2017-18.

Co-organizer, weekly Data Science Tea, academic year 2015

Doctoral Graduate Representative to the Faculty (“GradRep”), academic year 2014

Department Tea Organizer (“Tea-Totaller”), academic year 2010

Awards

UMass CICS 2017 Outstanding Dissertation Award, awarded Oct 2017

UMass CICS Student Travel Grant, for travel to CHI 2017, awarded Jan 2017

SIGPLAN PAC Student Travel Grant, for travel to PLDI 2016, awarded May 2016

NSF Student Travel Grant, for travel to SPLASH 2015, awarded September 2015

PLDI 2015 Distinguished Artifact, for work on FLASHRELATE, awarded June 2015

NSF Student Travel Grant, for travel to PLDI 2015, awarded summer 2015

SIGPLAN PAC Student Travel Grant, for travel to SPLASH 2014, awarded August 2014

Microsoft Research Graduate Fellowship, Finalist, 2012

SIGPLAN PAC Student Travel Grant, for travel to SPLASH 2012, awarded September 2012

Shep Shepard Legal Studies Award, Legal Studies Department, University of Massachusetts, Amherst, for academic excellence achieved within Legal Studies and contributions to the community, awarded May, 2001

Phi Beta Kappa Honor Society, inducted May, 2001

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