

# Austin Z. Henley

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## Key Research Achievements

- \* 8 full-length publications with 4 in top-tier human-computer interaction and software engineering conferences (CHI'14, FSE'16, CHI'17, CHI'18)
- \* 2 Best Paper Awards (FSE'16, VL/HCC'16) and 1 Honorable Mention Award (VL/HCC'17)
- \* Industry research internships at IBM Research, Microsoft Research, and National Instruments

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## Education

2013–Present	<b>Ph.D. in Computer Science</b> , University of Memphis Department of Computer Science	Memphis, TN
2014–2016	<b>Graduate Cert. in Cognitive Science</b> , University of Memphis Institute for Intelligent Systems	Memphis, TN
2012–2013	<b>M.S. in Computer Science</b> , University of Memphis Department of Computer Science	Memphis, TN
2008–2011	<b>B.S. in Computer Science</b> , Austin Peay State University Department of Computer Science & Information Technology	Clarksville, TN

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## Industry Experience

06/2017–08/2017	<b>Research Intern</b> , IBM Research Cognitive Computing Mentored by David Piorkowski	Yorktown Heights, NY
05/2016–08/2016	<b>Research Intern</b> , Microsoft Research Tools for Software Engineers (TSE) Mentored by Maria Christakis & Kivanc Muslu	Redmond, WA
06/2015–10/2015	<b>Research Intern</b> , National Instruments Platform Framework	Austin, TX
06/2014–08/2014	<b>Research Intern</b> , National Instruments Platform Framework	Austin, TX
05/2012–01/2013	<b>Software Engineer Intern</b> , First Tennessee Bank Enterprise Productivity	Memphis, TN

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## Academic Work Experience

01/2013–Present	<b>Research Assistant</b> , University of Memphis Department of Computer Science	Memphis, TN
09/2016–12/2016	<b>Instructor</b> , University of Memphis Department of Computer Science	Memphis, TN
08/2012–12/2012	<b>Teaching Assistant</b> , University of Memphis Department of Computer Science	Memphis, TN

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## Awards

2017	★ <b>Honorable Mention Award, IEEE VL/HCC</b> ★
2017	Best Presentation, University of Memphis CS Research Day
2016	★ <b>Distinguished Paper Award, ACM SIGSOFT FSE</b> ★
2016	NSF Travel Award for ACM FSE
2016	NSF Travel Award for IEEE ICSME
2016	★ <b>Best Paper Award, IEEE VL/HCC</b> ★
2016	VL/HCC Graduate Consortium Travel Grant
2016	Best Presentation, University of Memphis CS Research Day
2015–2016	Associate Investigator, National Instruments Research Grant
2015	Runner-up, Best Presentation, University of Memphis CS Research Day
2014	VL/HCC Graduate Consortium Travel Grant
2014	Runner-up, Best Presentation, University of Memphis CS Research Day
2008–2011	TN Hope Scholarship
2007	Finalist, FBLA Desktop Application Programming Event
2007	12 <sup>th</sup> place, BPA C++ National Programming Competition
2006	1 <sup>st</sup> place, BPA C++ TN State Programming Competition

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## Full Refereed Publications

ACM CHI'18	<b>Austin Z. Henley</b> , Kivanc Muslu, Maria Christakis, Scott D. Fleming, and Christian Bird. “CFar: A Tool to Increase Communication, Productivity, and Review Quality in Modern Code Review.” In <i>Proc. 2018 CHI Conf. on Human Factors in Computing Systems</i> , Montreal, Canada. [To appear]
IEEE VL/HCC'17	David Piorkowski, Sean Penney, <b>Austin Z. Henley</b> , Marco Pistoia, Margaret Burnett, Omer Tripp, and Pietro Ferrara. “Foraging Goes Mobile: Foraging While Debugging on Mobile Devices.” In <i>Proc. IEEE Symp. Visual Languages and Human-Centric Computing</i> , Raleigh, North Carolina, October 2017, 9–17. <b>Honorable Mention Award.</b> [29% acceptance rate]

- ACM CHI'17 **Austin Z. Henley**, Scott D. Fleming, and Maria V. Luong. “Toward Principles for the Design of Navigation Affordances in Code Editors: An Empirical Investigation.” In *Proc. ACM SIGCHI ACM Annual Conf. Human Factors in Computing Systems*, Denver, Colorado, May 2017, 5690–5702. [25% acceptance rate]
- ACM FSE'16 David Piorkowski, **Austin Z. Henley**, Tahmid Nabi, Scott D. Fleming, Christopher Scaffidi, and Margaret Burnett. “Foraging and Navigations, Fundamentally: A Developer Problem of Predicting Value/Cost.” In *Proc. ACM SIGSOFT Int'l Symp. on the Foundations of Software Engineering*, Seattle, Washington, November 2016, 97–108. **Distinguished Paper Award**. [27% acceptance rate]
- IEEE ICSME'16 Alka Singh, **Austin Z. Henley**, Scott D. Fleming, and Maria V. Luong. “An Empirical Evaluation of Models of Programmer Navigation.” In *Proc. IEEE Int'l Conf. on Software Maintenance and Evolution*, Raleigh, North Carolina, October 2016, 9–19. [29% acceptance rate]
- IEEE VL/HCC'16 **Austin Z. Henley** and Scott D. Fleming. “Yestercode: Improving Code-Change Support in Visual Dataflow Programming Environments.” In *Proc. IEEE Symp. Visual Languages and Human-Centric Computing*, Cambridge, United Kingdom, September 2016, 106–114. **Best Paper Award**. [33% acceptance rate]
- IEEE ICSME'15 David Piorkowski, Scott D. Fleming, Christopher Scaffidi, Margaret Burnett, Irwin Kwan, **Austin Z. Henley**, Jamie Macbeth, Charles Hill, and Amber Horvath. “To Fix or to Learn? How Production Bias Affects Developers Information Foraging during Debugging.” In *Proc. IEEE Int'l Conf. on Software Maintenance and Evolution*, Bremen, Germany, September/October 2015, 11–20. [22% acceptance rate]
- ACM CHI'14 **Austin Z. Henley** and Scott D. Fleming. “The Patchworks Code Editor: Toward Faster Navigation with Less Code Arranging and Fewer Navigation Mistakes.” In *Proc. 2014 ACM Annual Conf. Human Factors in Computing Systems*, Toronto, Canada, April/May 2014, 2511–2520. [23% acceptance rate]

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### Short Refereed Publications

- IEEE VL/HCC'16 **Austin Z. Henley**. “Designing Affordances for Navigating Information Spaces in Code Editors.” In *Proc. IEEE Symp. Visual Languages and Human-Centric Computing*, Cambridge, United Kingdom, September 2016, 254–255. [Graduate Consortium]
- IEEE VL/HCC'14 **Austin Z. Henley**, Alka Singh, Scott D. Fleming, and Maria V. Luong. “Helping Programmers Navigate Code Faster with Patchworks: A Simulation Study.” In *Proc. IEEE Symp. Visual Languages and Human-Centric Computing*, Melbourne, Australia, July/August 2014, 77–80. [Short paper]

IEEE VL/HCC'14 **Austin Z. Henley**. “Improving Source Code Navigation with Patchworks” In *Proc. IEEE Symp. Visual Languages and Human-Centric Computing*, Melbourne, Australia, July/August 2014, 187–188. [Graduate Consortium]

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## Active Manuscripts

**Austin Z. Henley** and Scott D. Fleming. “BachD: Helping Programmers Efficiently Detect Behavior-Altering Code Edits during Refactoring.” [In preparation]

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## Patents

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## Teaching

Fall 2016 Instructor, University of Memphis  
Operating Systems (COMP 4270)

Fall 2013, 2014 Guest Lecturer, University of Memphis  
Information Retrieval and Web Search (COMP 7/8130)

Fall 2012 Teaching Assistant, University of Memphis  
Discrete Structures (COMP 2700)

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## Service

2017 Publications Chair, VL/HCC

2015–2017 President, CS Graduate Student Association

2015–2016 CS Faculty Search Committee

2014–2016 Graduate Recruitment Fair

2015 Mentor, National Society of Black Engineers Regional Conference

2015 Student Volunteer, VL/HCC

2013, 2014 CS Open House for Middle/High School Students

2013 CS Graduate Program Review Committee

2010 Judge, TMTA High School Mathematics Contest