

Austin Z. Henley

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Research Interests

Software Engineering, Human-Computer Interaction, Computing Education;
Developer Productivity, Developer Tools, Empirical Software Engineering

Education

- 2013–2018 **Ph.D. in Computer Science**, University of Memphis
Department of Computer Science Memphis, TN
Dissertation: *Human-Centric Tools for Navigating Code*
Advisor: Dr. Scott D. Fleming
- 2014–2016 **Graduate Cert. in Cognitive Science**, University of Memphis
Institute for Intelligent Systems Memphis, TN
- 2012–2013 **M.S. in Computer Science**, University of Memphis
Department of Computer Science Memphis, TN
- 2008–2011 **B.S. in Computer Science**, Austin Peay State University
Department of Computer Science & Information Technology Clarksville, TN

Academic Work Experience

- 08/2018–*Present* **Assistant Professor**, University of Tennessee
Department of Electrical Engineering & Computer Science Knoxville, TN
- 01/2013–07/2018 **Research Assistant**, University of Memphis
Department of Computer Science Memphis, TN
- 09/2016–12/2016 **Instructor**, University of Memphis
Department of Computer Science Memphis, TN
- 08/2012–12/2012 **Teaching Assistant**, University of Memphis
Department of Computer Science Memphis, TN

Industry Experience

- 06/2017–08/2017 **Research Intern**, IBM Research
Cognitive Computing Yorktown Heights, NY
Mentored by David Piorkowski

05/2016–08/2016	Research Intern , Microsoft Research Tools for Software Engineers (TSE) Mentored by Maria Christakis & Kivanc Muslu	Redmond, WA
06/2015–10/2015	Research Intern , National Instruments Platform Framework	Austin, TX
06/2014–08/2014	Research Intern , National Instruments Platform Framework	Austin, TX
05/2012–01/2013	Software Engineer Intern , First Tennessee Bank Enterprise Productivity	Memphis, TN

Awards

- 2018 Finalist, Morton Dissertation Award
- 2017 ★ **Honorable Mention Award, IEEE VL/HCC** ★
- 2017 Best Presentation, University of Memphis CS Research Day
- 2016 ★ **Distinguished Paper Award, ACM SIGSOFT FSE** ★
- 2016 NSF Travel Award for ACM FSE
- 2016 NSF Travel Award for IEEE ICSME
- 2016 ★ **Best Paper Award, IEEE VL/HCC** ★
- 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

Full Refereed Publications

- IEEE VL/HCC'18 **Austin Z. Henley** and Scott D. Fleming. “CodeDeviant: Helping Programmers Detect Edits That Accidentally Alter Program Behavior.” In *Proc. IEEE Symp. Visual Languages and Human-Centric Computing*, Lisbon, Portugal. [To appear]
- ACM CHI'18 **Austin Z. Henley**, 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 *Proc. 2018 ACM Conf. on Human Factors in Computing Systems*, Montreal, Canada, April 2018, 157:1–157:13. [25% acceptance rate]

- IEEE VL/HCC'17 David Piorkowski, Sean Penney, **Austin Z. Henley**, Marco Pistoia, Margaret Burnett, Omer Tripp, and Pietro Ferrara. “Foraging Goes Mobile: Foraging While Debugging on Mobile Devices.” In *Proc. IEEE Symp. Visual Languages and Human-Centric Computing*, Raleigh, North Carolina, October 2017, 9–17. **Honorable Mention Award.** [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. 2017 ACM Conf. on 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 Conf. Human Factors in Computing Systems*, Toronto, Canada, April/May 2014, 2511–2520. [23% acceptance rate]

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]

Patents

David Piorkowski, **Austin Z. Henley**, John Richards, and Evelyn Duesterwald. “A Framework of Proactive and Reactive Strategies for Improving Labeling Consistency and Efficiency.” [Pending]

Teaching

University of Tennessee

Fall 2018 Software Engineering (COSC 340)

University of Memphis

Fall 2016 Operating Systems (COMP 4270)
37 undergraduates; 4.46/5

Fall 2013, 2014 Information Retrieval and Web Search (COMP 7130)
Guest Lecturer

Fall 2012 Discrete Structures (COMP 2700)
Teaching Assistant

Invited Talks

“Human-Centric Tools for Software Maintenance”

3/5/2018 University of Delaware

2/28/2018 University of Tennessee

2/26/2018 Colorado State University

2/22/2018 Wayne State University

2/15/2018 University of Memphis

2/13/2018 New Jersey Institute of Technology

2/6/2018 University of Nebraska-Lincoln

Service

- 2018 Program Committee, PLATEAU
- 2018 Mentor, Undergraduate Senior Capstone
- 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

Reviewing

- 2018 ACM TOCE
- 2018 ACM CHI
- 2017, 2018 IEEE VL/HCC, Showpieces/Posters

Sub-Reviewing

- 2018 IEEE/ACM ICPC
- 2014–2018 ACM CHI
- 2014–2018 IEEE VL/HCC
- 2014 ACM DIS