

EMILY HILL

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314 Hall of Science (HS) · (973) 408-3198

Department of Mathematics & Computer Science

Drew University · Madison, NJ 07940

EDUCATION

Ph.D. in Computer Science, University of Delaware: August 2010.

Thesis: *Developing Natural Language-based Software Analyses & Tools to Expedite Software Maintenance*.

Advisors: Dr. Lori Pollock & Dr. K. Vijay-Shanker.

M.S. in Computer Science, University of Delaware: May 2005.

B.S. in Computer Science, Minor in Mathematics, The College of New Jersey: May 2003.

PROFESSIONAL EXPERIENCE

Drew University Department of Mathematics & Computer Science

Associate Professor & Program Director of Computer Science: 2017 - present.

Assistant Professor & Program Director of Computer Science: 2014 - 2017.

Montclair State University Department of Computer Science

Assistant Professor: 2010 - 2014.

HONORS AND AWARDS

Most Influential Paper Award, 2017 <Programming> Conference for work published at AOSD 2007, 2017.

Distinguished Referee 2011-2012, ACM Transactions on Software Engineering and Methodology (TOSEM), 2013.

Distinguished Paper Award, International Conference on Automated Software Engineering (ASE), 2010.

Frank Pehrson Award for Outstanding Graduate Student, University of Delaware, 2009.

Graduate Research Fellowship, National Science Foundation, 2005-2008.

Best Paper Award, Working Conference on Mining Software Repositories, 2008.

Lauri Pfeffer Shinn Memorial Award, University of Delaware, 2007.

TEACHING EXPERIENCE

Drew University

CSCI 117, Introduction to Computers and Computing: Fall 2014, Spring & Summer 2015.

CSCI 150 (formerly 117), Introduction to Computers Science in Python: Fall 2015, Spring & Summer 2016, Fall 2016, Spring 2017, Summer 2017.

CSCI 151, Object Oriented Programming in Java: Spring & Summer 2015, Summer 2016 & 2017.

CSCI 230, Data Structures: Fall 2015.

CSCI 330, Databases & Information Management: Fall 2017.

CSCI 340, Software Engineering: Spring 2015, Fall 2016.

CSCI 350, Net-centric computing: Fall 2014.

CSCI 360, Operating Systems: Fall 2015, Spring 2017.

CSCI 400, Capstone: Spring 2015 & 2016.

CE 275, Innovation I: Fall 2017.

Montclair State University

CMPT 109, Introduction to Computer Applications (*online*): Fall 2011-2013.

CMPT 183, Foundations of Computer Science I: Fall 2010-2013.

CMPT 184, Foundations of Computer Science II: Spring 2011-2014.

CMPT 481/584, Operating Systems: Spring 2013.

CMPT 594, Software Engineering & Reliability: Spring 2012-2014.

University of Delaware

CISC 672, Advanced Compiler Construction: Spring 2005 (TA).

CISC 474, Advanced Web Technologies: Spring 2005 (TA).

CISC 105, General Computer Science: Spring 2004 (TA), Summer 2004.

CISC 181, Introduction to Computer Science: Fall 2004 (TA).

CISC 101, Computer & Information Systems: Winter 2004.

STUDENT MENTORING

Drew University

1. Kent Harris, "DoraBubbles", DSSI & independent study research, Summer-Fall 2017.
2. Lloyd Goldstein, "Making Bureau of Labor Statistics Data More Accessible", independent study research & DSSI, Spring-Summer-Fall 2017.
3. Mohammed Hassan, "Automatically generating explanations of Java code," independent study research & DSSI, Spring-Summer-Fall 2017.
4. Rebecca Filetti, "Applying textual analysis techniques to find passages related to Shakespeare," DSSI/DSDHI and independent study research, Summer 2016 – Fall 2016.
5. Jennifer Benedict, "Applying textual analysis techniques to find passages related to Shakespeare," DSDHI and independent study research, Summer 2016 – Fall 2016.
6. Andrew Castelluccio, "Automatically generating explanations of code that are useful to everyone," DSSI and no credit independent study research, Summer 2016 – Fall 2016.
7. Vishnu Allampalli, "Towards automatically summarizing tests and detecting missing test cases," independent study research and DSSI, Spring 2016 – Summer 2016.
8. Richa Patel, "Using R to analyze BitCoin data," independent study, Spring 2016.
9. Jackson Hurst, "Using R to analyze the price of oil," independent study, Spring 2016.
10. Wyatt Olney, "Summarizing source code for beginning programmers," independent research, DSSI, and senior honors thesis, Spring 2015 - Spring 2016.
11. Chris Thurber, "Comparing part of speech taggers on source code identifiers," independent research experience, Summer 2015 – Fall 2015.
12. Bezalem Lemma, "Developing a gold set for evaluating part of speech taggers on source code identifiers," summer research experience, Summer 2015.
13. Joseph Pignataro, "#drewtherightthing campaign web site," advised with Audra Tonero (customer), Summer 2015.

14. Anastasia Kolovani, "Socially Aware Computing," independent study, Spring & Fall 2015.
15. Adam Fanslau, "Recommending Learning Resources for Computer Science Students," senior honors thesis, Fall 2014 - Spring 2015.

Montclair State University

Undergraduate Students

16. Kevin Young, "Documenting & Refactoring an Android Mobile Science Toolkit," undergraduate independent study, Summer 2014.
17. Leah Dave, "Automatically Extracting Comments in Java," CREU funded undergraduate research project, Fall 2013 - Spring 2014.
18. Kathy Chowniac, "Automatically Extracting a Software Word Usage Model from Java Comments," CREU funded undergraduate research project, Spring 2013 - Spring 2014.
19. Cynthia Alvarez, "Automatically Extracting Queries from Maintenance Requests," undergraduate independent study, Spring 2013 - Fall 2013.
20. Spencer Kordecki, "Building a Mobile Android Application for Sustainability Science," paid undergraduate research, Summer 2013 - Spring 2014.
21. David Dymko, paid undergraduate research:
 - "Building a Mobile Android Application for Sustainability Science," Summer 2013 - Summer 2014.
 - "Automatically Extracting a Software Word Usage Model for Java and C++," Spring 2013.
22. Michael Morley, "Analyzing the Impact of Phrasal Concepts on Source Code Search," undergraduate independent study, Summer 2012 - Summer 2014.
23. Kaushal Kathwadia, "Investigating the Impact of Phrasal Concepts on Source Code Search," undergraduate independent study, Spring 2012.
24. Marvin Lapeine, "Bioinformatics and Drug Discovery," Science Honors Innovation Program, co-advised with Dr. Herbert, Fall 2011.
25. Darryl Price, "Development of a Software Quality Assurance Center for Excellence at MSU," undergraduate independent study, Fall 2011.
26. Manuel Roldan-Vega, "Investigating Contextual Query Reformulation with SWUM-based Software Search," undergraduate independent study and paid research, Summer 2011 - Spring 2013.
27. James Taveras, "Technology Needs for Combining Global and Local Concern Location Techniques," undergraduate independent study, Summer 2011.
28. Daisy Lorenzo, "Exploring Word Usage Relationships between Maintenance Requests and Source Code for Bug Localization," paid undergraduate research, Summer 2011 - Fall 2011.
29. Valerie Ho, paid undergraduate research, Spring 2011 - Fall 2011.
 - "Exploring Word Usage Relationships between Maintenance Requests and Source Code for Bug Localization," Summer-Fall 2011.
 - "Comparing Word Stemmers for Source Code Analysis," Spring 2011.
30. Andrew Wiese, "Comparing Word Stemmers for Source Code Analysis," paid undergraduate research, Spring 2011.

High School Students

31. Kira Mathias Prabhu, "Automatic Extraction of Code Island Queries for Bug Localization," volunteer high school student research project, Summer - Fall 2013.

Graduate Students

32. Travis Gant, "Developing and Deploying a Mobile Application Platform to Facilitate Environmental Research and Education," Masters Project, Summer - Fall 2014.
33. Adebisi (Bisi) Adenipekun, "Geotagger: An application to facilitate and promote collaborative, scientific inquiry", Masters Project, Spring - Fall 2014.
34. Sowmya Bandela, "Evaluating the Use of Textual Information in Debugging Software Systems," Masters Project, Fall 2012.
35. Jenn Schiffer, "Development of a Grading Rubric Student Feedback Software System for Online Education," Masters Project, Spring 2012.

University of Delaware

Under supervision and collaboration with Drs. Pollock and Shanker.

36. Eric Enslin, "Mining Source Code to Automatically Split Identifiers for Source Code Analysis," Research Experience for Undergraduates, 2009.
37. Sana Malik, "Extending and Evaluating a Software Word Usage Model for C/C++," CRA-W Distributed Research Experience for Undergraduates (DREU), 2009.
38. Jon Schall, "Towards Generating Useful Comments for Program Code," Research Experience for Undergraduates, 2009.
39. Haley Boyd, "Analyzing Word Usage in Software to Improve Software Maintenance Tools," Research Experience for Undergraduates, 2008.
40. Zachary P. Fry, "Automatically Mining Abbreviation Expansions from Software." Senior Honors Thesis, 2008.
41. Yana Novikova, "Integrating Information Retrieval with NLP for a Program Navigation Tool." Undergraduate independent study, 2007.
42. Meilani Williams, "Preposition Word Usage in Software." CRA-W Distributed Mentor Program, Summer 2007.

PHD THESES

43. Benwen Zheng, "Assisting Developers in the Creation and Maintenance of Unit Tests", co-advised with Dr. James Clause, University of Delaware
44. Laleh M. Eshkevari, "Automatic Detection and Classification of Identifiers," PhD Thesis committee, Ecole Polytechnique University of Montreal

REFEREED STUDENT-PRESENTED PAPERS * *presenters in bold*

1. **Wyatt Olney**, Emily Hill, Chris Thurber, Bezalem Lemma. "Part of Speech Tagging Java Method Names." *IEEE International Conference on Software Maintenance and Evolution, Early Research Achievements (ERA) Track*, 2016. 34% acceptance.

REFEREED STUDENT-PRESENTED POSTERS * *students in bold*

1. **Anastasia Kolovani**, Emily Hill. "Increasing Student Interest in Computer Science Through High School Outreach." General Poster Session, Grace Hopper Celebration of Women in Computing, Oct 2015.

2. **Kathy Chowniac, Leah Dave, Emily Hill**. "Automatically Extracting a Software Word Usage Model from Java Comments". General Poster Session, Grace Hopper Celebration of Women in Computing, Oct 2014.
3. Jerry Alan Fails, **Christopher Loeschorn**, Katherine Herbert, Emily Hill, **Spencer Kordecki, David Dymko, Andrew DeStefano**, and **Zill Christian**. "GeoTagger: A Collaborative and Participatory Environmental Inquiry System." *ACM Computer Supported Cooperative Work and Social Computing*, Feb 2014.
4. **Marvin Lapeine**, Katherine G. Herbert, Emily Hill, Nina M. Goodey. "Mobile interaction and query optimization in a protein-ligand data analysis system." *ACM SIGMOD International Conference on Management of Data*, Jun 2013.
5. **Andrew Wiese, Valerie Ho, Emily Hill**. "A Comparison of Stemmers on Source Code Identifiers for Software Search." *IEEE International Conference on Software Maintenance (ICSM'11), Early Research Achievements (ERA) Track*, Sep 2011.

GRANTS UNDER SUBMISSION

- **NSF S-STEM**: \$268,779 / \$2 million (2016-2021). "*NNJ PROGRESS – PROMoting GRaduate Education for Success in Science*," PIs: Katherine Herbert, Thomas Marlowe. Senior Personnel at Drew: Emily Hill, Adam Cassano.

GRANTS AWARDED

1. **NSF SHF: Small**: \$74,378 / \$450,000 (2015-2018). "Assisting Developers in the Creation and Maintenance of Unit Tests," PIs: James Clause (University of Delaware), Emily Hill.
2. **NSF S-STEM**: \$624,540 (2013-2014). "Networking and Engaging in Computer Science and Technology in Northern New Jersey Program," PIs: Katherine Herbert, Donal MacVeigh, Thomas Marlowe, Emily Hill, Jerry Fails.
3. **CRA-W Collaborative Research Experience for Undergraduates (CREU)**: \$7,000 (2013-2014). "Automatically Extracting Comments in Java," PIs: Kathy Chowniac, Leah Dave, Emily Hill. 2 x \$3,000 stipends during the academic year and up to \$1500 travel reimbursement to pursue undergraduate research.
4. **PSEG Institute for Sustainability Studies**: \$30,000 (2012-2013). "Towards a Mobile Exploratory Research and Data Analytics Platform for Environmental & Ecological Sustainability Studies," PIs: Emily Hill, Katherine Herbert
5. **NSF Award CNS-1205321**: \$38,307 / \$100,000 (2012-2013). PI: Emily Hill. Collaborative Research: Advanced Text Analysis Infrastructure for Software Engineering. In collaboration with University of Delaware (Lori Pollock, PI; Vijay Shanker, Co-PI) and Wayne State University (Andrian Marcus, PI).
6. **NSF Award CCF-0915803**: \$496,913 (2009-2012). PIs: Lori Pollock and K. Vijay-Shanker
7. **NSF Award CCF-070240**: \$444,750 (2007-2010). PIs: Lori Pollock and K. Vijay-Shanker
8. **NSF Graduate Research Fellowship**: full tuition and stipend (2005-2008).

BOOK CHAPTERS

1. Lori Pollock, K. Vijay-Shanker, Emily Hill, Giriprasad Sridhara, and David Shepherd. Natural Language-based Software Analyses and Tools for Software Maintenance, In De Lucia, A., Ferrucci, F. (eds.) *Software Engineering, International Summer Schools, ISSSE 2009-2011*, Salerno, Italy, Revised Tutorial Lectures, LNCS 7171, pp.102-134, Springer (2012).

JOURNAL PUBLICATIONS * *students in bold*

6. Emily Hill, Philip Johnson, Dan Port. "Is an Athletic Approach the Future of Software Engineering Education?" *IEEE Software*, 2016. (2013 Impact Factor 1.23)
2. Emily Hill, Dave Binkley, Dawn Lawrie, Lori Pollock, K. Vijay-Shanker. "An empirical study of identifier splitting techniques." *Empirical Software Engineering*, 2013. (2012 Impact Factor 1.180)

3. Thomas Fritz, Gail Murphy, Emerson Murphy-Hill, Jingwen Ou, and Emily Hill. "Degree-of-Knowledge: Modeling a Developer's Knowledge of Code." *Transactions on Software Engineering and Methodology*, 2014. (2012 Impact Factor 1.55)
4. **Zachary P. Fry**, David Shepherd, Emily Hill, Lori Pollock, K. Vijay-Shanker. "Analyzing Source Code: Looking for Useful Verb-Direct Object Pairs in All the Right Places." *IET Software Special Issue on Natural Language in Software Development*, 2008. (2016 Impact Factor 0.595)
5. Sreedevi Sampath, Sara Sprenkle, Emily Gibson, Lori Pollock, Amie Souter Greenwald. "Applying Concept Analysis to User-session-based Testing of Web Applications." *IEEE Transactions on Software Engineering*, Oct 2007. (2012 Impact Factor 2.59)

REFEREED CONFERENCE & WORKSHOP PUBLICATIONS * *students in bold*

7. **Wyatt Olney**, Emily Hill, **Chris Thurber**, **Bezalem Lemma**. "Part of Speech Tagging Java Method Names." *IEEE International Conference on Software Maintenance and Evolution, Early Research Achievements (ERA) Track*, 2016. 34% acceptance.
8. **Benwen Zhang**, Emily Hill, James Clause. "Towards Automatically Generating Descriptive Names for Unit Tests" *Proceedings of the 31st IEEE International Conference on Automated Software Engineering (ASE'16)*, 2016. 19% acceptance.
6. Philip Johnson, Dan Port, Emily Hill. "An Athletic Approach to Software Engineering Education." *Proceedings of the 29th IEEE Conference on Software Engineering Education and Training*, 2016. 57% acceptance.
7. **Benwen Zhang**, Emily Hill, James Clause. "Automatically Generating Test Templates from the Test Names." *Proceedings of the 30th IEEE International Conference on Automated Software Engineering (ASE'15)*, 2015. 24% acceptance.
8. Emily Hill, David Shepherd, Lori Pollock. "Exploring the Use of Concern Element Role Information in Feature Location Evaluation." *IEEE International Conference on Program Comprehension (ICPC)*, 2015. 32% acceptance.
9. Jerry Alan Fails, Katherine Herbert-Berger, Emily Hill, **Andrew DeStefano**, **Brandon Hesse**, **Paul Cushman**, **Travis Gant**, **Syed Shah**, **Aliet Abreu-Cruz**, **Nikita Panchariya**, and **Varsha Nimbagal**. "Geotagger: A Collaborative Environmental Inquiry Platform." *International Conference on Collaboration Technologies and Systems (CTS)*, 2015. 30% acceptance.
10. Katherine G. Herbert, Jerry Alan Fails, Emily Hill, **Andrew J. De Stefano**, **Varsha Nimbagal**, **Nikita S. Panchariya**, **Revathi Ragupathy** and **Serkan Yavuz**. "Current Developments in Big Data and Sustainability Sciences in Citizen Science." *IEEE Big Data Service*, 2015.
11. Katherine G. Herbert, Emily Hill, Jerry Alan Fails, **Joseph O. Ajala**, **Richard T. Boniface**, and **Paul W. Cushman**. "Scientific Data Infrastructure for Sustainability Science Mobile Applications." *IEEE Big Data*, 2014.
12. Emily Hill, **Manuel Roldan-Vega**, Jerry Alan Fails, and **Greg Mallet**. "NL-based Query Refinement and Contextualized Code Search Results: A User Study." *IEEE 2014 Software Evolution Week: Joint Meeting of the European Conference on Software Maintenance and Reengineering and the Working Conference on Reverse Engineering (CSMR-WCRE)*, 2014. 31% acceptance rate.
13. Emily Hill, Bunyamin Sisman, Avinash Kak. "On the Use of Positional Proximity in IR-based Feature Location." *IEEE 2014 Software Evolution Week: Joint Meeting of the European Conference on Software Maintenance and Reengineering and the Working Conference on Reverse Engineering (CSMR-WCRE), Early Research Achievements (ERA) Track*, 2014. 33% acceptance rate.
14. Jerry Alan Fails, **Christopher Loeschorn**, Katherine Herbert, Emily Hill, **Spencer Kordecki**, **David Dymko**, **Andrew DeStefano**, and **Zill Christian**. "GeoTagger: A Collaborative and Participatory Environmental Inquiry System." *ACM Computer Supported Cooperative Work and Social Computing*, 2014. 27% acceptance rate.

15. Emily Hill, David Shepherd, Lori Pollock and Vijay Shanker. "Differentiating Roles of Program Elements in Action-Oriented Concerns." *Proceedings of the 29th IEEE International Conference on Software Maintenance, Early Research Achievements (ERA) Track*, 2013. 43% acceptance rate.
16. Emily Hill, Alberto Bacchelli, Dave Binkley, Bogdan Dit, Dawn Lawrie and Rocco Oliveto. "Which Feature Location Technique is Better?" *Proceedings of the 29th IEEE International Conference on Software Maintenance, Early Research Achievements (ERA) Track*, 2013. 43% acceptance rate.
17. **Manuel Roldan-Vega**, **Greg Mallet**, Emily Hill and Jerry Fails. "CONQUER: A Tool for NL-based Query Refinement and Contextualizing Source Code Search Results." *Proceedings of the 29th IEEE International Conference on Software Maintenance, Tool Demo Track*, 2013. 55% acceptance rate.
18. Dave Binkley, Dawn Lawrie, Emily Hill, Janet Burge, Ian Harris, Regina Hebig, Oliver Keszöcze, Karl Reed and John Slankas. "Task Driven Software Summarization." *Proceedings of the 29th IEEE International Conference on Software Maintenance, Early Research Achievements (ERA) Track*, 2013. 43% acceptance rate.
19. **Marvin Lapeine**, Katherine G. Herbert, Emily Hill, Nina M. Goodey. "Mobile interaction and query optimization in a protein-ligand data analysis system." *Proceedings of the ACM SIGMOD International Conference on Management of Data (student poster)*, 2013.
20. David Binkley, Dawn Lawrie, Lori L. Pollock, Emily Hill, K. Vijay-Shanker. "A dataset for evaluating identifier splitters." *Proceedings of the 10th Working Conference on Mining Software Repositories, Data Track*, 2013. 56% acceptance rate.
21. Emily Hill, Shivani Rao, Avinash Kak. "On the Use of Stemming for Concern Location and Bug Localization in Java." *Proceedings of the 12th IEEE International Working Conference on Source Code Analysis and Manipulation*, 2012. 40% acceptance rate.
22. Emily Hill, Lori Pollock, and K. Vijay-Shanker. "Improving Source Code Search with Natural Language Phrasal Representations of Method Signatures." *Proceedings of the 26th IEEE International Conference on Automated Software Engineering (ASE'11)*, Nov 2011. 37% acceptance rate.
23. **Andrew Wiese**, **Valerie Ho**, Emily Hill. "A Comparison of Stemmers on Source Code Identifiers for Software Search." *Proceedings of the 2011 IEEE International Conference on Software Maintenance (ICSM'11), Early Research Achievements (ERA) Track*, Sep 2011. 38% acceptance rate.
24. Emily Hill, Lori Pollock, and K. Vijay-Shanker. "Investigating How to Effectively Combine Static Concern Location Techniques." *Proceedings of the 3rd ICSE Workshop on Search-driven Development: Users, Infrastructure, Tools and Evaluation (SUITE'11)*, May 2011.
25. Giriprasad Sridhara, Emily Hill, Divya Muppaneni, Lori Pollock, K. Vijay-Shanker. "Towards Automatically Generating Summary Comments for Java Methods." *International Conference on Automated Software Engineering (ASE)*, Sep 2010. **Distinguished Paper Award**, 18% acceptance rate.
26. Emily Hill, Lori Pollock, and K. Vijay-Shanker. "Automatically Capturing Source Code Context of NL-Queries for Software Maintenance and Reuse." *International Conference on Software Engineering (ICSE)*, May 2009. 12% acceptance.
27. **Eric Enslin**, Emily Hill, Lori Pollock, K. Vijay-Shanker. "Mining Source Code to Automatically Split Identifiers for Software Analysis." *6th Working Conference on Mining Software Repositories (MSR)*, May 2009. 29% acceptance rate.
28. Giriprasad Sridhara, Emily Hill, Lori Pollock, and K Vijay-Shanker. "Identifying Word Relations in Software: A Comparative Study of Semantic Similarity Tools." *16th IEEE International Conference on Program Comprehension (ICPC)*, Jun 2008. 35% acceptance rate.
29. Emily Hill, **Zachary P. Fry**, **Haley Boyd**, Giriprasad Sridhara, **Yana Novikova**, Lori Pollock, K. Vijay-Shanker. "AMAP: Automatically Mining Abbreviation Expansions in Programs to Enhance Software Maintenance Tools." *5th Working Conference on Mining Software Repositories (MSR)*, May 2008. **Best Paper Award**, 40% acceptance rate.

30. Emily Hill. "Developing Natural Language-based Program Analyses & Tools to Expedite Software Maintenance." Doctoral Symposium at the *International Conference on Software Engineering*, May 2008. 25% acceptance rate.
31. Emily Hill, Lori Pollock, K. Vijay-Shanker. "Exploring the Neighborhood with Dora to Expedite Software Maintenance." *International Conference on Automated Software Engineering (ASE)*, Nov 2007. 12% acceptance rate.
32. Sara Sprenkle, Emily Hill, Lori Pollock. "Learning Effective Oracle Comparator Combinations for Web Applications." *First International Workshop on Software Test Evaluation*, Oct 2007.
33. Thomas Fritz, Gail Murphy, Emily Hill. "Does a Programmer's Activity Indicate Knowledge of Code?" *6th Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE)*, Sep 2007. 17% acceptance rate.
34. Lori Pollock, K. Vijay-Shanker, David Shepherd, Emily Hill, Zachary P. Fry, Kishen Maloor. "Introducing Natural Language Program Analysis." *Workshop on Program Analysis for Software Tools & Engineering*, ACM, Jun 2007.
35. David Shepherd, Zachary P. Fry, Emily Hill, Lori Pollock, K. Vijay-Shanker. "Using Natural Language Program Analysis to Locate and Understand Action-Oriented Concerns." *International Conference on Aspect Oriented Software Development*, Mar 2007. 18% acceptance rate. **Most Influential Paper Award.**
36. Sreedevi Sampath, Sara Sprenkle, Emily Gibson, Lori Pollock. "Web Application Testing with Customized Test Requirements—An Experimental Comparison Study." *International Symposium on Software Reliability Engineering*, Nov 2006. 34% acceptance rate.
37. Sara Sprenkle, Emily Gibson, Sreedevi Sampath, Lori Pollock. "A Case Study of Automatically Creating Test Suites from Web Application Field Data." *Workshop on Testing, Analysis and Verification of Web Services and Applications*, ACM, Jul 2006.
38. Sreedevi Sampath, Sara Sprenkle, Emily Gibson, and Lori Pollock. "Integrating Customized Test Requirements with Traditional Requirements in Web Application Testing." *Workshop on Testing, Analysis and Verification of Web Services and Applications*, ACM, Jul 2006.
39. Sara Sprenkle, Emily Gibson, Sreedevi Sampath, Lori Pollock. "Automated Replay and Failure Detection for Web Applications." *International Conference on Automated Software Engineering*, Nov 2005. 9% acceptance rate.
40. Sara Sprenkle, Sreedevi Sampath, Emily Gibson, Lori Pollock, Amie Souter. "An Empirical Comparison of Test Suite Reduction Techniques for User-session-based Testing of Web Applications." *International Conference on Software Maintenance*, Sep 2005. 31% acceptance rate.
41. Sreedevi Sampath, Sara Sprenkle, Emily Gibson, Lori Pollock, and Amie Souter. "Analyzing Clusters of Web Application User Sessions." *Workshop on Dynamic Analysis*, May 2005.
42. David Shepherd, Emily Gibson, Lori Pollock. "Design and Evaluation of an Automated Aspect Mining Tool." *2004 International Conference on Software Engineering Research and Practice*, Jun 2004. 31% acceptance rate.

OTHER PUBLICATIONS

43. Lori L. Pollock, David Binkley, Dawn Lawrie, Emily Hill, Rocco Oliveto, Gabriele Bavota, Alberto Bacchelli. "1st international workshop on natural language analysis in software engineering (NaturaLiSE 2013)". *Proceedings of the 35th International Conference on Software Engineering*, May 2013.

INVITED PRESENTATIONS

1. "Using Natural Language Program Analysis to Locate and Understand Action-Oriented Concerns", AOSD 2007 MIP talk given at Programming 2017, Spring 2017.
2. "Searching for Software Evolution." Seton Hall, Spring 2016.

3. "What's Wrong with Feature Location Research? (we're using the wrong gold sets)." U Montreal, Fall 2015.
4. "Which LMS is Best for Me? Reports from Faculty." NJ Edge, Fall 2015.
5. "Engineering Iron Man's JARVIS." Third International Workshop on Open and Original Problems in Software Language Engineering (OOPSLE), Spring 2015.
6. "Searching for Software Evolution." RISE Seminar, Spring 2015.
7. "Evaluating Feature Location Techniques for Software Maintenance." Montclair State University Language & Information Brown Bag, Fall 2013.
8. "Developing Natural Language-based Software Analyses & Tools to Expedite Software Maintenance." Microsoft Research, Fall 2011.
9. "Developing Natural Language-based Software Analyses & Tools for Software Maintenance." The College of New Jersey, Fall 2009.
10. "Developing Natural Language-based Software Analyses & Tools for Software Maintenance." Washington & Lee University, Fall 2009.
11. "Exploring the Neighborhood with Dora to Expedite Software Maintenance." Empirical and Applied Software Engineering Lab at the University of Maryland, Baltimore County, Spring 2008.

INSTITUTIONAL SERVICE ACTIVITIES

DREW UNIVERSITY

Standing

- Program Director of Computer Science, 2015 - present.
- Civic Engagement Faculty Advisory Committee (CEFAC), 2016 – 2017.
- Choral Leadership Board, 2015-2017.
- Honors Committee, 2015-2016.

Ad-hoc

- Digital Humanities Steering Group, Spring 2017.
- Summer College CS instructor, 2015-2017.
- Developed script for the CAE to identify optimal tutoring times, Spring 2017.
- Communications interdisciplinary major committee, 2016-2017.
- Digital Humanities Working Group Participant, Spring 2016.
- Helped create Stevens Software Engineering masters articulation agreement, Spring 2016.
- LMS Selection Committee, 2015-2016.
- Summer Advising, 2015-2016.
- Faculty & Chairs interviewer for the Director of the Math & Science Resource Center finalists, Spring 2015.
- Google Classroom Demo, Faculty Technology Showcase, April 2015.
- Faculty interviewer for the Director of Institutional Research finalists, Fall 2014.
- STEM Presidential Scholars Working Group, Fall 2014.

Student service projects

Munsell app, an android app to detect Munsell chip colors in the field under the advisement of Dr. Muccigrosso, Fall 2016.

LeafletJS Markers, a web app to display map markers that rotate based on temple orientation under the advisement of Dr. Muccigrosso, Fall 2016.

LeafletJS Shrines, a web app to display interactive historical maps under the advisement of Dr. Hamilton, Fall 2016.

AssetMapper, a software engineering project outlining technical needs for Orange community resources under the advisement of Drs. Moore and Rosenblum, Fall 2016.

SubjectsPlus upgrade, a capstone student development project for the Drew library, Spring 2016.

Microfiche PDF finder, a capstone student development project for the Drew library, Spring 2016.

#drewtherighthing, advised and supported student in creating & deploying web site for Audra Tonero, Summer 2015.

Acorn App, coordinated student development & deployment of a web site for Acorn Academy, Spring 2015.

Student groups

Judge, Engineering Club Hackathon, Spring 2017.

MONTCLAIR STATE UNIVERSITY

Deputy Chair, Academic Technology Committee. Spring 2013 - Spring 2014.

Organizer, Moderator, & Panelist for Real Women in Science Conference, panel on STEM Careers for Women: Challenges, Mentorship, & Balance, Fall 2011 - Spring 2012.

Participant in Research Academy for University Learning discussion group on *Integration of Abilities: Exercises for Creative Growth*, Fall 2010.

College of Science and Mathematics

CSAM Web Manager Search Committee, Summer 2013.

Department liaison for the CSAM Student Research Symposium, Spring 2011.

Computer Science Department

ABET Course coordinator for CMPT 183: Foundations of Computer Science I, Fall 2013 - Spring 2014.

Louis Stokes Alliance for Minority Participation (LSAMP) coordinator, Fall 2012 - Spring 2014.

CS Faculty Search Committee, 2012-2013.

Lab Hardware Selection Committee, 2013.

Graduate Committee, Summer 2012.

Curriculum development subcommittees, Spring 2012:

Leader, undergraduate research curriculum development committee

Member, CMPT 230 Computer Systems course development committee

Professional Science Masters (PSM) Committee, Fall 2011.

Information Technology (IT) Curriculum and Accreditation Committee, Fall 2011.

Advisor for Computer Science and Information Technology Majors, 2011-2012.

Assessment Committee for CMPT 183: Foundations of Computer Science I, Spring 2011-2012.

Lead department effort to select new introductory textbook for CMPT 183-184 to better meet student needs and address programming inadequacies observed by faculty in upper level classes, 2011.

Grader for Software Engineering section of comprehensive exam for masters students, Fall 2010.

LOCAL & REGIONAL

“Game Design 4 Everyone”, invited local HS students to campus to work with Drew students in an afternoon of game design, Spring 2015.

Introducing Madison High School Students to web development, Spring 2015.

Strategic Action Planning Committee on Curriculum & Instruction, Madison Public Schools, 2015.

North Jersey Regional Science Fair Judge, Spring 2012.

DISCIPLINE SERVICE ACTIVITIES

Program Evaluator

St. Peters, May 3-4 2017.

Farmingdale College, April 27, 2017.

Steering Committee

International Conference on Mining Software Repositories (IEEE/ACM), 2016—2021.

International Conference on Program Comprehension (IEEE/ACM), 2016—2021.

Chair

Program Co-Chair, IEEE International Working Conference on Source Code Analysis and Manipulation, 2018.

Program Co-Chair, International Conference on Mining Software Repositories (IEEE/ACM), 2018.

Data Showcase Chair, International Conference on Mining Software Repositories (IEEE/ACM), 2016.

Short Paper Co-Chair, International Conference on Program Comprehension (ICPC), 2016.

Tool Demo Track Program Co-Chair, IEEE International Conference on Software Maintenance and Evolution (ICSME), 2016.

Tool Demo Track Program Chair, 22nd International Conference on Software Analysis, Evolution and Reengineering (SANER), 2015.

Publication Chair, IEEE International Conference on Software Testing, Verification, and Validation, 2014.

Workshops Co-Chair, IEEE Software Evolution Week: Joint Meeting of the European Conference on Software Maintenance and Reengineering and the Working Conference on Reverse Engineering (CSMR-WCRE), 2014.

Tool Demo Track Program Co-Chair, IEEE International Conference on Program Comprehension, 2013.

Organizer

1st International Workshop on Natural Language Analysis in Software Engineering, 2013.

1st International Workshop on The Next Five Years of Text Analysis in Software Maintenance, 2012.

Workshop on Textual Analysis in Software Engineering, June 2012, September 2012, May 2013.

Program Committee Member

IEEE International Conference on Software Maintenance and Evolution, NIER Track, 2017.

IEEE Working Conference on Software Visualization (VISSOFT), 2017.

Foundations of Software Engineering, Artifact Track, 2017.

IEEE International Conference on Software Maintenance and Evolution, 2014-2016.

IEEE International Conference on Program Comprehension, 2012-2016.
IEEE International Working Conference on Source Code Analysis and Manipulation, 2013-2016.
IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER, CSMR, WCRE) 2013-2015.
IEEE International Conference on Software Maintenance and Evolution, Artifact Track, 2016.
IEEE International Conference on Software Maintenance and Evolution, ERA Track, 2013 & 2015.
IEEE International Conference on Software Engineering, Poster Track, 2014.
IEEE International Conference on Software Maintenance, Tool Demo Track, 2014.
Workshop on Mining Unstructured Data, 2013 & 2015.
Working Conference on Mining Software Repositories (IEEE/ACM), 2011-2014, 2017.
International Conference on Evaluation of Novel Approaches to Software Engineering, 2012.
Workshop on Search-driven Development: Users, Infrastructure, Tools & Evaluation, 2011-2012.
Working Conference on Mining Software Repositories, Mining Challenge, 2009-2011.

Reviewer

Programming, 2017.
IEEE Transactions on Software Engineering, 2009-2017.
Wiley Journal of Software: Evolution and Process, 2016.
Empirical Software Engineering; An International Journal, 2011-2016.
Science of Computer Programming, 2011-2014.
ACM Transactions on Software Engineering and Methodology, 2010-2015.
Journal of Systems and Software, 2013.

Panelist

“Where does computer science fit into STEM teacher education?”, American Association for the Advancement of Science Regional Conference on Stimulating Research and Innovation for Preservice Education of STEM Teachers in High-Need Schools, 2017.
SANER PhD Symposium, 2015.

External Reviewer

ESEC/FSE Doctoral Symposium, 2017.
Programming, 2017.
Workshop on Experiences and Empirical Studies in Software Modeling, 2011.

Webmaster International Symposium on Software Testing and Analysis, 2006.

ACADEMIC MEMBERSHIPS

ACM, IEEE.