

Paige Rodeghero

CONTACT INFORMATION

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Computer Science and Engineering
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RESEARCH INTERESTS

Software Engineering: Source code comprehension, Automatic source code documentation, Gamification of software engineering, Increasing developer productivity

EDUCATION

University of Notre Dame, Notre Dame, IN

Ph.D., Computer Science and Engineering, Expected May 2018

- Thesis Topic: *Understanding Programmer Behavior to Improve Automatic Documentation Generation Algorithms*
- Adviser: Professor Collin McMillan
- Area of Study: Software Engineering

M.S., Computer Science and Engineering, August 2017

- Adviser: Professor Collin McMillan

Ball State University, Muncie, IN

B.S., Computer Science, May 2013

- Minor: Dance Performance

PUBLICATIONS

- [1] **Rodeghero, P.**, Jiang, S., Armaly, A., McMillan, C., “Detecting User Story Information in Developer-Client Conversations to Generate Extractive Summaries”, in Proc. of the 39th ACM/IEEE International Conference on Software Engineering (ICSE’17), Buenos Aires, Argentina, May 20-28, 2017 (17% acceptance rate).
- [2] Armaly, A., **Rodeghero, P.**, McMillan, C., “A Comparison of Program Comprehension Strategies by Blind and Sighted Programmers”, in Transactions on Software Engineering (TSE), accepted July 5, 2017. Journal First.
- [3] **Rodeghero, P.**, “Behavior-Informed Algorithms for Automatic Documentation Generation”, in the Proc. of the 33rd IEEE International Conference on Software Maintenance and Evolution (ICSME).
- [4] **Rodeghero, P.**, McMillan, C., Shirley, A. “API Usage in Descriptions of Source Code Functionality”, The International Workshop on API Usage and Evolution. Co-located with ICSE’17.
- [5] **Rodeghero, P.**, Huo, D., Ding, T., McMillan, C., Gethers, M., “An Empirical Study on How Expert Knowledge Affects Bug Reports”, Journal of Software: Evolution and Process. **Special issue containing the best papers** from the 30th International Conference on Software Maintenance and Evolution. Extensive revision and expansion of the conference paper.
- [6] **Rodeghero, P.**, “Discovering Important Source Code Terms.” The Proceedings 38th IEEE/ACM International Conference on Software Engineering (ICSE’16). ACM Student Research Competition, Austin, Texas, USA.

- [7] **Rodeghero, P.**, McMillan, C., “An Empirical Study on the Patterns of Eye Movement during Summarization Tasks”, in Proc. of the 9th International Symposium on Empirical Software Engineering and Measurement (ESEM’15), Beijing, China, Oct. 22-23, 2015, 10 pages.
- [8] **Rodeghero, P.**, Liu, C., McBurney, P. W., McMillan, C., “An Eye-Tracking Study of Java Programmers and Application to Source Code Summarization”, in IEEE Transactions on Software Engineering (TSE).
- [9] **Rodeghero, P.**, McMillan, C., McBurney, P. W., Bosch, N., D’Mello, S., “Improving Automated Source Code Summarization via an Eye-Tracking Study of Programmers”, in Proc. of 36th IEEE/ACM International Conference on Software Engineering (ICSE’14), Hyderabad, India, May 31-June 7 2014, 12 pages. (20% acceptance rate)
ACM Distinguished Paper Award
- PUBLICATIONS UNDER REVIEW
- [10] **Rodeghero, P.**, Wood, A., Armaly, A., McMillan, C., and Krasniqi, R. [The name of the paper has been redacted to comply with the double-blind review process], in review for the 40th International Conference on Software Engineering (ICSE’18).
- [11] Armaly, A., **Rodeghero, P.**, and McMillan, C., [The name of the paper has been redacted to comply with the double-blind review process], in review for the 40th International Conference on Software Engineering (ICSE’18).
- [12] **Rodeghero, P.**, McMillan, C., “Detecting Important Terms in Source Code”, in review at the IEEE Transactions on Software Engineering
- CONFERENCE TALKS
- [1] “Detecting User Story Information in Developer-Client Conversations to Generate Extractive Summaries”, The 39th ACM/IEEE International Conference on Software Engineering (ICSE’17), Buenos Aires, Argentina, May 20-28, 2017 (17% acceptance rate).
- [2] “Behavior-Informed Algorithms for Automatic Documentation Generation”, The 33rd IEEE International Conference on Software Maintenance and Evolution (ICSME).
- [3] “API Usage in Descriptions of Source Code Functionality”, The International Workshop on API Usage and Evolution.
- [4] “An Empirical Study on the Patterns of Eye Movement during Summarization Tasks”, The 9th International Symposium on Empirical Software Engineering and Measurement (ESEM’15), Beijing, China, Oct. 22-23, 2015.
- [5] “Improving Automated Source Code Summarization via an Eye-Tracking Study of Programmers”, The 36th IEEE/ACM International Conference on Software Engineering (ICSE’14), Hyderabad, India, May 31-June 7 2014. (20% acceptance rate)
ACM Distinguished Paper Award
- CONFERENCE POSTERS
- [1] **Rodeghero, P.**, “Discovering Important Source Code Terms.” The Proceedings 38th IEEE/ACM International Conference on Software Engineering (ICSE’16). ACM Student Research Competition, Austin, Texas, USA.
- [2] **Rodeghero, P.**, “Behavior-Informed Algorithms for Automatic Documentation Generation”, in the Proc. of the 33rd IEEE International Conference on Software Maintenance and Evolution (ICSME).
- INVITED TALKS
- [1] “Behavior-Informed Algorithms for Automatic Documentation Generation”. In: *Hope College Seminar*, October 19, 2017

AWARDS AND HONORS

- [1] National Science Foundation Travel Award to attend ICSE 2016 \$652
- [2] SIGSOFT CAPS Travel Award to ICSE 2015 \$1200
- [3] National Science Foundation Travel Award to attend NasBase 2015 \$660
- [4] ACM Distinguished Paper Award ICSE 2016
- [5] CSE GAANN Teaching Fellow \$30,000 per year for 4 years
- [6] Department of Computer Science and Engineering Kaneb Outstanding Graduate Student Teacher Award 2013 \$100
- [7] Notre Dame Outstanding Graduate Student Teaching Award 2013 \$100
- [8] Funding provided by CRA to attend CRA Grad Cohort 2014 \$756.12

ADVISING AND MENTORING

Undergraduate Students

- **Abigail Shirey**, Computer Science Engineering, January 2017-Present
Work resulted in the paper: “API Usage in Descriptions of Source Code Functionality” at The International Workshop on API Usage and Evolution. Co-located with ICSE’17

TEACHING EXPERIENCE

University of Notre Dame, Notre Dame, Indiana

CS 40877 Educational Game Design 2017

- **Instructor of Record**
- New course - designed curriculum
- 12 senior level computer science/engineering students
- Collaborated with a local school to build educational games for classroom use.

CS 40773 Software Projects With Drones 2016

- Guest lecturer for two classes on software engineering topics

CS 40497 Information Web Sciences 2014

- Teaching Assistant
- Provided daily support in the classroom. Held office hours.
- Graded student work.

CS 40424 Human Computer Interaction 2013

- Teaching Assistant (*Received two awards*: The Department of Computer Science and Engineering Kaneb Outstanding Graduate Student Teacher Award & The Notre Dame Outstanding Graduate Student Teaching Award 2013)
- Guest lectured on building software prototypes and wireframes.
- Provided daily support in the classroom. Held office hours.
- Graded student work.

Ball State University, Muncie, Indiana

Introduction to Computer Science 2013

- Lab Instructor
- Conducted regularly lab meetings and instructed students on assigned tasks.

PROFESSIONAL
SERVICE

Committee Service

- Program Committee *IEEE/ACM International Conference on Program Comprehension* (2018)
- Program Committee *Mining Software Repositories Program Competition Track* (2018)
- Organizing Committee, Publicity Chair and Social Media Chair for *IEEE Source Code Analysis and Metrics* (2018)
- Program Committee *IEEE International Conference on Software Maintenance and Evolution New Ideas and Emerging Results Track* (2017)
- Organizing Committee, Web Chair for *IEEE Source Code Analysis and Metrics* (2017)

Referee Service

- Journal Reviewer for *Journal of Systems and Software* (2017)
- Organizing Committee, Student Volunteer for *IEEE International Conference on Software Maintenance and Evolution* (2016)
- Subreviewer for *IEEE International Conference on Software Analysis, Evolution, and Reengineering Early Research Achievements Track* (2016)
- Reviewer for *IEEE Transactions on Education* (2015)
- Subreviewer for *IEEE International Conference on Program Comprehension* (2015)

RESEARCH AND
PROFESSIONAL
EXPERIENCE

University of Notre Dame, Notre Dame, Indiana

Research Assistant

June 2013 - Present

- Adviser: Collin McMillan
- Worked with a team of researchers on 15 separate projects
- Lead 12 separate projects within the research team

ABB Corporate Research Center, Raleigh, North Carolina

Research Internship

April 2016 - July 2016

- Adviser: David Shepherd
- Collaborated with a team of researchers from ABB Corporate Research and from the University of Zurich to design and develop a communication retrospection dashboard for the FlowLight.
- Ran pilot studies with ABB employees.
- Installed FlowLights and software in the Buenos Aires, Argentina ABB location.

Alden Systems, Inc., Birmingham, Alabama

Software Engineering Internship

February 2016 - March 2016

- Designed and implemented a reporting system on current project progress. The system reported on open user stories, open tasks, and open bug reports.

University of Alabama, Tuscaloosa, Alabama

Research Experiences for Undergraduates (REU)

June 2012 - July 2012

- Adviser: Nicholas Kraft
- Pair programmed, designed and partially implemented a tool for detecting code clones within large software projects.

IDEE/Vizi Courseware, LLC, Muncie, Indiana

Software Developer

May 2010 - May 2013

- Designed and developed educational games for collegiate level courses to replace traditional textbooks.

Ball State University, Muncie, Indiana

Software Developer

August 2012 - May 2013

- Designed and developed two educational computer games for the Indiana State Museum with 11 team members.

PROFESSIONAL
MEMBERSHIPS

- Society of Women Engineers (2013 - Present)
- IEEE (2014 - Present)
- ACM (2013 - Present)
- SigSoft (2014 - Present)

REFERENCES
AVAILABLE TO
CONTACT

On Request

OTHER

U.S. Citizen, SWE-ND (Committee Member 2014-2015), Algebra II Tutor, Geometry Tutor, Research Tutor, ACM Student Member, SIGSOFT Member, ND Dance Company Member

MORE
INFORMATION

More information and auxiliary documents can be found at
<http://paigerodeghero.com/>