

# Christopher S. Corley

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## Research Interests

Software maintenance and evolution, machine learning in software engineering, mining software repositories, program comprehension, automating software engineering

## Education

University of Alabama, Tuscaloosa, Alabama, USA

- PhD Computer Science, May 2018
- Dissertation: *Online Topic Modeling for Software Maintenance Using A Changeset-based Approach*
- Chair: Jeffrey C. Carver
- Advisor: Nicholas A. Kraft

University of Alabama, Tuscaloosa, Alabama, USA

- MS Computer Science, August 2014
- Advisor: Nicholas A. Kraft

University of North Alabama, Florence, Alabama, USA

- BS Computer Science, May 2011

## Professional Experience

Fathom Video, Remote, 2021 – current

- Senior Software Engineer

Coyote Logistics, Chattanooga, TN, 2016 – 2021

- Software Engineer
- Promoted to Senior Software Engineer in Spring 2019
- Promoted to Lead Software Engineer in Fall 2019

ABB U.S. Corporate Research Center, Raleigh, NC, 2015

- Visiting Researcher

University of North Alabama, Mathematics & Computer Science, 2010 – 2011

- Undergraduate Lab Assistant

University of North Alabama, Academic Resource Center, 2008 – 2011

- Undergraduate Computer Science Tutor

## Fellowships and Awards

Graduate Assistance in Areas of National Need (GAANN) Doctoral Fellowship, 2011 – 2016

Research Assistantship – Improved Code Clone Categorization (NSF 0915559 & 0915403), 2011

Research Experience for Undergraduates, 2009 & 2010

## Publications

### Refereed Journal Articles

- C.S. Corley**, K. Damevski, and N.A. Kraft, “Changeset-Based Topic Modeling of Software Repositories”, *IEEE Transactions on Software Engineering* vol. 46, no. 10, pp. 1068-1080, 1 Oct. 2020, doi: 10.1109/TSE.2018.2874960.

### Refereed Conference and Workshop Proceedings

- M. Züger, **C.S. Corley**, A. Meyer, B. Li, T. Fritz, D. Shepherd, V. Augustine, P. Francis, N.A. Kraft, and W. Snipes, “Reducing Interruptions at Work: A Large-Scale Field Study of FocusLight” *2017 CHI Conference on Human Factors in Computing Systems (CHI’17)*, Denver, Colorado, USA, 12 pages, May 2017 (acceptance rate: 25%). Honorable Mention Award.
- C.S. Corley**, K.L. Kashuda, and N.A. Kraft, “Modeling Changeset Topics for Feature Location”, *31st International Conference on Software Maintenance and Evolution (ICSME’15)*, Bremen, Germany, 10 pages, September 2015 (acceptance rate: 22%).
- C.S. Corley**, K. Damevski, and N.A. Kraft, “Exploring the Use of Deep Learning for Feature Location”, *31st International Conference on Software Maintenance and Evolution (ICSME’15)* Early Research Achievements track, Bremen, Germany, 5 pages, September 2015 (acceptance rate: 35%).
- C.S. Corley**, F. Lois, and S.F. Quezada, “Web Usage Patterns of Developers”, *31st International Conference on Software Maintenance and Evolution (ICSME’15)* Industry track, Bremen, Germany, 10 pages, September 2015 (acceptance rate: 36%).
- C.S. Corley**, K.L. Kashuda, D.S. May, and N.A. Kraft, “Modeling Changeset Topics”, *4<sup>th</sup> Workshop on Mining Unstructured Data (MUD’14)*, Victoria, British Columbia, Canada, 5 pages, September 2014.
- N. Klein, **C.S. Corley**, and N.A. Kraft, “New Features for Duplicate Bug Detection”, *11<sup>th</sup> Working Conference on Mining Software Repositories (MSR’14)*, Hyderabad, India, 4 pages, May 2014 (acceptance rate: 37% for short papers).
- A. Bosu, **C.S. Corley**, D. Heaton, D. Chatterji, J.C. Carver, and N.A. Kraft, “Building Reputation in StackOverflow: An Empirical Investigation,” *10<sup>th</sup> Working Conference on Mining Software Repositories (MSR’13)* Mining Challenge, San Francisco, California, USA, 4 pages, May 2013 (acceptance rate: 41%).
- C.S. Corley**, E.A. Kammer, and N.A. Kraft, “Modeling the Ownership of Source Code Topics,” *Proceedings of the 20<sup>th</sup> IEEE International Conference on Program Comprehension (ICPC’12)*, Passau, Bavaria, Germany, 10 pages, June 2012 (acceptance rate 41%).
- C.S. Corley**, N.A. Kraft, L.H. Etzkorn, and S.K. Lukins, “Recovering Traceability Links between Source Code and Fixed Bugs via Patch Analysis,” *Proceedings of the 6<sup>th</sup> International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE’11)*, Honolulu, Hawaii, USA, 7 pages, May 2011 (acceptance rate 44%).

## Professional Activities

### Program Committee Member

- 17<sup>th</sup> International Conference on Mining Software Repositories – Mining Challenge (MSR'20)
- 26<sup>th</sup> International Conference on Program Comprehension – Technical Research Track (ICPC'18)
- 15<sup>th</sup> International Conference on Mining Software Repositories – Mining Challenge (MSR'18)
- 33<sup>rd</sup> International Conference on Software Maintenance and Evolution – New Ideas and Emerging Results Track (ICSME'17, previously ERA track)
- 32<sup>nd</sup> International Conference on Software Maintenance and Evolution – Early Research Achievements Track (ICSME'16)
- 31<sup>st</sup> International Conference on Software Maintenance and Evolution – Tool Demo Track (ICSME'15)
- 30<sup>th</sup> International Conference on Software Maintenance and Evolution – Tool Demo Track (ICSME'14)
- 50<sup>th</sup> ACM Southeast Conference (ACMSE'12)

### External Reviewer

- 31<sup>st</sup> International Conference on Software Maintenance and Evolution – Early Research Achievements Track (ICSME'15)
- 8<sup>th</sup> IEEE International Conference on Software Testing, Verification, and Validation (ICST'15)
- 4<sup>th</sup> International Workshop on Combinatorial Testing (IWCT'15)
- 30<sup>th</sup> International Conference on Software Maintenance and Evolution – Early Research Achievements Track (ICSME'14)
- 7<sup>th</sup> International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'13)

### Conference and Workshop Attendance

- 31<sup>st</sup> IEEE International Conference on Software Maintenance and Evolution (ICSME'15)
- 30<sup>th</sup> IEEE International Conference on Software Maintenance and Evolution (ICSME'14)
- 4<sup>th</sup> Workshop on Mining Unstructured Data (MUD'14)
- 11<sup>th</sup> Working Conference on Mining Software Repositories (MSR'14)
- 22<sup>nd</sup> IEEE International Conference on Program Comprehension (ICPC'14)
- 20<sup>th</sup> IEEE International Conference on Program Comprehension (ICPC'12)
- 50<sup>th</sup> ACM Southeast Conference (ACMSE'12)
- 27<sup>th</sup> IEEE International Conference on Software Maintenance (ICSM'11)
- 8<sup>th</sup> Working Conference on Mining Software Repositories (MSR'11)
- 6<sup>th</sup> International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'11)
- 48<sup>th</sup> ACM Southeast Conference (ACMSE'10)

### Professional Memberships

IEEE, 2011 – 2015

IEEE Computer Society, 2011 – 2015

Association for Computing Machinery, 2008 – 2015

– Local chapter (University of North Alabama) Student President, 2009 – 2011

ACM Special Interest Group on Software Engineering (SIGSOFT), 2012 – 2015

## Teaching

*Assistant*, CS 250 - Programming II (Fall 2013, Spring 2014)

– Primary Instructor: Nicholas A. Kraft

*Assistant*, CS 315 - Software Engineering (Spring 2013)

– Primary Instructor: Nicholas A. Kraft

– 100P course

## Academic Service

Graduate Student Association Department Representative, 2014

## Mentoring

Research Experience for Undergraduates Mentor, 2011 – 2014

– 2014: Daniel S. May (BS student, Computer Science, Swarthmore College), Kelly L. Kashuda (BS student, Computer Science, University of Alabama)

– 2013: Nathan Klein (BS student, Computer Science, Oberlin College)

Tide Together Peer Mentor, 2012 – 2014

– 2014: Reginald L. Tucker (PhD student, Management, University of Alabama)

– 2013: Erik R. Kline (PhD student, English, University of Alabama)

– 2012: Matthew Jones (MFA student, Creative Writing, University of Alabama)

Tide Together Peer Mentor Student Leader, 2014 – 2015

– 2014: Natasha Aduloju-Ajijola, Ana Rondon, Gabby Smith, Jean Swindle, Pandora White

## Volunteering

Roberts Park Community Center, Raleigh, NC Co-instructor, Introduction to Programming, Summer 2015

30<sup>th</sup> IEEE International Conference on Software Maintenance and Evolution (ICSME'14) Student Volunteer, 2014

4<sup>th</sup> Workshop on Mining Unstructured Data (MUD'14) Student Volunteer, 2014

Alabama Robotics Competition Assistant & Judge, 2012 – 2015

Graduate Orientation and Welcome Volunteer, Fall 2014

Tuscaloosa Public Library Teen Zone: GeoTech Lab, Summer 2014

Women in STEM Experience Student Volunteer, Fall 2013

50<sup>th</sup> ACM Southeast Conference (ACMSE'12) Student Volunteer, 2012