

Caius Brindescu

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Profile

I am a Software Engineer at Etleap. My work focuses on backend development, managing infrastructure, customer support and customer onboarding. I got my PhD at Oregon State University in 2020 where I worked on understanding how developers solve problems.

Education

- 2013 - 2020 **PhD in Computer Science at Oregon State University**
Thesis: *“An Investigation of the Effects of Merge Conflicts on Collaborative Software Development.”* I was advised by Dr. Carlos Jensen and Dr. Anita Sarma.
- 2012 - 2013 **PhD in Computer Science at University of Illinois at Urbana-Champaign**
Research Interests: Software evolution and software design. I worked with Dr. Danny Dig.
- 2007 - 2011 **Bachelor of Science in Computer Engineering at “Politehnica” University, Timișoara**
Subjects studied: Software Engineering, Object Oriented Programming, Operating Systems, Databases.

Work Experience

- 06/18 - 09/18 Software Engineer at **Etleap Inc.**
- 09/19 - present **Responsibilities:** Support customers during onboarding and trials, building and maintaining the core product and infrastructure
- 08/12 - 06/19 Graduate Assistant at **Oregon State University**
Responsibilities: Conducting graduate research, teaching assistant for multiple courses, and teaching
- 03/12 - 07/12 Research Engineer at **Politehnica University of Timișoara** and Software Engineer at **Movidius Inc**
Responsibilities: Joint project between the university and Movidius. My task was implementing an Eclipse based IDE to support multi-core debugging of embedded systems.
- Summer 2011 Internship at **University of Illinois at Urbana-Champaign** under the supervision of Danny Dig.
Responsibilities: Extending the existing *ReLooper* tool with a way to solve data-races via privatization. It is built as an Eclipse plugin and uses the WALA framework for static analysis.
- Summer 2009 & Summer 2010 Internship at **Politehnica University of Timișoara** under the supervision of Radu Marinescu
Responsibilities: Researching a method to use automated refactoring to solve bad smells in code. Determining the right refactoring strategy was done using metric-based algorithms. Looked for applications in the Refuse Parent Bequest design flaw. I also implemented a refactoring engine to be used to improve the design of software products.

Summer 2008 Internship at **Incremental SRL**
Responsibilities: Servicing computers

Publications

Journals

- TOSEM '20** **Using relative lines of code to guide automated test generation for Python**
Josie Holmes, Iftekhar Ahmed, Caius Brindescu, Rahul Gopinath, He Zhang, Alex Groce
ACM Transactions on Software Engineering and Methodology, vol. 89, issue 4, pp. 1 – 39
- ESEJ '19** **An empirical investigation into merge conflicts and their effect on software quality**
Caius Brindescu, Iftekhar Ahmed, Carlos Jensen, Anita Sarma
Empirical Software Engineering Journal, vol. 25, pp. 562 – 590
- ESEJ '19** **The Life-Cycle of Merge Conflicts: Processes, Barriers, and Strategies**
Nicholas Nelson, Caius Brindescu, Shane McKee, Anita Sarma, Danny Dig
Empirical Software Engineering Journal, vol. 24, pp. 2863 -- 2906

Conferences

- ICSME '20** **Lifting the Curtain on Merge Conflict Resolution: A Sensemaking Perspective**
Caius Brindescu, Yenifer Ramirez, Anita Sarma, Carlos Jensen
International Conference of Software Maintenance and Evolution, Adelaide, Australia, October 2020
- ICSE '20** **Planning for Untangling: Predicting the Difficulty of Merge Conflicts**
Caius Brindescu, Iftekhar Ahmed, Rafael Leano, Anita Sarma
International Conference on Software Engineering, Seoul, South Korea, November 2020
Acceptance rate: 21% (129/617)
- ESEM '17** **An Empirical Examination of Code Smells and Their Impact on Collaborative Work**
Iftekhar Ahmed, Caius Brindescu, Umme Ayda Mannan, Carlos Jensen, Anita Sarma
International Symposium on Empirical Software Engineering and Measurement, Toronto, Ontario, Canada, November 2017.
Acceptance rate: 26% (74/273)
- FSE '16** **Can Testedness be Effectively Measured?**
Iftekhar Ahmed, Rahul Gopinath, Caius Brindescu, Alex Groce, Carlos Jensen
International Symposium on the Foundations of Software Engineering, Seattle, WA, USA, November 2016.
Acceptance rate: 26% (74/273)

ICSE '14 **How Do Centralized and Distributed Version Control Systems Impact Software Changes?**
Caius Brindescu, Mihai Codoban, Sergii Shmarkatiuk, Danny Dig
International Conference on Software Engineering, Hyderabad, India, May 2014
Acceptance rate: 20% (99/499)

Service

I served as an external reviewer for the following conferences: ECOOP '15, ASE '14, ECOOP '13, ASE '17, ASE '17 Tool Demos, ICSE '19 and FSE '19. I was also a student volunteer for OOPSLA '14, FSE '16 and FSE '18.

I was on Program Committee for the Tool Track at SCAM '15, the Mining Challenge at MSR '17 and the Showpiece track at VL/HCC '17.

Invited talks

10/2014 *How do Centralized and Distributed Version Control Systems Impact Software Changes?*
Talk in CS 561 (Software Engineering) at Oregon State University. Host: Danny Dig

09/2012 *Code Smells*
Lecture in CS 427 (Software Engineering I) at University of Illinois at Urbana-Champaign.
Host: Ralph Johnson