Thomas Zimmermann
Sr. Principal Researcher | ACM Fellow | IEEE Fellow

✉ tzimmer@microsoft.com ⌂ thomas-zimmermann.com

⌖ 1 Microsoft Way, Redmond, WA 98052, United States ☏ (+1) 425 703 8450

Last update: January 1, 2024

Summary

Thomas Zimmermann is a Sr. Principal Researcher at Microsoft, where he works on cutting-edge research and innovation in data science, machine learning, software engineering, and digital games. He has over 15 years of experience in the field, with more than 100 publications that have been cited over 25,000 times. He is an ACM Fellow, an IEEE Fellow, and Co-Editor in Chief of the Empirical Software Engineering journal.

His research mission is to empower software developers and organizations to build better software and services with AI. He is best known for his pioneering work on systematic mining of software repositories and his empirical studies of software development in industry. He has contributed to several Microsoft products and tools, such as Visual Studio, GitHub, and Xbox. He is also the Chair of the ACM Special Interest Group on Software Engineering and a frequent committee member for top software engineering conferences.

Microsoft Research podcast "The productive software engineer with Dr. Tom Zimmermann": https://www.microsoft.com/en-us/research/podcast/the-productive-software-engineer-with-dr-tom-zimmermann/

People of the ACM profile: https://www.acm.org/articles/people-of-acm/2022/thomas-zimmermann

Experience

Sr. Principal Researcher, Microsoft Research, Redmond, WA, USA	12/2019−Present
Principal Researcher	07/2019−11/2019
Senior Researcher	09/2014−07/2019
Researcher	11/2008−08/2014
Affiliate Faculty, University of Washington, Computer Science & Engineering, Seattle, WA, USA	11/2011−12/2020
Adjunct Assistant Professor, University of Calgary, Department of Computer Science, Alberta, Canada	09/2008−06/2020
Assistant Professor, University of Calgary, Department of Computer Science, Alberta, Canada	09/2007−08/2008
Research Fellow, Saarland University, Saarbrücken, Germany	08/2004−08/2007
Research Intern, Microsoft Research, Software Reliability Research, Redmond, WA, USA	06/2006−09/2006
Intern, Siemens AG, Corporate Information and Operations (CIO), Munich, Germany	08/2002−09/2002
Research Intern, University of Passau, Chair for Software Systems, Passau, Germany	05/2000−08/2002
Intern, Siemens AG, Corporate Information and Operations (CIO), Munich, Germany	08/2001−12/2001

Awards and Honors

IEEE CS Edward J. McCluskey Technical Achievement Award (2022) for "contributions to mining software repositories and defect prediction". This award recognizes outstanding and innovative contributions to the fields of computer and information science and engineering or computer technology.

Award video: https://www.youtube.com/watch?v=g89dy1LXwpw

ACM Fellow (2022) for "contributions to mining software repositories and defect prediction". The grade of ACM Fellow recognizes the top 1% of ACM members for their outstanding accomplishments in computing and information technology and outstanding service to ACM and the larger computing community.

IEEE Fellow (2021) for "contributions to data science in software engineering, research and practice". The grade of IEEE Fellow recognizes unusual distinction in the profession and shall be conferred only upon a person of outstanding and extraordinary qualifications and experience in IEEE-designated fields, and who has made important individual contributions to one or more of these fields.

IEEE CS TCSE New Direction Award (2020). This award is presented to individuals who have made substantial contributions to software engineering research or practice where these contributions moved the field in a new direction. I received the award with Dr. Ahmed E. Hassan (Queen's University) for contributions to establish the field of mining software repositories.

IEEE CS TCSE Distinguished Service Award (2018). This award is presented annually to an individual for outstanding and sustained contributions and service to the software engineering community. I received the award for my leadership role in all the major software engineering conferences, my commitment to software engineering research, and my significant professional service.

Most Influential Paper Awards / Test of Time Awards – Seven (7) These awards recognize academic papers that have had a significant and lasting impact in their field over a number of years, typically ten or more years.

- "Searching for a Needle in a Haystack: Predicting Security Vulnerabilities for Windows Vista" (ICST 2010, Most Influential Paper)

- "Cross-project Defect Prediction: a Large Scale Experiment on Data vs. Domain vs. Process" (ESEC/FSE 2009, Test of Time Award)

- "Duplicate bug reports considered harmful?" (ICSM 2008, Most Influential Paper)

- "How Long will it Take to Fix This Bug?" (MSR 2007, Most Influential Paper)

- "When do Changes Induce Fixes?" (MSR 2005, Most Influential Paper).
  Award citation: "Prior software quality research focused on flagging files with bugs, but the SZZ algorithm by Sliwerski et al. was the first work to focus on flagging faulty changes. By flagging bugs before they get into the code, followup research has taken a preventive role instead of a catchup role."

- "Mining Version Histories to Guide Software Changes" (ICSE 2004, Most Influential Paper)

- "Preprocessing CVS Data for Finegrained Analysis" (MSR 2004, Most Influential Paper).
  Award citation: "For clearly and engagingly presenting practices that stood at the core of early MSR approaches, thus lowering the entry barrier for the researchers worldwide to join this emerging field."

ACM SIGSOFT Distinguished Paper Awards – Seven (7). These awards recognize the top 10% of accepted full-length technical papers at a SIGSOFT-sponsored conference.

- "A Longitudinal Study of Student Contributions to OSS vs. OSS4SG with a Lightweight Intervention" (ESEC/FSE 2023)

- "How Was Your Weekend? Software Development Teams Working From Home During COVID-19" (ICSE 2021)

- "How Practitioners Perceive the Relevance of Software Engineering Research" (ESEC/FSE 2015)

- "Cowboys, Ankle Sprains, and Keepers of Quality: How Is Video Game Development Different from Software Development?" (ICSE 2014)

- "Assessing the Value of Branches with What if Analysis" (FSE 2012)

- "What Makes a Good Bug Report?" (FSE 2008)

- "Predicting Faults from Cached History" (ICSE 2007)

IEEE Software Best Software Engineering in Practice (SEIP) Paper Awards – Two (2). These awards recognize the top paper of 100+ submissions to the SEIP track at the ICSE conference.

- "Software Engineering for Machine Learning: A Case Study" (ICSE 2019)

- "Characterizing and Predicting Which Bugs Get Reopened" (ICSE 2012)

Additional Paper Awards – Three (3)

- Distinguished Paper Award for "How Developers and Managers Define and Trade Productivity for Quality" (CHASE 2022)

- SIGCHI "Best of CHI" Honorable Mention Award (top 5% of submissions) for "Mastering the Art of War: How Patterns of Gameplay Influence Skill in Halo" (CHI 2013).

- Best Student Paper Award for "Fine-grained Processing of CVS Archives with APFEL" (ETX 2006 workshop).

ACM Distinguished Scientist (2017). The Distinguished Members Grade recognizes ACM members who have achieved significant accomplishments or have made a significant impact on the computing field.

Best Dissertation Award for PhD thesis "Changes and Bugs – Mining and Predicting Development Activities" at the IEEE International Conference on Software Maintenance (ICSM 2009)

Research Fellowship of the DFG research training group on "Performance Guarantees for Computer Systems" for PhD studies (2004–2007).
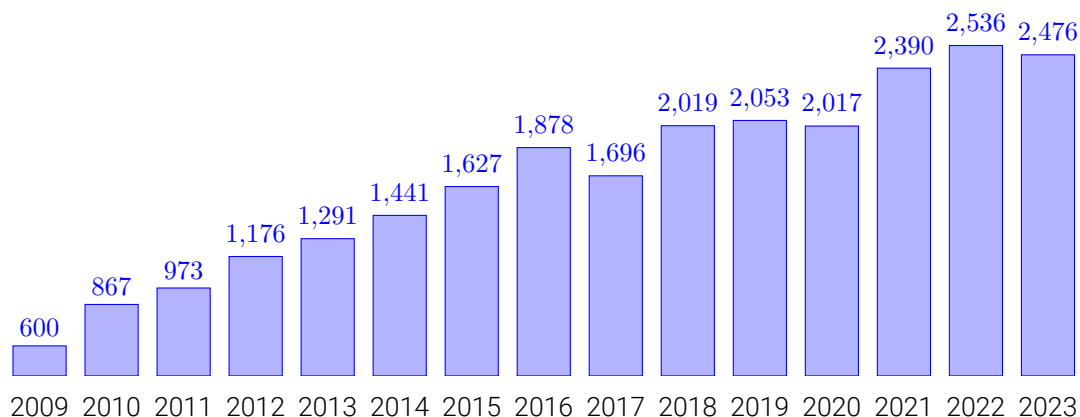
Winner of the Graph Drawing Contest 2002 and 2003 (with Daniel Gmach and Paul Holleis) — the jury recognized our work as "a promising contribution to research on graph drawing."

Publications

Papers are labelled with 🏅 for best paper awards, 🏆 for test of time awards, and ★ for other highlights.

Frequently cited papers are labelled with 🚀 (250+ citations), 🚀🚀 (500+ citations), and 🚀🚀🚀 (1000+ citations).

Citations per Year. *According to Google Scholar as of January 1, 2024.*

Year	Citations
2009	600
2010	867
2011	973
2012	1,176
2013	1,291
2014	1,441
2015	1,627
2016	1,878
2017	1,696
2018	2,019
2019	2,053
2020	2,017
2021	2,390
2022	2,536
2023	2,476

Journals

[1] "It would work for me too": How Online Communities Shape Software Developers' Trust in AI-Powered Code Generation Tools
Ruijia Cheng, Ruotong Wang, Thomas Zimmermann, Denae Ford
ACM Transactions on Interactive Intelligent Systems (TiiS) Just accepted (2023), Association for Computing Machinery

[2] Taking Flight with Copilot
Christian Bird, Denae Ford, Thomas Zimmermann, Nicole Forsgren, Eirini Kalliamvakou, Travis Lowdermilk, Idan Gazit
Commununications of the ACM 66.6 (May 2023), pp. 56–62, Association for Computing Machinery

[3] Taking Flight with Copilot: Early Insights and Opportunities of AI-Powered Pair-Programming Tools
Christian Bird, Denae Ford, Thomas Zimmermann, Nicole Forsgren, Eirini Kalliamvakou, Travis Lowdermilk, Idan Gazit
Queue 20.6 (Jan. 2022), pp. 35–57, Association for Computing Machinery

[4] Accessibility in Software Practice: A Practitioner's Perspective
Tingting Bi, Xin Xia, David Lo, John Grundy, Thomas Zimmermann, Denae Ford
ACM Transactions on Software Engineering and Methodology (TOSEM) 31.4 (2022), 66:1–26, Association for Computing Machinery

[5] Correlating Automated and Human Evaluation of Code Documentation Generation Quality
Xing Hu, Qiuyuan Chen, Haoye Wang, Xin Xia, David Lo, Thomas Zimmermann
ACM Transactions on Software Engineering and Methodology (TOSEM) 31.4 (2022), 63:1–28, Association for Computing Machinery

[6] A Tale of Two Cities: Software Developers Working from Home during the COVID-19 Pandemic
Denae Ford, Margaret-Anne Storey, Thomas Zimmermann, Christian Bird, Sonia Jaffe, Chandra Maddila, Jenna L. Butler, Brian Houck, Nachiappan Nagappan
ACM Transactions on Software Engineering and Methodology (TOSEM) 31.2 (Dec. 2021), 27:1–37, Association for Computing Machinery

[7] Developers Who Vlog: Dismantling Stereotypes through Community and Identity
Souti Chattopadhyay, Denae Ford, Thomas Zimmermann
Proceedings of the ACM on Human-Computer Interaction (PACMHCI) 5.CSCW2 (2021), 386:1–33, Association for Computing Machinery

[8] The SPACE of Developer Productivity
Nicole Forsgren, Margaret-Anne Storey, Chandra Maddila, Thomas Zimmermann, Brian Houck, Jenna Butler
Communications of the ACM 64.6 (May 2021), pp. 46–53, Association for Computing Machinery

[9] ★ The SPACE of Developer Productivity: There's More to It than You Think.
Nicole Forsgren, Margaret-Anne Storey, Chandra Maddila, Thomas Zimmermann, Brian Houck, Jenna Butler
Queue 19.1 (Feb. 2021), pp. 20–48, Association for Computing Machinery
This paper is the 6th most popular among 750,000 in the ACM Digital Library, evidenced by its 540,000 downloads.

[10] Mind the Gap: On the Relationship Between Automatically Measured and Self-Reported Productivity
Moritz Beller, Vince Orgovan, Spencer Buja, Thomas Zimmermann
IEEE Software 38.5 (Sept. 2021), pp. 24–31, IEEE Computer Society

[11] Behavioral Science of Software Engineering
Marian Petre, Jim Buckley, Luke Church, Margaret-Anne Storey, Thomas Zimmermann
IEEE Software 37.06 (Nov. 2020), pp. 21–25, IEEE Computer Society

[12] How do Practitioners Perceive the Relevance of Requirements Engineering Research?
Xavier Franch, Daniel Mendez, Andreas Vogelsang, Rogardt Heldal, Eric Knauss, Marc Oriol, Guilherme Travassos, Jeffrey C. Carver, Thomas Zimmermann
IEEE Transactions on Software Engineering 48.6 (2020), pp. 1947–1964

[13] An Empirical Study of Release Note Production and Usage in Practice
Tingting Bi, Xin Xia, David Lo, John Grundy, Thomas Zimmermann
IEEE Transactions on Software Engineering 48.6 (2020), pp. 1834–1852

[14] Detecting Developers' Task Switches and Types
Andre N. Meyer, Chris Satterfield, Manuela Züger, Katja Kevic, Gail C. Murphy, Thomas Zimmermann, Thomas Fritz
IEEE Transactions on Software Engineering 48.2 (2022), pp. 225–240

[15] Towards a Theory of Software Developer Job Satisfaction and Perceived Productivity
Margaret-Anne Storey, Thomas Zimmermann, Christian Bird, Jacek Czerwonka, Brendan Murphy, Eirini Kalliamvakou
IEEE Transactions on Software Engineering 47.10 (Oct. 2021), pp. 2125–2142

[16] Moving from Closed to Open Source: Observations from Six Transitioned Projects to GitHub
Pavneet Singh Kochhar, Eirini Kalliamvakou, Nachiappan Nagappan, Thomas Zimmermann, Christian Bird
IEEE Transactions on Software Engineering 47.9 (Sept. 2021), pp. 1838–1856

[17] Enabling Good Work Habits in Software Developers through Reflective Goal-Setting
Andre N. Meyer, Gail C. Murphy, Thomas Zimmermann, Thomas Fritz
IEEE Transactions on Software Engineering 47.9 (Sept. 2021), pp. 1872–1885

[18] Today was a Good Day: The Daily Life of Software Developers
Andre N. Meyer, Earl T. Barr, Christian Bird, Thomas Zimmermann
IEEE Transactions on Software Engineering 47.5 (May 2021), pp. 863–880

[19] The Effect of Work Environments on Productivity and Satisfaction of Software Engineers
Brittany Johnson, Thomas Zimmermann, Christian Bird
IEEE Transactions on Software Engineering 47.4 (Apr. 2021), pp. 736–757

[20] Mining Treatment-Outcome Constructs from Sequential Software Engineering Data
Maleknaz Nayebi, Guenther Ruhe, T. Zimmermann
IEEE Transactions on Software Engineering 47.2 (Feb. 2021), pp. 393–411

[21] The Sound of Software Development: Music Listening Among Software Engineers
Laura Barton, Gulipek Candan, Thomas Fritz, Thomas Zimmermann, Gail C. Murphy
IEEE Software 37.2 (Mar. 2020), pp. 78–85

[22] Software Analytics: Whats Next?
Tim Menzies, Thomas Zimmermann
IEEE Software 27.4 (Sept. 2018), pp. 80–86, IEEE

[23] What Makes a Great Manager of Software Engineers?
Eirini Kalliamvakou, Christian Bird, Thomas Zimmermann, Andrew Begel, Robert DeLine, Daniel M. Germán
IEEE Transactions on Software Engineering 45.1 (2019), pp. 87–106

[24] Design Recommendations for Self-Monitoring in the Workplace: Studies in Software Development
Andre N. Meyer, Gail C. Murphy, Thomas Zimmermann, Thomas Fritz
Proceedings of the ACM Human-Computer Interaction 1.2 (Nov. 2017)

[25] Data Scientists in Software Teams: State of the Art and Challenges
Miryung Kim, Thomas Zimmermann, Robert DeLine, Andrew Begel
IEEE Transactions on Software Engineering 44.11 (2018), pp. 1024–1038

[26] The Work Life of Developers: Activities, Switches and Perceived Productivity
André N. Meyer, Laura E. Barton, Gail C. Murphy, Thomas Zimmermann, Thomas Fritz
IEEE Transactions on Software Engineering 43.12 (Dec. 2017), pp. 1178–1193

[27] Master Maker: Understanding Gaming Skill through Practice and Habit from Gameplay Behavior
Jeff Huang, Eddie Yan, Gifford Cheung, Nachiappan Nagappan, Thomas Zimmermann
Topics in Cognitive Science 9.2 (Apr. 2017), pp. 437–466

[28] An empirical investigation of single-objective and multiobjective evolutionary algorithms for developer's assignment to bugs
Muhammad Rezaul Karim, Guenther Ruhe, Md. Mainur Rahman, Vahid Garousi, Thomas Zimmermann
Journal of Software: Evolution and Process 28.12 (Dec. 2016), pp. 1025–1060

[29] The Design Space of Bug Fixes and How Developers Navigate It
Emerson Murphy-Hill, Thomas Zimmermann, Christian Bird, Nachiappan Nagappan
IEEE Transactions on Software Engineering 41.1 (Jan. 2015), pp. 65–81

[30] Relating Requirements to Implementation via Topic Analysis: Do Topics Extracted from Requirements Make Sense to Managers and Developers?
Abram Hindle, Christian Bird, Thomas Zimmermann, Nachiappan Nagappan
Empirical Software Engineering (EMSE) 20 (2 2015), pp. 479–515, Springer

[31] An Empirical Study of Refactoring Challenges and Benefits at Microsoft
Miryung Kim, Thomas Zimmermann, Nachiappan Nagappan
IEEE Transactions on Software Engineering (TSE) 40 (7 2014), pp. 633–649, IEEE

[32] 📢 Local vs. Global Lessons for Defect Prediction and Effort Estimation
Tim Menzies, Andrew Butcher, David Cok, Andrian Marcus, Lucas Layman, Forrest Shull, Burak Turhan, Thomas Zimmermann
IEEE Transactions on Software Engineering 39.6 (2013), pp. 822–834

[33] 📢 What Makes a Good Bug Report?
Thomas Zimmermann, Rahul Premraj, Nicolas Bettenburg, Sascha Just, Adrian Schröter, Cathrin Weiss
IEEE Transactions on Software Engineering (TSE) 36.5 (Sept. 2010), pp. 618–643, IEEE

[34] 📢📢 Recommendation Systems for Software Engineering
Martin P. Robillard, Robert J. Walker, Thomas Zimmermann
IEEE Software 27.4 (July 2010), pp. 80–86, IEEE

[35] 📢 Do Crosscutting Concerns Cause Defects?
Marc Eaddy, Thomas Zimmermann, Kaitlin D. Sherwood, Vibhav Garg, Gail C. Murphy, Nachiappan Nagappan, Alfred V. Aho
IEEE Transactions on Software Engineering (TSE) 34.4 (July 2008), pp. 497–515

[36] Drawing Graphs within Graphs
Paul Holleis, Thomas Zimmermann, Daniel Gmach
Journal of Graph Algorithms and Applications (JGAA) 9.1 (Oct. 2005), pp. 7–18

[37] 🚀🚀🚀 Mining Version Histories to Guide Software Changes
Thomas Zimmermann, Peter Weißgerber, Stephan Diehl, Andreas Zeller
IEEE Transactions on Software Engineering (TSE) 31.6 (June 2005), pp. 429–445

International Conferences

[1] Objectives and Key Results in Software Teams: Challenges, Opportunities and Impact on Development
Jenna L. Butler, Thomas Zimmermann, Christian Bird
Proceedings of the 2024 IEEE/ACM 46th International Conference on Software Engineering: Software Engineering in Practice (ICSE-SEIP), 2024, Association for Computing Machinery

[2] 🏅 A Four-Year Study of Student Contributions to OSS vs. OSS4SG with a Lightweight Intervention
Zihan Fang, Madeline Endres, Thomas Zimmermann, Denae Ford, Westley Weimer, Kevin Leach, Yu Huang
Proceedings of the 31st ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), 2023, pp. 3–15, Association for Computing Machinery
ACM SIGSOFT Distinguished Paper Award

[3] Recommending Root-Cause and Mitigation Steps for Cloud Incidents using Large Language Models
Toufique Ahmed, Supriyo Ghosh, Chetan Bansal, Thomas Zimmermann, Xuchao Zhang, Saravan Rajmohan
Proceedings of the 2023 IEEE/ACM 45th International Conference on Software Engineering (ICSE), 2023, pp. 1737–1749, IEEE

[4] Make Your Tools Sparkle with Trust: The PICSE Framework for Trust in Software Tools
Brittany Johnson, Christian Bird, Denae Ford, Nicole Forsgren, Thomas Zimmermann
Proceedings of the 2023 IEEE/ACM 45th International Conference on Software Engineering: Software Engineering in Practice (ICSE-SEIP), 2023, pp. 409–419, IEEE

[5] Understanding Skills for OSS Communities on GitHub
Jenny T. Liang, Thomas Zimmermann, Denae Ford
Proceedings of the 30th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), 2022, pp. 170–182, Association for Computing Machinery

[6] Nalanda: A Socio-Technical Graph Platform for Building Software Analytics Tools at Enterprise Scale
Chandra Maddila, Suhas Shanbhogue, Apoorva Agrawal, Thomas Zimmermann, Chetan Bansal, Nicole Forsgren, Divyanshu Agrawal, Kim Herzig, Arie Deursen
Proceedings of the 30th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), 2022, pp. 1246–1256, Association for Computing Machinery

[7] ReBOC: Recommending Bespoke Open Source Software Projects to Contributors
Denae Ford, Nischal Shrestha, Thomas Zimmermann
2022 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC), 2022, pp. 1–5

[8] What Are Weak Links in the Npm Supply Chain?
Nusrat Zahan, Thomas Zimmermann, Patrice Godefroid, Brendan Murphy, Chandra Maddila, Laurie Williams
Proceedings of the 44th International Conference on Software Engineering: Software Engineering in Practice, 2022, pp. 331–340, Association for Computing Machinery

[9] Attracting and Retaining OSS Contributors with a Maintainer Dashboard
Mariam Guizani, Thomas Zimmermann, Anita Sarma, Denae Ford
Proceedings of the 2022 ACM/IEEE 44th International Conference on Software Engineering: Software Engineering in Society, 2022, pp. 36–40, Association for Computing Machinery

[10] Towards Mining OSS Skills from GitHub Activity
Jenny T. Liang, Thomas Zimmermann, Denae Ford
Proceedings of the ACM/IEEE 44th International Conference on Software Engineering: New Ideas and Emerging Results, 2022, pp. 106–110, Association for Computing Machinery

[11] Practitioners' Expectations on Automated Code Comment Generation
Xing Hu, Xin Xia, David Lo, Zhiyuan Wan, Qiuyuan Chen, Thomas Zimmermann

Proceedings of the 44th International Conference on Software Engineering, 2022, pp. 1693–1705, ACM

[12] ✪ How Developers and Managers Define and Trade Productivity for Quality
Margaret-Anne Storey, Brian Houck, Thomas Zimmermann
Proceedings of the 15th International Conference on Cooperative and Human Aspects of Software Engineering, 2022, pp. 26–35, Association for Computing Machinery
CHASE Distinguished Paper Award

[13] Reel Life vs. Real Life: How Software Developers Share Their Daily Life through Vlogs
Souti Chattopadhyay, Thomas Zimmermann, Denae Ford
Proceedings of the 29th ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering, 2021, pp. 404–415, Association for Computing Machinery

[14] Automating the Removal of Obsolete TODO Comments
Zhipeng Gao, Xin Xia, David Lo, John Grundy, Thomas Zimmermann
Proceedings of the 29th ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering, 2021, pp. 218–229, Association for Computing Machinery

[15] Anomalicious: Automated Detection of Anomalous and Potentially Malicious Commits on GitHub
Danielle Gonzalez, Thomas Zimmermann, Patrice Godefroid, Max Schaefer
Proceedings of the 43rd International Conference on Software Engineering, Software Engineering In Practice Track, 2021, pp. 258–267, IEEE Press

[16] Please Turn Your Cameras On: Remote Onboarding of Software Developers during a Pandemic
Paige Rodeghero, Thomas Zimmermann, Brian Houck, Denae Ford
Proceedings of the 43rd International Conference on Software Engineering, Software Engineering In Practice Track, 2021, pp. 41–50, IEEE Press

[17] Neural Knowledge Extraction From Cloud Service Incidents
Manish Shetty, Chetan Bansal, Sumit Kumar, Nikitha Rao, Nachiappan Nagappan, Thomas Zimmermann
Proceedings of the 43rd International Conference on Software Engineering, Software Engineering In Practice Track, 2021, pp. 218–227, IEEE Press

[18] ✪ "How Was Your Weekend?" Software Development Teams Working From Home During COVID-19
Courtney Miller, Paige Rodeghero, Margaret-Anne Storey, Denae Ford, Thomas Zimmermann
Proceedings of the 43rd International Conference on Software Engineering, 2021, pp. 624–636, IEEE Press
ACM SIGSOFT Distinguished Paper Award

[19] Leaving My Fingerprints: Motivations and Challenges of Contributing to OSS for Social Good
Yu Huang, Denae Ford, Thomas Zimmermann
Proceedings of the 43rd International Conference on Software Engineering, 2021, pp. 1020–1032, IEEE Press

[20] Analyzing Web Search Behavior for Software Engineering Tasks
Nikitha Rao, Chetan Bansal, Thomas Zimmermann, Ahmed Hassan Awadallah, Nachiappan Nagappan
Proceedings of the 2020 IEEE International Conference on Big Data, 2020, pp. 768–777, IEEE

[21] An Empirical Study of Software Exceptions in the Field Using Search Logs
Foyzul Hassan, Chetan Bansal, Nachiappan Nagappan, Thomas Zimmermann, Ahmed Hassan Awadallah
Proceedings of the 14th ACM / IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM), 2020, Association for Computing Machinery

[22] The State of the ML-Universe: 10 Years of Artificial Intelligence & Machine Learning Software Development on GitHub
Danielle Gonzalez, Thomas Zimmermann, Nachiappan Nagappan
Proceedings of the 17th International Conference on Mining Software Repositories, 2020, pp. 431–442, Association for Computing Machinery

[23] ✪ 🚀🚀 Software Engineering for Machine Learning: A Case Study
Saleema Amershi, Andrew Begel, Christian Bird, Robert DeLine, Harald Gall, Ece Kamar, Nachiappan Nagappan, Besmira Nushi, Thomas Zimmermann
Proceedings of the 41st International Conference on Software Engineering: Software Engineering in Practice, 2019, pp. 291–300, IEEE Press
IEEE Software Best Software Engineering in Practice Paper Award

[24] Characterizing Software Engineering Work with Personas Based on Knowledge Worker Actions
Denae Ford, Thomas Zimmermann, Christian Bird, Nachiappan Nagappan
Proceedings of the 11th International Symposium on Empirical Software Engineering and Measurement, 2017

[25] Characterizing Software Developers by Perceptions of Productivity (Industry Track)
André N. Meyer, Thomas Zimmermann, Thomas Fritz
Proceedings of the 11th International Symposium on Empirical Software Engineering and Measurement, 2017

[26] How do Practitioners Perceive the Relevance of Requirements Engineering Research? An Ongoing Study (RE@Next)
Xavier Franch, Daniel Méndez Fernández, Marc Oriol, Andreas Vogelsang, Rogardt Heldal, Eric Knauss, Guilherme Horta Travassos, Jeffrey C. Carver, Oscar Dieste, Thomas Zimmermann
Proceedings of the 25th IEEE International Requirements Engineering Conference, 2017, pp. 382–387

[27] Ramp-up Journey of New Hires: Do strategic practices of software companies influence productivity?
Ayushi Rastogi, Suresh Thummalapenta, Thomas Zimmermann, Nachiappan Nagappan, Jacek Czerwonka
Proceedings of the Innovations in Software Engineering Conference, 2017, pp. 107–111

[28] How Practitioners Perceive the Relevance of ESEM Research
Jeffrey C. Carver, Oscar Dieste, Nicholas A. Kraft, David Lo, Thomas Zimmermann
Proceedings of the 10th International Symposium on Empirical Software Engineering and Measurement, 2016

[29] A Perspective on Blending Programming Environments and Games: Beyond Points, Badges, and Leaderboards
Titus Barik, Emerson Murphy-Hill, Thomas Zimmermann
Proceedings of the 2016 IEEE Symposium on Visual Languages and Human-Centric Computing, 2016, pp. 134–142

[30] 🚀 The Emerging Role of Data Scientists on Software Development Teams
Miryung Kim, Thomas Zimmermann, Robert DeLine, Andrew Begel
Proceedings of the 38th International Conference on Software Engineering, 2016, pp. 96–107

[31] Belief & Evidence in Empirical Software Engineering
Prem Devanbu, Thomas Zimmermann, Christian Bird
Proceedings of the 38th International Conference on Software Engineering, 2016, pp. 108–119

[32] "What Went Right and What Went Wrong": An Analysis of 155 Postmortems from Game Development
Michael Washburn Jr. Pavithra Sathiyanarayanan, Meiyappan Nagappan, Thomas Zimmermann, Christian Bird
Proceedings of the 38th International Conference on Software Engineering (Companion Volume), 2016, pp. 280–289

[33] What Drives People: Creating Engagement Profiles of Players from Game Log Data
Erik Harpstead, Thomas Zimmermann, Nachiappan Nagappan, Jose J. Guajardo, Ryan Cooper, Tyson Solberg, Dan Greenawalt
Proceedings of the ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play, 2015, pp. 369–379

[34] Ramp-up Journey of New Hires: Tug of War of Aids and Impediments
Ayushi Rastogi, Suresh Thummalapenta, Thomas Zimmermann, Nachiappan Nagappan, Jacek Czerwonka
Proceedings of the Ninth International Symposium on Empirical Software Engineering and Measurement, 2015, pp. 96–105

[35] Quantifying Developers' Adoption of Security Tools
Jim Witschey, Olga Zielinska, Allaire Welk, Emerson Murphy-Hill, Chris Mayhorn, Thomas Zimmermann
Proceedings of the 10th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering, 2015, pp. 260–271, ACM

[36] 🏅 How Practitioners Perceive the Relevance of Software Engineering Research
David Lo, Nachiappan Nagappan, Thomas Zimmermann
Proceedings of the 10th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering, 2015, pp. 415–425, ACM
ACM SIGSOFT Distinguished Paper Award

[37] Products, Developers, and Milestones: How Should I Build my N-Gram Language Model (Industry Track)
Juliana Saraiva, Christian Bird, Thomas Zimmermann
Proceedings of the 10th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering, 2015, pp. 998–1001, ACM

[38] Build it yourself! Homegrown Tools in a Large Software Company
Edward K. Smith, Christian Bird, Thomas Zimmermann
Proceedings of the 37th International Conference on Software Engineering, 2015, pp. 369–379

[39] The Uniqueness of Changes: Characteristics and Applications
Baishakhi Ray, Meiyappan Nagappan, Christian Bird, Nachiappan Nagappan, Thomas Zimmermann
Proceedings of the 12th International Working Conference on Mining Software Repositories, 2015, pp. 34–44

[40] Understanding the Test Automation Culture of App Developers
Pavneet Singh Kochhar, Ferdian Thung, Nachiappan Nagappan, Thomas Zimmermann, David Lo
Proceedings of the 8th IEEE International Conference on Software Testing, Verification, and Validation, 2015

[41] 🚀 Software Developers' Perceptions of Productivity
André N. Meyer, Thomas Fritz, Gail C. Murphy, Thomas Zimmermann
Proceedings of the 22th International Symposium on Foundations of Software Engineering, 2014, pp. 19–29

[42] The First Hour Experience: How the Initial Play can Engage (or Lose) New Players
Gifford Cheung, Thomas Zimmermann, Nachiappan Nagappan
Proceedings of the ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play, 2014, pp. 57–66

[43] Mining Energy Traces to Aid in Software Development: An Empirical Case Study (Industry Track)
Ashish Gupta, Thomas Zimmermann, Christian Bird, Nachiappan Nagappan, Thirumalesh Bhat, Syed Emran
Proceedings of the Eight International Symposium on Empirical Software Engineering and Measurement, 2014

[44] ☗ Cowboys, Ankle Sprains, and Keepers of Quality: How Is Video Game Development Different from Software Development?
Emerson Murphy-Hill, Thomas Zimmermann, Nachiappan Nagappan
Proceedings of the 36th International Conference on Software Engineering, 2014, pp. 1–11
ACM SIGSOFT Distinguished Paper Award

[45] 🚀 Analyze This! 145 Questions for Data Scientists in Software Engineering
Andrew Begel, Thomas Zimmermann
Proceedings of the 36th International Conference on Software Engineering, 2014, pp. 12–23

[46] Understanding and Improving Software Build Teams
Shaun Phillips, Thomas Zimmermann, Christian Bird
Proceedings of the 36th International Conference on Software Engineering, 2014, pp. 735–744

[47] Extrinsic Influence Factors in Software Reliability: A Study of 200,000 Windows Machines
Christian Bird, Venkatesh-Prasad Ranganath, Thomas Zimmermann, Nachiappan Nagappan, Andreas Zeller
Companion Proceedings of the 36th International Conference on Software Engineering, 2014, pp. 205–214

[48] 🚀🚀 Persuasive Technology in the Real World: A Study of Long-Term Use of Activity Sensing Devices for Fitness
Thomas Fritz, Elaine Huang, Gail Murphy, Thomas Zimmermann
Proceedings of the International Conference on Human Factors in Computing Systems, 2014, pp. 487–496

[49] Off With Their Assists: An Empirical Study of Driving Skill in Forza Motorsports 4
Thomas Debeauvais, Thomas Zimmermann, Nachiappan Nagappan, Kevin Carter, Ryan Cooper, Dan Greenawalt, Tyson Solberg
Proceedings of the 9th International Conference on the Foundations of Digital Games, 2014

[50] Predicting Risk of Pre-release Code Changes with CheckinMentor
Alexander Tarvo, Nachiappan Nagappan, Thomas Zimmermann, Thirumalesh Bhat, Jacek Czerwonka
Proceedings of the 24th IEEE International Symposium on Software Reliability Engineering, 2013, pp. 128–137

[51] Have Agile Techniques been the Silver Bullet for Software Development at Microsoft?
Brendan Murphy, Christian Bird, Thomas Zimmermann, Laurie Williams, Nachiappan Nagappan, Andrew Begel
Proceedings of the Seventh International Symposium on Empirical Software Engineering and Measurement, 2013

[52] Dwelling in Software: Aspects of the felt-life of engineers in large software projects
Richard Harper, Christian Bird, Thomas Zimmermann, Brendan Murphy
Proceedings of the European Conference on Computer-Supported Cooperative Work, 2013

[53] Diversity in Software Engineering Research
Meiyappan Nagappan, Thomas Zimmermann, Christian Bird
Proceedings of the 9th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering, 2013, ACM

[54] The Design of Bug Fixes
Emerson Murphy-Hill, Thomas Zimmermann, Christian Bird, Nachiappan Nagappan
Proceedings of the 35th International Conference on Software Engineering, 2013

[55] Distributed Development Considered Harmful?
Ekrem Kocaganeli, Thomas Zimmermann, Christian Bird, Nachiappan Nagappan, Tim Menzies
Proceedings of the 35th International Conference on Software Engineering, 2013

[56] 🏅 Mastering the Art of War: How Patterns of Gameplay Influence Skill in Halo
Jeff Huang, Thomas Zimmermann, Nachiappan Nagappan, Charles Harrison, Bruce Phillips
Proceedings of the International Conference on Human Factors in Computing Systems, 2013
ACM SIGCHI "Best of CHI" Honorable Mention Award (top 5% of submitted papers)

[57] Predicting Method Crashes with Bytecode Operations
Sunghun Kim, Thomas Zimmermann, Rahul Premraj, Nicolas Bettenburg, Shivkumar Shivaji
Proceedings of the 6th Annual India Software Engineering Conference, 2013

[58] 🏅 Assessing the Value of Branches with What-if Analysis
Christian Bird, Thomas Zimmermann
Proceedings of the 20th International Symposium on Foundations of Software Engineering, 2012
ACM SIGSOFT Distinguished Paper Award

[59] 🚀 A Field Study of Refactoring Challenges and Benefits
Miryung Kim, Thomas Zimmermann, Nachiappan Nagappan
Proceedings of the 20th International Symposium on Foundations of Software Engineering, 2012

[60] The Effect of Branching Strategies on Software Quality
Emad Shihab, Christian Bird, Thomas Zimmermann
Proceedings of the Sixth International Symposium on Empirical Software Engineering and Measurement, 2012

[61] Relating Requirements to Implementation via Topic Analysis
Abram Hindle, Christian Bird, Thomas Zimmermann, Nachiappan Nagappan
Proceedings of the 2012 International Conference on Software Maintenance, 2012

[62] 🚀 Information Needs for Software Development Analytics
Raymond P.L. Buse, Thomas Zimmermann
Proceedings of the 34th International Conference on Software Engineering, 2012

[63] 🏅 Characterizing and Predicting Which Bugs Get Reopened
Thomas Zimmermann, Nachiappan Nagappan, Philip J. Guo, Brendan Murphy
Proceedings of the 34th International Conference on Software Engineering, 2012
IEEE Software Best Software Engineering in Practice Paper Award

[64] Local vs Global Models for Effort Estimation and Defect Prediction
Tim Menzies, Andrew Butcher, Andrian Marcus, Thomas Zimmermann, David Cok
Proceedings of the 26st IEEE/ACM International Conference on Automated Software Engineering, 2011

[65] An Integration Resolution Algorithm for Mining Multiple Branches in Version Control Systems (Industry Track)
Alexander Tarvo, Thomas Zimmermann, Jacek Czerwonka
Proceedings of the 27th IEEE International Conference on Software Maintenance, 2011

[66] Failure is a Four-Letter Word: A Parody in Empirical Research
Andreas Zeller, Thomas Zimmermann, Christian Bird
Proceedings of the 7th International Conference on Predictive Models in Software Engineering, 2011

[67] Crash Graphs: An Aggregated View of Multiple Crashes to Improve Crash Triage (Practical Experience Report)
Sunghun Kim, Thomas Zimmermann, Nachiappan Nagappan
Proceedings of the 2011 IEEE/IFIP International Conference on Dependable Systems and Networks, 2011

[68] "Not My Bug!" and Other Reasons for Software Bug Report Reassignments
Philip J. Guo, Thomas Zimmermann, Nachiappan Nagappan, Brendan Murphy
Proceedings of the ACM Conference on Computer Supported Cooperative Work (CSCW), 2011, ACM Press

[69] Empirical Software Engineering at Microsoft Research (Showcase Paper)
Christian Bird, Nachiappan Nagappan, Brendan Murphy, Thomas Zimmermann

Proceedings of the ACM Conference on Computer Supported Cooperative Work (CSCW), 2011, ACM Press

[70] An Empirical Study of the Factors Relating Field Failures and Dependencies (Industry Track)
Thomas Zimmermann, Nachiappan Nagappan, Kim Herzig, Rahul Premraj, Laurie Williams
Proceedings of the 4th International Conference on Software Testing, Verification and Validation (ICST), 2011

[71] Security Trend Analysis with CVE Topic Models
Stephan Neuhaus, Thomas Zimmermann
Proceedings of the 21st IEEE International Symposium on Software Reliability Engineering (ISSRE), 2010, IEEE Computer Society

[72] Change Bursts as Defect Predictors
Nachiappan Nagappan, Andreas Zeller, Thomas Zimmermann, Kim Herzig, Brendan Murphy
Proceedings of the 21st IEEE International Symposium on Software Reliability Engineering (ISSRE), 2010, IEEE Computer Society

[73] 🚀 Characterizing and Predicting Which Bugs Get Fixed: An Empirical Study of Microsoft Windows
Philip J. Guo, Thomas Zimmermann, Nachiappan Nagappan, Brendan Murphy
Proceedings of the 32th International Conference on Software Engineering (ICSE), 2010, pp. 495–504, ACM Press

[74] 🚀 Discovering and Exploiting Relationships in Software Repositories
Andrew Begel, Yit Phang Khoo, Thomas Zimmermann
Proceedings of the 32th International Conference on Software Engineering (ICSE), 2010, pp. 125–134, ACM Press

[75] 🏆 🚀 Searching for a Needle in a Haystack: Predicting Security Vulnerabilities for Windows Vista
Thomas Zimmermann, Nachiappan Nagappan, Laurie Williams
Proceedings of the 3rd International Conference on Software Testing, Verification and Validation (ICST), 2010, pp. 421–428, IEEE Computer Society
ICST Most Influential Paper Award

[76] 🚀 Investigating Information Needs to Improve Cooperation Between Developers and Bug Reporters
Silvia Breu, Rahul Premraj, Jonathan Sillito, Thomas Zimmermann
Proceedings of the ACM Conference on Computer Supported Cooperative Work (CSCW), 2010, pp. 301–310, ACM Press

[77] Predicting Defects with Program Dependencies (Short Paper)
Thomas Zimmermann, Nachiappan Nagappan
Proceedings of the Third International Symposium on Empirical Software Engineering and Measurement (ESEM), 2009, IEEE Computer Society

[78] Optimized Assignment of Developers for Fixing Bugs – An Initial Evaluation for Eclipse Projects (Short Paper)
Md. Mainur Rahman, Guenther Ruhe, Thomas Zimmermann
Proceedings of the Third International Symposium on Empirical Software Engineering and Measurement (ESEM), 2009, IEEE Computer Society

[79] Expert Recommendation with Usage Expertise (Short Paper)
David Ma, David Schuler, Thomas Zimmermann, Jonathan Sillito
Proceedings of the 25th IEEE International Conference on Software Maintenance (ICSM), 2009, pp. 535–538, IEEE Computer Society

[80] 🏆 🚀🚀 Cross-project Defect Prediction
Thomas Zimmermann, Nachiappan Nagappan, Harald Gall, Emanuel Giger, Brendan Murphy
Proceedings of the 7th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE), 2009, pp. 91–100, ACM Press
ESEC/FSE Test of Time Award

[81] 🚀🚀 Improving Bug Triage with Bug Tossing Graphs
Gaeul Jeong, Sunghun Kim, Thomas Zimmermann
Proceedings of the 7th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE), 2009, pp. 111–120, ACM Press

[82] The Beauty and the Beast: Vulnerabilities in Red Hat's Packages
Stephan Neuhaus, Thomas Zimmermann
Proceedings of the 2009 USENIX Annual Technical Conference (USENIX ATC), 2009, pp. 383–396, Usenix Association

[83] Predicting Defects in SAP Java Code: An Experience Report
Tilman Holschuh, Markus Päuser, Kim Herzig, Thomas Zimmermann, Rahul Premraj, Andreas Zeller
Companion to the 31th International Conference on Software Engineering (ICSE), 2009, pp. 172–181, IEEE Computer Society

[84] ☸ 🚀🚀 What Makes a Good Bug Report?
Nicolas Bettenburg, Sascha Just, Adrian Schröter, Cathrin Weiß, Rahul Premraj, Thomas Zimmermann
Proceedings of the 16th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE), 2008, pp. 308–318, ACM Press
ACM SIGSOFT Distinguished Paper Award

[85] 🏆 Duplicate Bug Reports Considered Harmful?
Nicolas Bettenburg, Rahul Premraj, Thomas Zimmermann, Sunghun Kim
Proceedings of the 24th IEEE International Conference on Software Maintenance (ICSM), 2008, pp. 337–345, IEEE Computer Society
ICSME Most Influential Paper Award

[86] Towards the next generation of bug tracking systems
Sascha Just, Rahul Premraj, Thomas Zimmermann
Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC), 2008, pp. 82–85, IEEE Computer Society

[87] Explaining Product Release Planning Results using Concept Analysis
Gengshen Du, Thomas Zimmermann, Guenther Ruhe
Proceedings of the 20th International Conference on Software Engineering and Knowledge Engineering, 2008, pp. 137–142

[88] Predicting Software Metrics at Design Time
Wolfgang Holz, Rahul Premraj, Thomas Zimmermann, Andreas Zeller
Proceedings of the 9th International Conference on Product Focused Software Process Improvement, 2008, pp. 34–44, Springer

[89] 🚀🚀 Predicting Defects using Network Analysis on Dependency Graphs
Thomas Zimmermann, Nachiappan Nagappan
Proceedings of the 30th International Conference on Software Engineering (ICSE), 2008, pp. 531–540, ACM Press

[90] Predicting Subsystem Defects using Dependency Graph Complexities
Thomas Zimmermann, Nachiappan Nagappan
Proceedings of the 18th IEEE International Symposium on Software Reliability Engineering (ISSRE), 2007, IEEE Computer Society

[91] 🚀 Extraction of Bug Localization Benchmarks from History
Valentin Dallmeier, Thomas Zimmermann
Proceedings of the 22nd IEEE/ACM International Conference on Automated Software Engineering (ASE), 2007, ACM Press

[92] 🚀🚀 Predicting Vulnerable Software Components
Stephan Neuhaus, Thomas Zimmermann, Christian Holler, Andreas Zeller
Proceedings of the 14th ACM Conference on Computer and Communications Security (CCS), 2007, IEEE Computer Society

[93] Building Software Cost Estimation Models using Homogenous Data
Rahul Premraj, Thomas Zimmermann
Proceedings of the 1st International Symposium on Empirical Software Engineering and Measurement (ESEM), 2007, pp. 393–400, IEEE Computer Society

[94] ☸ 🚀🚀 Predicting Faults from Cached History
Sunghun Kim, Thomas Zimmermann, E. James Whitehead Jr. Andreas Zeller
Proceedings of the 29th International Conference on Software Engineering (ICSE), 2007, pp. 489–498, IEEE Computer Society
ACM SIGSOFT Distinguished Paper Award

[95] Mining Aspects from Version History
Silvia Breu, Thomas Zimmermann
Proceedings of the 21st IEEE/ACM International Conference on Automated Software Engineering (ASE), 2006, pp. 221–230, IEEE Computer Society

[96] Automatic Identification of Bug-Introducing Changes

Sunghun Kim, Thomas Zimmermann, Kai Pan, E. James Whitehead Jr.
Proceedings of the 21st IEEE/ACM International Conference on Automated Software Engineering (ASE), 2006, pp. 81–90, IEEE Computer Society

[97] Predicting Component Failures at Design Time
Adrian Schröter, Thomas Zimmermann, Andreas Zeller
Proceedings of the 5th ACM-IEEE International Symposium on Empirical Software Engineering (ISESE), 2006, pp. 18–27, ACM Press

[98] 🚀🚀 DynaMine: Finding Common Error Patterns by Mining Software Revision Histories
V. Benjamin Livshits, Thomas Zimmermann
Proceedings of the 10th European Software Engineering Conference held jointly with 13th ACM SIGSOFT International Symposium on Foundations of Software Engineering (ESEC/FSE), 2005, pp. 296–305, ACM Press

[99] 🏆 🚀🚀🚀 Mining Version Histories to Guide Software Changes
Thomas Zimmermann, Peter Weißgerber, Stephan Diehl, Andreas Zeller
Proceedings of the 26th International Conference on Software Engineering (ICSE), 2004, pp. 563–572, IEEE Computer Society
ICSE Most Influential Paper Award

Other Refereed Conferences and Workshops

[1] Beliefs, Practices, and Personalities of Software Engineers: A Survey in a Large Software Company
Edward Smith, Christian Bird, Thomas Zimmermann
Proceedings of the 9th International Workshop on Cooperative and Human Aspects of Software Engineering, 2016, pp. 15–18

[2] An Empirical Investigation of a Genetic Algorithm for Developer's Assignment to Bugs
Md. Mainur Rahman, Muhammad Rezaul Karim, Guenther Ruhe, Vahid Garousi, Thomas Zimmermann
Proceedings of the First North American Search Based Software Engineering Symposium, 2015

[3] Improving Developer Participation Rates in Surveys
Edward Smith, Robert Loftin, Emerson Murphy-Hill, Christian Bird, Thomas Zimmermann
Proceedings of the 6th International Workshop on Cooperative and Human Aspects of Software Engineering, 2013

[4] Revival Actions in a Shooter Game
Sauvik Das, Thomas Zimmermann, Nachiappan Nagappan, Bruce Phillips, Chuck Harrison
Proceedings of the CHI Workshop on Designing and Evaluating Sociability in Online Video Games, 2013

[5] Influence of Gameplay on Skill in Halo Reach
Jeff Huang, Thomas Zimmermann, Nachiappan Nagappan, Bruce Phillips, Chuck Harrison
Proceedings of the CHI Workshop on Game User Research, 2013

[6] Collaborative Software Development in Ten Years: Diversity, Tools, and Remix Culture
Thomas Zimmermann, Christian Bird
Proceedings of the CSCW Workshop on the Future of Collaborative Software Development, 2012

[7] Data-Driven Games User Research
Thomas Zimmermann, Bruce Phillips, Nachiappan Nagappan, Chuck Harrison
Proceedings of the CHI Workshop on Game User Research, 2012

[8] The Inductive Software Engineering Manifesto: Principles for Industrial Data Mining
Tim Menzies, Christian Bird, Thomas Zimmermann, Wolfram Schulte, Ekrem Kocaganeli
Proceedings of the International Workshop on Machine Learning Technologies in Software Engineering, 2011

[9] An Explanatory Analysis on Eclipse Beta-Release Bugs Through In-Process Metrics
Ayse Tosun Misirli, Brendan Murphy, Thomas Zimmermann, Ayse Basar Bener
Proceedings of the 8th International Workshop on Software Quality, 2011

[10] A Theory of Branches as Goals and Virtual Teams
Christian Bird, Thomas Zimmermann, Alex Teterev
Proceedings of the 4th International Workshop on Cooperative and Human Aspects of Software Engineering, 2011

[11] Analytics for Software Development

Raymond P.L. Buse, Thomas Zimmermann
Proceedings of the FSE/SDP Workshop on the Future of Software Engineering Research (FoSER), 2010, ACM Press

[12] Social Media for Software Engineering
Andrew Begel, Robert DeLine, Thomas Zimmermann
Proceedings of the FSE/SDP Workshop on the Future of Software Engineering Research (FoSER), 2010, ACM Press

[13] Keeping Up With Your Friends: Function Foo, Library Bar.DLL, and Work Item 24
Andrew Begel, Thomas Zimmermann
Proceedings of the First Workshop on Web 2.0 for Software Engineering (Web2SE), 2010, pp. 20–23, ACM Press

[14] Mining Usage Expertise from Version Archives
David Schuler, Thomas Zimmermann
Proceedings of the Fifth International Working Conference on Mining Software Repositories, 2008, pp. 121–124, ACM Press

[15] Extracting Structural Information from Bug Reports
Nicolas Bettenburg, Rahul Premraj, Thomas Zimmermann, Sunghun Kim
Proceedings of the Fifth International Working Conference on Mining Software Repositories, 2008, pp. 27–30, ACM Press

[16] Quality of Bug Reports in Eclipse
Nicolas Bettenburg, Sascha Just, Adrian Schröter, Cathrin Weiß, Rahul Premraj, Thomas Zimmermann
Proceedings of the 2007 OOPSLA Workshop on Eclipse Technology eXchange (ETX), 2007, pp. 21–25, ACM Press

[17] How Documentation Evolves Over Time
Daniel Schreck, Valentin Dallmeier, Thomas Zimmermann
Proceedings of the 9th International Workshop on Principles of Software Evolution (IWPSE), 2007, pp. 4–10, ACM Press

[18] 🏆 🚀🚀 How Long will it Take to Fix This Bug?
Cathrin Weiß, Rahul Premraj, Thomas Zimmermann, Andreas Zeller
Proceedings of the Fourth Workshop on Mining Software Repositories (MSR), 2007, IEEE Computer Society
MSR Most Influential Paper Award

[19] Mining Workspace Updates in CVS
Thomas Zimmermann
Proceedings of the Fourth Workshop on Mining Software Repositories (MSR), 2007, IEEE Computer Society

[20] 🚀🚀 Predicting Defects for Eclipse
Thomas Zimmermann, Rahul Premraj, Andreas Zeller
Proceedings of the 3rd International Workshop on Predictor Models in Software Engineering (PROMISE), 2007, IEEE Computer Society

[21] 🎖 Fine-grained Processing of CVS Archives with APFEL
Thomas Zimmermann
Proceedings of the 2006 OOPSLA Workshop on Eclipse Technology eXchange (ETX), 2006, pp. 16–20, ACM Press
Best Student Paper Award

[22] HAM: Cross-Cutting Concerns in Eclipse
Silvia Breu, Thomas Zimmermann, Christian Lindig
Proceedings of the 2006 OOPSLA Workshop on Eclipse Technology eXchange (ETX), 2006, pp. 21–24, ACM Press

[23] Mining Version Archives for Co-changed Lines
Thomas Zimmermann, Sunghun Kim, E. James Whitehead Jr. Andreas Zeller
Proceedings of the Third International Workshop on Mining Software Repositories (MSR), 2006, pp. 72–75, ACM Press

[24] Mining Eclipse for Cross-Cutting Concerns
Silvia Breu, Thomas Zimmermann, Christian Lindig
Proceedings of the Third International Workshop on Mining Software Repositories (MSR), 2006, pp. 94–97, ACM Press

[25] TA-RE: An Exchange Language for Mining Software Repositories
Sunghun Kim, Thomas Zimmermann, Miryung Kim, Ahmed E. Hassan, Audris Mockus, Tudor Girba, Martin Pinzger, E. James Whitehead Jr. Andreas Zeller
Proceedings of the Third International Workshop on Mining Software Repositories (MSR), 2006, pp. 22–25, ACM Press

[26] Was Software-Archive erzählen
Stephan Diehl, Andreas Zeller, Thomas Zimmermann

Software Engineering 2006. Fachtagung des GI-Fachbereichs Softwaretechnik, 2006, pp. 39–50, Springer

[27] HATARI: Raising Risk Awareness (Research Demonstration)
Jacek Sliwerski, Thomas Zimmermann, Andreas Zeller
Proceedings of the 10th European Software Engineering Conference held jointly with 13th ACM SIGSOFT International Symposium on Foundations of Software Engineering (ESEC/FSE), 2005, pp. 107–110, ACM

[28] 🏆 🎣🎣🎣 When do Changes Induce Fixes?
Jacek Sliwerski, Thomas Zimmermann, Andreas Zeller
Proceedings of the Second International Workshop on Mining Software Repositories (MSR), 2005, pp. 24–28, ACM Press
MSR Most Influential Paper Award. "Prior software quality research focused on flagging files with bugs, but the SZZ algorithm by Sliwerski et al. was the first work to focus on flagging faulty changes. By flagging bugs before they get into the code, followup research has taken a preventive role instead of a catchup role."

[29] 🏆 🎣 Preprocessing CVS Data for Fine-grained Analysis
Thomas Zimmermann, Peter Weißgerber
Proceedings of the First International Workshop on Mining Software Repositories (MSR), 2004, pp. 2–6, IEEE Computer Society
MSR Most Influential Paper Award. "For clearly and engagingly presenting practices that stood at the core of early MSR approaches, thus lowering the entry barrier for the researchers worldwide to join this emerging field."

[30] How History Justifies System Architecture (or Not)
Thomas Zimmermann, Stephan Diehl, Andreas Zeller
Proceedings of the 6th International Workshop on Principles of Software Evolution (IWPSE), 2003, pp. 73–83, IEEE Computer Society

[31] Visualizing Memory Graphs
Thomas Zimmermann, Andreas Zeller
Software Visualization, International Seminar Dagstuhl Castle, Germany, May 20-25, 2001, Revised Lectures, 2002, Springer

Book Chapters

[1] Developers' Diverging Perceptions of Productivity
André N. Meyer, Gail C. Murphy, Thomas Fritz, Thomas Zimmermann
Rethinking Productivity in Software Engineering, 2019, Apress open / Springer

[2] Fitbit for Developers: Self-Monitoring at Work
André N. Meyer, Thomas Fritz, Thomas Zimmermann
Rethinking Productivity in Software Engineering, 2019, Apress open / Springer

[3] One size does not fit all
T. Zimmermann
Perspectives on Data Science for Software Engineering, 2016, Morgan Kaufmann

[4] Card-sorting: From text to themes
T. Zimmermann
Perspectives on Data Science for Software Engineering, 2016, Morgan Kaufmann

[5] DynaMine: Finding Usage Patterns and their Violations by Mining Software Repositories
V. Benjamin Livshits, Thomas Zimmermann
Mining Software Specifications: Methodologies and Applications, 2011, CRC Press

[6] The Art of Collecting Bug Reports
Rahul Premraj, Thomas Zimmermann
Making Software: What Really Works, and Why We Believe It, 2010, O'Reilly Media

[7] Predicting Bugs from History
Thomas Zimmermann, Nachiappan Nagappan, Andreas Zeller
Software Evolution, 2008, Springer

[8] Integrated Development with Eclipse 3.0
Thomas Zimmermann
Essential Open Source Toolset: Programming with Eclipse, JUnit, CVS, Bugzilla, Ant, Tcl/Tk and More, 2005, John Wiley & Sons

Patents

[1]   Predicting software build errors
      Christian Bird, Thomas Zimmermann

[2]   Analyzing power consumption in mobile computing devices
      Thomas Zimmermann, Christian Bird, Nachiappan Nagappan, Syed Masum Emran, Thirumalesh Bhat, Ashish Gupta

[3]   Software development automated analytics
      Thomas Zimmermann, Christian Bird, Nachiappan Nagappan

[4]   Discovering and exploiting relationships in software repositories
      Andrew Begel, Thomas Zimmermann, Yit Phang Khoo, Gina Venolia

[5]   Predicting defects in code
      Nachiappan Nagappan, Thomas Zimmermann, Brendan Murphy, Andreas Zeller

Professional Activities

General Chair

1. International Conference on AIware (AIware 2023) – General Co-Chair

2. International Conference on Automated Software Engineering (ASE 2019) – General Chair

3. International Symposium on Foundations of Software Engineering (FSE 2016) – General Chair

4. International Working Conference on Mining Software Repositories (MSR 2013) – General Chair

Program Committee Chair

1. ACM/IEEE International Conference on Software Engineering (ICSE 2026)

2. 14th Asia-Pacific Symposium on Internetware (Internetware 2023)

3. ACM/IEEE International Conference on AI Engineering – Software Engineering for AI (CAIN 2022)

4. ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2020)

5. International Conference on Software Maintenance and Evolution (ICSME 2017)

6. IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2016) – Future of Software Engineering Track; Industry Track

7. International Conference on Software Engineering (ICSE 2015) – Software Engineering in Practice Track

8. IEEE Intl. Conference on Software Testing, Verification and Validation (ICST 2015) – Testing in Practice Track

9. IEEE International Conference on Software Maintenance (ICSM 2012) – Industry Track

10. Working Conference on Mining Software Repositories (MSR 2011)

11. Working Conference on Mining Software Repositories (MSR 2010)

12. IEEE International Conference on Program Comprehension (ICPC 2010) – Industry Track

13. Working Conference on Reverse Engineering (WCRE 2008) – Tool demonstrations

Program Committee Member

1. International Conference on Software Engineering (ICSE 2025)

2. ACM/IEEE International Conference on AI Engineering – Software Engineering for AI (CAIN 2024)

3. First International Workshop on Large Language Models for Code (LLM4Code 2024)

4. International Conference on Mining Software Repositories (MSR 2022)

5. ACM/IEEE International Conference on AI Engineering – Software Engineering for AI (CAIN 2023)

6. International Conference on Cooperative and Human Aspects of Software Engineering (CHASE 2022)

7. International Conference on Software Engineering (ICSE 2022) – Journal First

8. ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2021)

9. International Conference on Software Engineering (ICSE 2021) – Research Track (Area Chair)

10. ACM SIGPLAN International Workshop on the State of the Art in Program Analysis (SOAP 2021)

11. International Workshop on Evaluation and Analysis of Recommender Systems in Software Engineering (WEARS 2021)

12. International Workshop on Bots in Software Engineering (BotSE 2021)

13. International Workshop on AI Engineering (WAIN 2021)

14. International Conference on Software Engineering (ICSE 2020) – Research Track, Journal First

15. International Symposium on Software Testing and Analysis (ISSTA 2020)

16. International Conference on Mining Software Repositories (MSR 2020) – Research Track, Registered Reports

17. International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE 2020)

18. International Workshop on Knowledge Graph for Software Engineering (KG4SE 2020)

19. International Conference on Software Analysis, Evolution and Reengineering (SANER 2020) – Journal First

20. International Workshop on Empirical Software Engineering in Practice (IWESEP 2019)

21. International Conference on Software Maintenance and Evolution (ICSME 2019) – Doctoral Symposium

22. Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2019)

23. ROSE Festival #3: Recognizing and Rewarding Open Science in Software Engineering (2019)

24. International Conference on Software Engineering (ICSE 2019) – Journal First

25. Symposium on Eye Tracking Research & Applications (ETRA 2019)

26. International Conference on Software and Systems Reuse (ICSR 2019)

27. International Conference on Evaluation and Assessment in Software Engineering (EASE 2019)

28. International Conference on Mining Software Repositories (MSR 2019)

29. First international workshop on Empirical Answers to Questions of Software Engineering

30. International Conference on Software Analysis, Evolution and Reengineering (SANER 2019) – Journal First

31. Innovations in Software Engineering Conference (ISEC 2019)

32. ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2018) – Research Track, Journal First

33. International Symposium on Software Testing and Analysis (ISSTA 2018)

34. International Conference on Software Engineering (ICSE 2018) – Research Track, New and Emerging Ideas Track

35. International Conference on Mining Software Repositories (MSR 2018)

36. International Conference on Software Reuse (ICSR 2018)

37. International Workshop on Empirical Software Engineering in Practice (IWESEP 2018)

38. International Symposium on Empirical Software Engineering and Measurement (ESEM 2018) – Journal First

39. International Workshop on Anti-Patterns for Software Analytics (APSA 2018)

40. Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2017) – Doctoral Symposium

41. International Workshop on Mobile Market Analytics (WAMA 2017)

42. International Conference on Automated Software (ASE 2017) – Tool Track

43. International Workshop on Establishing a Community-Wide Infrastructure for Architecture-Based Software Engineering (ECASE 2017)

44. International Workshop on Empirical Software Engineering in Practice (IWESEP 2017)

45. International Working Conference on Source Code Analysis and Manipulation (SCAM 2016)

46. International Conference on Software Maintenance and Evolution (ICSME 2016)

47. International Conference on Automated Software (ASE 2016)

48. International Conference on Mining Software Repositories (MSR 2016)

49. International Workshop on Games and Software Engineering (GAS 2016)

50. International Workshop on Bringing Architecture Design Thinking into Developers' Daily Activities (BRIDGE 2016)

51. International Workshop on Empirical Software Engineering in Practice (IWESEP 2016)

52. International Conference on Software Engineering (ICSE 2016)

53. India Software Engineering Conference (ISEC 2016)

54. Asia-Pacific Software Engineering Conference (APSEC 2015) – Industry Track

55. Onward! Symposium on New Ideas in Programming and Reflections on Software (Onward! Papers 2015)

56. International Working Conference on Source Code Analysis and Manipulation (SCAM 2015)

57. International Conference on Automated Software Engineering (ASE 2015) – Expert Review Panel Member

58. International Symposium on Empirical Software Engineering and Measurement (ESEM 2015)

59. International Conference on Software Maintenance and Evolution (ICSME 2015)

60. Working Conference on Mining Software Repositories (MSR 2015)

61. International Conference on Program Comprehension (ICPC 2015)

62. International Conference on Software Testing, Verification, and Validation (ICST 2015)

63. International Conference on Software Analysis, Evolution and Reengineering (SANER 2015)

64. International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE 2015)

65. International Workshop on Software Architecture and Metrics (SAM 2015)

66. International Workshop on Faults and Failures in Large Software Systems (COUFLESS 2015)

67. International Workshop on Empirical Software Engineering in Practice (IWESEP 2014)

68. IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM 2014)

69. International Symposium on the Foundations of Software Engineering (FSE 2014)

70. International Conference on Automated Software Engineering (ASE 2014) – External Review Panel Member

71. International Working Conference on Mining Software Repositories (MSR 2014)

72. International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE 2014)

73. International Conference on Software Engineering (ICSE 2014) – New Ideas and Emerging Results Track, Student Research Competition

74. International Conference on Software Testing, Verification, and Validation (ICST 2014)

75. International Workshop on Empirical Software Engineering in Practice (IWESEP 2013)

76. International Conference on Computer Science and Software Engineering (CASCON 2013)

77. International Conference on Automated Software Engineering (ASE 2013) – Expert Review Panel Member

78. International Workshop on Software Mining (2013)

79. International Conference on Software Maintenance (ICSM 2013)

80. International Symposium on Empirical Software Engineering and Measurement (ESEM 2013)

81. ACM SIGPLAN Conference on Systems, Programming, Languages and Applications (SPLASH/OOPSLA 2013) – External Review Committee Member

82. International Conference on Program Comprehension (ICPC 2013)

83. ACM SIGPLAN Conference on Systems, Programming, Languages and Applications (SPLASH/OOPSLA 2012)

84. International Symposium on Software Reliability Engineering (ISSRE 2012)

85. International Conference on Software Maintenance (ICSM 2012)

86. International Symposium on Empirical Software Engineering and Measurement (ESEM 2012)

87. International Conference on Predictive Models in Software Engineering (PROMISE 2012)

88. International Working Conference on Mining Software Repositories (MSR 2012)

89. International Workshop on Software Quality (WoSQ 2012)

90. International Workshop on Empirical Software Engineering in Practice (IWESEP 2012)

91. Workshop on Developing Tools as Plug-ins (TOPI 2012)

92. International Workshop on Search-driven development: Users, Infrastructure, Tools and Evaluation (SUITE 2012)

93. International Conference on Quality Software (QSIC 2012)

94. International Workshop on Software Mining (2012)

95. International Workshop on Regression Testing (2012)

96. European Conference on Software Maintenance and Reengineering (CSMR)

97. ACM Conference on Recommender Systems (RecSys 2011)

98. International Symposium on Software Reliability Engineering (ISSRE 2011)

99. International Conference on Software Maintenance (ICSM 2011)

100. International Conference on Predictor Models in Software Engineering (PROMISE 2011)

101. International Symposium on Empirical Software Engineering and Measurement (ESEM 2011)

102. International Symposium on Software Testing and Analysis (ISSTA 2011)

103. European Conference on Object-Oriented Programming (ECOOP 2011)

104. International Conference on Software Engineering (ICSE 2011)

105. International Conference on Quality Software (QSIC 2011)

106. International Workshop on Web 2.0 for Software Engineering (Web2SE 2011)

107. International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE 2011)

108. International Workshop on Search-Driven Software Development (SUITE 2011)

109. European Conference on Software Maintenance and Reengineering (CSMR 2011)

110. International Workshop on Empirical Software Engineering in Practice (IWESEP 2010)

111. International Symposium on Software Reliability Engineering (ISSRE 2010)

112. International Symposium on Software Visualization (SoftVis 2010)

113. ACM Conference on Recommender Systems (RecSys 2010)

114. International Conference on Software Maintenance (ICSM 2010)

115. International Conference on Predictor Models in Software Engineering (PROMISE 2010) – research track and student symposium

116. International Symposium on Empirical Software Engineering and Measurement (ESEM 2010)

117. International Conference on the Quality of Information and Communications Technology (QUATIC-QE 2010) – track Quality Evolution in ICT

118. International Conference on Quality Software (QSIC 2010)

119. International Workshop on Search-Driven Software Development (SUITE 2010)

120. International Workshop on Web 2.0 for Software Engineering (Web2SE 2010)

121. International Symposium on Software Testing and Analysis (ISSTA 2010) – demo and tool track

122. European Conference on Software Maintenance and Reengineering (CSMR 2010)

123. International Workshop on Knowledge Collaboration in Software Development (KCSD 2009)

124. Workshop on FAMIX and Moose in Reengineering (FAMOOSr 2009)

125. ACM International Workshop on Data-intensive Software Management and Mining (DSMM 2009)

126. ACM Conference on Recommender Systems (RecSys 2009)

127. Joint International Workshop on Principles of Software Evolution and International ERCIM Workshop on Software Evolution (IWPSE-EVOL 2009)

128. Intl. Symposium on Empirical Software Engineering and Measurement (ESEM 2009) – short papers

129. Workshop on Knowledge Engineering in Global Software Development (KNOWING 2009)

130. International Conference on Predictor Models in Software Engineering (PROMISE 2009)

131. Working Conference on Mining Software Repositories (MSR 2009)

132. International Workshop on Public Data about Software Development(WoPDaSD 2009)

133. Workshop on Collaboration and Knowledge Sharing in Software Development Teams (SofTEAM 2009)

134. European Conference on Software Maintenance and Reengineering (CSMR 2009)

135. International Symposium on Software Reliability Engineering (ISSRE 2008)

136. International Workshop on Managing Requirements Knowledge (MaRK 2008)

137. Workshop on FAMIX and Moose in Reengineering (FAMOOSr 2008)

138. International Workshop on Advanced Software Development Tools and Techniques (WASDeTT2008)

139. Working Conference on Mining Software Repositories (MSR 2008)

140. European Conference on Software Maintenance and Reengineering (CSMR 2008)

141. International Workshop on Predictor Models in Software Engineering (PROMISE 2008)

142. Workshop zur Integration von Prozessen und Werkzeugen im agilen Zeitalter (INTEGRA 2008)

143. International Symposium on Software Reliability Engineering (ISSRE 2007) – student track

144. International Workshop on Public Data about Software Development (WoPDaSD 2007)

145. International Workshop on Mining Software Repositories (MSR 2006)

Organized Workshops and Seminars

1. FM+SE Vision 2030: Impact of Foundation Models on the Software Industry and on Software Engineering, Mexico City (2023) – Co-organizer

2. Shonan Seminar No. 191: Human Aspects in Software Engineering (2023) – Co-organizer

3. Dagstuhl Seminar 22442: Toward Scientific Evidence Standards in Empirical Computer Science (2022) – Co-organizer

4. Dagstuhl Seminar 20091: SE4ML - Software Engineering for AI-ML-based Systems (2020) – Co-organizer

5. International Workshop on Software Engineering Research and Industrial Practice (SER&IP 2020) – Co-organizer

6. Dagstuhl Seminar 19471: BOTse: Bots in Software Engineering (2019) – Co-organizer

7. ROSE Festival #2: Recognizing and Rewarding Open Science in Software Engineering (2019) – Co-organizer

8. ROSE Festival #1: Recognizing and Rewarding Open Science in Software Engineering (2018) – Co-organizer

9. Dagstuhl Seminar 17102: Rethinking Productivity in Software Engineering (2017) – Co-organizer

10. Software Engineering Mix Volume 2: Large-scale Data Analysis of Software Repositories (2016) – Co-organizer

11. International Workshop on BIG Data Software Engineering (BigDSE 2016) – Co-organizer

12. Software Engineering Mix (2015) – Co-organizer

13. International Workshop on BIG Data Software Engineering (BigDSE 2015) – Co-organizer

14. Dagstuhl Seminar 14261: Software Development Analytics (2014) – Co-organizer

15. International Workshop on Data Analysis Patterns in Software Engineering (DAPSE 2013) – Co-organizer

16. International Workshop on Recommender Systems for Software Engineering (RSSE 2012) – Co-organizer

17. International Workshop on Recommender Systems for Software Engineering (RSSE 2010) – Co-organizer

18. International Workshop on Defects in Large Software Systems (DEFECTS 2009) – Co-organizer

19. International Workshop on Recommender Systems for Software Engineering (RSSE 2008) – Co-organizer

20. International Workshop on Defects in Large Software Systems (DEFECTS 2008) – Co-organizer

21. ICSM Working Session on Myths in Software Engineering (MythSE 2007) – Co-organizer

Other Roles on Organizing Committees

1. International Conference on Software Engineering (ICSE 2019) – Finance Chair

2. International Conference on Software Engineering (ICSE 2018) – Co-located Events Chair

3. International Conference on Software Engineering (ICSE 2017) – Data Chair

4. Analyzing software data: After the gold rush (a goldfish-bowl panel at ICSE 2014) – Co-organizer

5. International Conference on Software Engineering (ICSE 2014) – Social Media Chair

6. International Conference on Software Engineering (ICSE 2013) – Finance Chair

7. Software development analytics (a goldfish-bowl panel at ICSE 2012) – Co-organizer

8. ACM Student Research Competition at ICSE 2011 (ACM-SRC 2011) – Coordinator

9. ACM Student Research Competition at ICSE 2010 (ACM-SRC 2010) – Coordinator

10. Special Issue of IEEE Software on Mining Software Archives (2009) – Guest editor

11. International Symposium on Software Reliability Engineering (ISSRE 2008) – Publicity chair

12. Working Conference on Mining Software Repositories (MSR 2008) – Local arrangement chair

13. MSR Mining Challenge 2007 – Organizer

14. IEEE Region 8 Student Branch Congress (SBC 2004) – Organizing Committee member

15. German IEEE Student Branch Meeting (SBM 2002) – Organizing Committee member

Award Committees

1. IBM Conference of the Center for Advanced Studies on Collaborative Research (CASCON), Most Infuential Paper Award Committee – 2023

2. ACM/IEEE International Conference on Mining Software Repositories (MSR), FOSS Impact Paper Award – 2022

3. ACM/IEEE International Conference on Mining Software Repositories (MSR), Most Influential Paper Award (Co-Chair) – 2021

4. ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), Test of Time Paper Award – 2020

5. ACM/IEEE International Conference on Mining Software Repositories (MSR), Most Influential Paper Award (Co-Chair) – 2020

6. IEEE Technical Council on Software Engineering (TCSE), Distinguished Educator Award – 2020

7. IEEE Technical Council on Software Engineering (TCSE), Distinguished Service Award – 2019

Steering Committees

1. International Conference on AIware (AIware) – since 2024

2. Asia-Pacific Symposium on Internetware (Internetware) – since 2024

3. ACM/IEEE International Conference on AI Engineering – Software Engineering for AI (CAIN) – since 2022

4. ACM/IEEE International Conference on Automated Software Engineering (ASE) – since 2019

5. ACM/IEEE International Conference on Software Engineering (ICSE) – since 2018

6. ACM International Conference on the Foundations of Software Engineering (FSE) – 2017–2027

7. ACM/IEEE International Conference on Mining Software Repositories (MSR) – since 2010

8. IEEE International Conference on Software Maintenance and Evolution (ICSME) – 2017–2020

Other Leadership Roles

1. Chair of the ACM Special Interest Group on Software Engineering (SIGSOFT) – 2018–2024

2. Member of the ACM Council as SGB Council Representative – 2021–2025

3. Chair of the Steering Committee of the ACM/IEEE International Conference on Mining Software Repositories (MSR) – since 2014

4. Member (2022) and Co-Chair (2023, 2024) of the Selection Committee for the Heidelberg Laureate Forum

Editorial Activities

Editor in Chief

1. Empirical Software Engineering – since 2014

Editorial Boards

1. Empirical Software Engineering – Editorial Board Member, 2012–2014

2. IEEE Transactions on Software Engineering – Editorial Board Member, 2014–2020

3. IEEE Software – Associate Editor for Development Infrastructures and Tools, since 2011

4. Journal of Software: Evolution and Process – Advisory Editorial Board Member, since 2012

5. Journal of Software and Systems – Editorial Board Member, since 2014

Edited Books

1. Caitlin Sadowski and Thomas Zimmermann, editors. *Rethinking Productivity in Software Engineering*. Apress, 2018. Open Access. – **Downloaded 500K times**

2. Tim Menzies, Laurie Williams, and Thomas Zimmermann, editors. *Perspectives on Data Science for Software Engineering*. Morgan Kaufmann, 2016.

3. Christian Bird, Tim Menzies, and Thomas Zimmermann, editors. *The Art and Science of Analyzing Software Data*. Morgan Kaufmann, 2015.

4. Martin P. Robillard, Walid Maalej, Robert J. Walker, and Thomas Zimmermann, editors. *Recommendation Systems in Software Engineering*. Springer, 2014.

Edited Special Issues

1. Marian Petre, Jim Buckley, Luke Church, Margaret-Anne D. Storey, Thomas Zimmermann: *Behavioral Science of Software Engineering*, IEEE Software 37(6), November-December 2020.

2. Tim Menzies, Thomas Zimmermann: *Software Analytics: So What?* IEEE Software 30(4), July-August 2013.

3. Tim Menzies, Thomas Zimmermann: *The Many Faces of Software Analytics.* IEEE Software 30(5), September-October 2013.

4. Tao Xie, Thomas Zimmermann, Arie van Deursen: Special Issue on *Mining Software Repositories* with invited papers from the MSR 2011 conference. Empirical Software Engineering 18(6), December 2013.

5. Jim Whitehead, Thomas Zimmermann: Special Issue on *Mining Software Repositories* with invited papers from the MSR 2010 conference. Empirical Software Engineering 17(4-5), August 2012.

6. Nachiappan Nagappan, Andreas Zeller, Thomas Zimmermann. *Mining Software Archives*. IEEE Software 26(1), January-February 2009.

Invited Talks

1. *Beyond Code: Helping Software Teams with LLMs*
   FM+SE School, Mexico City (with Rob DeLine), November 2023.

2. *AI and ML: The Software Engineers of the Future*
   U.S. Leadership in Software Engineering & AI Engineering: Critical Needs & Priorities (keynote), June 2023.

International Conference on Software Engineering (invited talk in the Future of Software Engineering track), May 2023.

3. *Measuring developer productivity with the SPACE framework*
   1st Meta Engineering Productivity Summit, November 2022.

4. *Everything Everywhere All at Once: The New Hybrid Future of Software Engineering*
   International Symposium on Empirical Software Engineering and Measurement (keynote), September 2022.

5. *Measuring Developer Productivity and the New Future of Work*
   Innovations in Software Engineering Conference, Gandhinagar, India (keynote), February 2022.

6. *SPACE: Measuring Developer Productivity and the New Future of Work*
   Craft Conference (with Brian Houck), June 2021.

7. *A Tale of Two Cities: Working from Home During the COVID-19 Pandemic*
   Southern California Software Engineering Symposium (keynote), February 2021.

8. *Homo Softwarus 2.0: The Intelligent Software Engineer*
   18th National Software Application Conference, Hangzhou, China (keynote), November 2019.

9. *Decoding Software Productivity with Data Science*
   Software Engineering School: Intelligent Software Engineering, Hangzhou, China, November 2019.

10. *Cross project defect prediction*
    ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (Test of Time Paper talk), August 2019.

11. *Strawberry Shorttake with Burdball: A Decade of Software Analytics*
    International Workshop on Realizing Artificial Intelligence Synergies in Software Engineering (keynote), May 2019

12. *Analyze That: Data Science and Software Engineering*
    LASER Foundation: International Workshop on Empirical Answers to Questions of Software Engineering (keynote), November 2018

13. *Software Productivity Decoded: How Data Science Helps to Achieve More*
    Delft University of Technology (Prof. Andy Zaidman), November 2018.
    York University, September 2018.
    International Conference on Software and System Processes (keynote), July 2017.
    Asia-Pacific Symposium on Internetware (keynote), September 2017.
    CHOOSE Forum on Software and Data Engineering, November 2017.
    University of California, Los Angeles (Prof. Miryung Kim), October 2017.

14. *Alice in Dataland - Reuse for Data Science in Software Teams*
    International Conference on Software Reuse (keynote), May 2017.

15. *How Long will it Take to Fix This Bug? – Ten Years Later*
    International Conference on Mining Software Repositories (Most Influential Paper talk), May 2017.

16. *The Sound of Data: Make Great Software!*
    International Conference on Software Security and Reliability (keynote), August 2016.

17. *The Lenses of Empirical Software Engineering*
    International Symposium on Empirical Software Engineering and Measurement (keynote), October 2015.

18. *Data Ninja III: The Rise of Data Scientists in the Software Industry*
    Florida State University (Prof. Sonia Haiduc), October 2016.
    Brazilian Symposium on Software Engineering (keynote), September 2015.

19. *When do Changes Induce Fixes – Ten Years Later*
    International Working Conference on Mining Software Repositories, Most Influential Paper talk, May 2015.

20. *Data Hard with a Vengeance*
    International Symposium on the Foundations of Software Engineering (invited talk), November 2014.

21. *Large Scale Analysis of Software Repositories in Industry: Experiences from the CodeMine Project*
International Working Conference on Source Code Analysis and Manipulation (keynote), September 2014.

22. *Insight 2.0: Beyond the Repository.*
Next Generation of Mining Software Repositories, November 2014.

23. *Mining Version Histories to Guide Software Changes*
International Conference on Software Engineering, Most Influential Paper talk, June 2014.

24. *Hello Clippy! Lessons Learned from RSSEs*
International Workshop on Recommendation Systems for Software Engineering (keynote), June 2014.

25. *Confessions of an Industrial Researcher: A Typical Bollywood Story*
International Workshop on Software Engineering Research and Industrial Practices (keynote), June 2014.

26. *Preprocessing CVS Data for Fine-Grained Analysis – Ten Years Later*
International Working Conference on Mining Software Repositories, Most Influential Paper talk, May 2014.

27. *Software Analytics for Digital Games* MSR Asia Summit, October 2013.
University of Utah, January 2014.
Microsoft Research SEIF Day, July 2014.
Queen's University (Prof. Jenny Zou), October 2014.
Interntaional Workshop on Games and Software Engineering (keynote), May 2015.

28. *Software Analytics = Sharing Information*
International Conference on Predictive Models in Software Engineering (keynote), October 2013.

29. *Analytics for Smarter Software Development*
International Conference on Computer Science and Software Engineering (keynote), November 2012. IEEE Software Experts Summit, Bangalore, India, May 2014.

30. *Empirical Software Engineering at Microsoft*
Saarland University (Prof. Andreas Zeller), September 2010.
European Microsoft Innovation Center (EMIC), September 2010.
University of Texas at Austin (guest lecture, Prof. Sarfraz Khurshid), October 2010.
IIIT Delhi (invited talk, Prof. Pankaj Jalote), September 2010.
International Workshop on Empirical Software Engineering in Practice (Keynote), December 2010.
University of Passau (invited talk, Prof. Dirk Beyer), February 2011.
Microsoft Research Software Summit, Paris (with Chris Bird), April 2011.
University of Lugano (invited talk, Prof. Michele Lanza), October 2011.
University of Zurich (invited talk, Prof. Harald Gall), October 2011.
University of Alabama (invited talk, Prof. Jeff Gray), April 2012.
Queen's University (invited talk, Prof. Jim Cordy), April 2013.

31. *Social Networking + Analytics for Software Development*
CHOOSE Forum, November 2011.

32. *The Art of Collecting Bug Reports*
Microsoft Research Asia, Beijing (invited talk, Dr. Dongmei Zhang), November 2010.
Hong Kong University of Science and Technology (invited talk, Prof. Sung Kim), February 2011.

33. *Analytics for Software Development*
International Conference on Software Maintenance, September 2010.

34. *Mining Version Histories to Guide Software Changes*
University of Texas at Austin (invited talk, Prof. Miryung Kim), October 2010.

35. *Quality of Bug Reports in Open Source*.
Dagstuhl Seminar on Mining Programs and Processes, December 2007.

36. *Mining Software Archives to Support Software Development*
Microsoft Research (job application talk), March 2007.
Jahrestreffen des Beirat der Universitätsprofessoren (GIBU 2007), April 2007

Iowa State University (job application talk), April 2007.
Massachusetts Institute of Technology (Prof. Michael Ernst), April 2007.
Rutgers University (job application talk), April 2007.
University of Calgary (job application talk), May 2007.

37. *How Dependencies Predict Failures*.
University of Victoria (Prof. Ahmed E. Hassan), September 2006.

38. *Mining Usage Patterns from Version Archives*.
McGill University (Prof. Martin Robillard), August 2006.

39. *Mining the History of Method Calls*.
University of British Columbia (Prof. Gail Murphy), July 2006

40. *Learning from Mistakes*.
Katholische Universität Eichstätt-Ingolstadt (Prof. Stephan Diehl), December 2005.

41. *Don't Program on Fridays*.
Dagstuhl Seminar on Multi-Version Program Analysis, June 2005.

42. *eRose - Guiding programmers in Eclipse*.
CHOOSE Forum on Tools for Managing Software Complexity, April 2005.

Research Funding

1. NSERC. Collaborative Research Grant (with Prof. Frank Maurer): CDN $63 000 (my share, 2008-2011)

2. NSERC. Discovery Grant: CDN $17 700/year (granted for the period 2008-2012, but held only for one year because of my move to Microsoft Research)

3. NSERC. Research Tools and Instruments Grant (with Prof. Frank Maurer and Prof. Jonathan Sillito): CDN $32 125 (2008)

4. IBM. Jazz Faculty Grant: US $25 000 (2007)

5. Microsoft Research. Unrestricted Gift: US $10 000 (2007)

6. University of Calgary. Startup Grant: CDN $60 000 (2007-2008)

Teaching

1. *Modifiability of Large-Scale Software (SENG 531).* Lecture and Tutorial (Undergraduate Level).
University of Calgary, Winter 2008.

2. *Software Mining* (with Rahul Premraj). Lecture and Tutorial (Graduate Level).
Universität des Saarlandes, Summer 2007.

   The students worked in groups of four on research problems defined by Dr. Premraj and myself. The results of the project on "Quality of Bug Reports" were published at the ETX 2007 workshop and the FSE 2008 conference (acceptance rate 20%, ACM SIGSOFT Distinguished Paper).

   http://www.st.cs.uni-sb.de/edu/softmine2007/

3. *Software Evolution* (with Andreas Zeller). Seminar. Universität des Saarlandes, Winter 2004/2005.

   http://www.st.cs.uni-sb.de/edu/seminare/2004/

Education

Ph.D. in Computer Science, Saarland University, Saarbrücken, Germany   2004–2008
Ph.D. thesis: *Changes and Bugs – Mining and Predicting Development Activities.*
Final Grade: summa cum laude. Ph.D. advisor: Andreas Zeller
Best Dissertation Award at IEEE International Conference on Software Maintenance (ICSM 2009)

Diploma in Computer Science (Dipl.-Inform.), University of Passau, Germany   1998–2004
Diploma thesis: *Mining Version Archives to Guide Software Change.*