

Research Statement

My research falls into what I call the *triangle of empirical software engineering*. From the beginning of my career, I have been interested in leveraging *empirical research* to study phenomena in *software engineering practice*, with the goal of deriving *actionable insights* and requirements for *better tool support*.

The guiding theme of my research is the idea that *thoroughly analyzing and understanding the state-of-practice is an essential first step towards improving how software is being developed*. Too often, decisions in software projects are opinion-based rather than data-informed. Most research projects I work on have an interdisciplinary angle, including work with connections to psychology, law, social science, and management. I consider myself a *methods pluralist*, combining qualitative methods such as interviews and observational studies with large-scale quantitative data mining of open-source projects, industrial datasets, and curated corpora such as SOTorrent, the official MSR 2019 mining challenge dataset that we maintained between 2017 and 2020 [C5, S7]. I follow *open science and open data* practices by publishing data, analysis scripts, and paper preprints whenever possible.

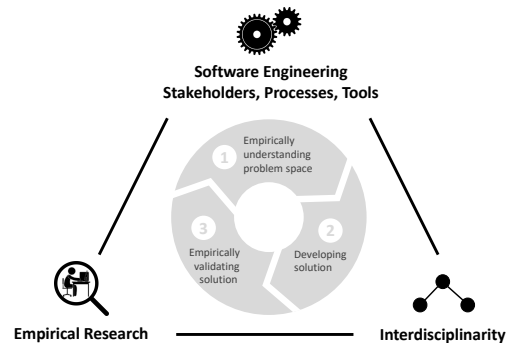
I have successfully applied this philosophy in industry as well: As Principal Expert for Empirical Software Engineering at SAP, I regularly utilized empirical methods to identify problems with existing development processes and tools, deriving guidelines and requirements for better tooling. After moving back to academia, I have been continuing this line of work first at the University of Bayreuth and now at Heidelberg University, with a strong focus on *academically excellent but practically relevant* research. Our ongoing collaboration with SAP on test flakiness exemplifies this approach. Our work on timeout-induced flakiness [C10, C11] directly influenced how SAP HANA handles test timeouts, the latter receiving a Best Paper Award at ESEM 2024, and we recently extended this work to study the flakiness of LLM-generated tests [C15, C16]. My background as a software engineer in different companies helps me balance the perspectives of researchers, practitioners, and other stakeholders; I actively communicate scientific results back to practice through talks and other communication channels.

Besides research projects rooted in software development practice, I am also interested in the *meta-scientific discourse within the software engineering research community*. I noticed early on that common practices raise ethical concerns [S5] and suffer from methodological blind spots [J8, S9]. I am part of the ACM SIGSOFT Empirical Standards initiative [O1], contribute guidelines for evaluating empirical studies involving LLMs [S15], and investigate how software engineering research can better reach its target audience [??].

Beyond software engineering practice, I study the *human and social dimensions* of software engineering. Our interview study on the challenges and survival strategies of veteran women developers [C9] won an ACM SIGSOFT Distinguished Paper Award at ICSE 2023; related work explores how to make software development more broadly diverse and inclusive [J10].

A growing focus of my group is the *empirical study of GenAI in software development*—from co-authoring the Copenhagen Manifesto arguing that GenAI in SE must be human-centered [O2] to a critical review of trust in AI coding assistants [J14] and studying how context engineering can better support AI agents [S16].

Taken together, my research agenda spans empirical methods, meta-science, human and social dimensions, and the evaluation of emerging tools and process in software engineering. This broad portfolio positions my group well for wherever the field of software engineering is heading. Whether future challenges arise from new paradigms, tools, or socio-technical contexts, the combination of rigorous empirical methods, strong industry ties, the capability to not only conduct studies but also build and evaluate tools, and a genuine commitment to practically relevant and academically excellent research provides a solid foundation for impactful contributions.



The triangle of empirical software engineering.

Publication List

DBLP: <https://dblp.uni-trier.de/pid/145/3950.html>

Google Scholar: <https://scholar.google.com/citations?user=xO09KrYAAAAAJ>

Website: <https://empirical-software.engineering/publications/>

★ Among the ten most important publications

Journal Papers (peer-reviewed)

[J15]

Self-Admitted GenAI Usage in Open-Source Software.

Tao Xiao, Youmei Fan, Fabio Calefato, Christoph Treude, Raula Gaikovina Kula, Hideaki Hata, Sebastian Baltes. *IEEE Transactions on Software Engineering*, 2026.

<https://empirical-software.engineering/publications#tse26-genai-usage>

[J14]

On the Need to Rethink Trust in AI Assistants for Software Development: A Critical Review.

Sebastian Baltes, Timo Speith, Brenda Chiteri, Seyedmoein Mohsenimofidi, Shalini Chakraborty, Daniel Buschek. *IEEE Transactions on Software Engineering*, 2026.

<https://empirical-software.engineering/publications#tse26-trust-ai>

[J13]

Information-Theoretic Detection of Unusual Source Code Changes.

Adriano Torres, Sebastian Baltes, Christoph Treude, Markus Wagner. *Empirical Software Engineering*, Volume 30, Issue 5, 2025.

<https://empirical-software.engineering/publications#emse25-entropy>

[J12]

The Influence of Code Comments on the Perceived Helpfulness of Stack Overflow Posts.

Kathrin Figl, Maria Kirchner, Sebastian Baltes, Michael Felderer. *Empirical Software Engineering*, Volume 30, Issue 6, 2025.

<https://empirical-software.engineering/publications#emse25-so-helpfulness>

[J11]

The Silent Scientist: When Software Research Fails to Reach Its Audience.

Marvin Wyrich, Christof Tinnes, Sebastian Baltes, Sven Apel. *Communications of the ACM*, Volume 68, Issue 11, 2025.

<https://empirical-software.engineering/publications#cacm25-silent-scientist>

[J10]

Making Software Development More Diverse and Inclusive: Key Themes, Challenges, and Future Directions.

Sonja M. Hyrnsalmi, Sebastian Baltes, Chris Brown, Rafael Prikladnicki, Gema Rodríguez-Pérez, Alexander Serebrenik, Jocelyn Simmonds, Bianca Trinkenreich, Yi Wang, Grischa Liebel. *ACM Transactions on Software Engineering and Methodology*, Volume 34, Issue 5, 2025.

<https://empirical-software.engineering/publications#tosem24-sddi>

[J9]

18 Million Links in Commit Messages: Purpose, Evolution, and Decay.

Tao Xiao, Sebastian Baltes, Hideaki Hata, Christoph Treude, Raula Gaikovina Kula, Takashi Ishio, Kenichi Matsumoto.

Empirical Software Engineering, Volume 28, Issue 4, 2023.

<https://empirical-software.engineering/publications#emse23-commits>

[J8]

Sampling in Software Engineering Research: A Critical Review and Guidelines. ★

Sebastian Baltes, Paul Ralph.

Empirical Software Engineering, Volume 27, Issue 4, 2022.

<https://empirical-software.engineering/publications#emse22-sampling>

[J7]

Challenges for Inclusion in Software Engineering: The Case of the Emerging Papua New Guinean Society.
Raula Gaikovina Kula, Christoph Treude, Hideaki Hata, [Sebastian Baltes](#), Igor Steinmacher, Marco Aurélio Gerosa, Winifred Kula Amiri.

IEEE Software, Volume 39, Issue 3, 2022.

<https://empirical-software.engineering/publications#ieeesw22-bridges>

[J6]

GitHub Discussions: An Exploratory Study of Early Adoption. ★

Hideaki Hata, Nicole Novielli, [Sebastian Baltes](#), Raula Gaikovina Kula, Christoph Treude.

Empirical Software Engineering, Volume 27, Issue 1, 2022.

<https://empirical-software.engineering/publications#emse22-github-discussions>

[J5]

On the Diversity and Frequency of Code Related to Mathematical Formulas in Real-World Java Projects.

Oliver Moseler, Felix Lemmer, [Sebastian Baltes](#), Stephan Diehl.

Journal of Systems and Software, Volume 172, 2021.

<https://empirical-software.engineering/publications#jss21-formulas>

[J4]

Is 40 the new 60? How Popular Media Portrays the Employability of Older Software Developers. ★

[Sebastian Baltes](#), George Park, Alexander Serebrenik.

IEEE Software, Volume 37, Issue 6, 2020.

<https://empirical-software.engineering/publications#ieeesw20-ageing>

[J3]

Pandemic Programming: How COVID-19 Affects Software Developers and How Their Organizations Can Help. ★

Paul Ralph, [Sebastian Baltes](#), Gianisa Adisaputri, Richard Torkar, Vladimir Kovalenko, Marcos Kalinowski, Nicole Novielli, Shin Yoo, Xavier Devroey, Xin Tan, Minghui Zhou, Burak Turhan, Rashina Hoda, Hideaki Hata, Gregorio Robles, Amin Milani Fard, Rana Alkadhi.

Empirical Software Engineering, Volume 25, Issue 6, 2020.

<https://empirical-software.engineering/publications#emse20-pandemicprogramming>

[J2]

Contextual Documentation Referencing on Stack Overflow.

[Sebastian Baltes](#), Christoph Treude, Martin P. Robillard.

IEEE Transactions on Software Engineering, Volume 48, Issue 2, 2022.

<https://empirical-software.engineering/publications#tse20-condor>

[J1]

Usage and Attribution of Stack Overflow Code Snippets in GitHub Projects. ★

[Sebastian Baltes](#), Stephan Diehl.

Empirical Software Engineering, Volume 24, Issue 3, 2019.

<https://empirical-software.engineering/publications#emse19-snippets>

Conference Full Papers (peer-reviewed)

[C18]

Configuring Agentic AI Coding Tools: An Exploratory Study.

Matthias Galster, Seyedmoein Mohsenimofidi, Jai Lal Lulla, Muhammad Auwal Abubakar, Christoph Treude, [Sebastian Baltes](#).
Proceedings of the 3rd ACM/IEEE International Conference on AI-powered Software (AIware 2026).

<https://empirical-software.engineering/publications#aiware26-agents-configuration>

[C17]

How Does Cognitive Capability and Personality Influence Problem Solving in Coding Interview Puzzles?.

Dulaji Hidellaarachchi, [Sebastian Baltes](#), John Grundy.

Proceedings of the 19th IEEE/ACM International Conference on Cooperative and Human Aspects of Software Engineering (CHASE 2026).

Acceptance rate: 24% (28/119).

<https://empirical-software.engineering/publications#chase26-cognitive-capability>

[C16]

On the Flakiness of LLM-generated Tests for Industrial and Open-Source Database Management Systems.

Alexander Berndt, Thomas Bach, Rainer Gemulla, Marcus Kessel, [Sebastian Baltes](#).

Proceedings of the 48th International Conference on Software Engineering: Software Engineering in Practice (ICSE SEIP 2026).

Acceptance rate: 38% (61/162).

<https://empirical-software.engineering/publications#icse26-llm-test-flakiness>

[C15]

Can We Classify Flaky Tests Using Only Test Code? An LLM-Based Empirical Study.

Alexander Berndt, Vekil Bekmyradov, Rainer Gemulla, Marcus Kessel, Thomas Bach, [Sebastian Baltes](#).

33rd IEEE International Conference on Software Analysis, Evolution and Reengineering: Reproducibility Studies and Negative Results (SANER-RENE 2026).

<https://empirical-software.engineering/publications#saner26-flakiness-test-code>

[C14]

Staying or Leaving? How Job Satisfaction, Embeddedness and Antecedents Predict Turnover Intentions of Software Professionals.

Miikka Kuuttila, Paul Ralph, Huilian Sophie Qiu, Ronnie de Souza Santos, Morakot Choetkiertikul, Amin Milani Fard, Rana Alkadhi, Xavier Devroey, Gregorio Robles, Hideaki Hata, [Sebastian Baltes](#), Hera Arif, Vladimir Kovalenko, Shalini Chakraborty, Eray Tuzun, Gianisa Adisaputri.

Proceedings of the 48th International Conference on Software Engineering (ICSE 2026).

Acceptance rate: 20% ((72+88)/809).

<https://empirical-software.engineering/publications#icse26-turnover>

[C13]

The Software Infrastructure Attitude Scale (SIAS): A Questionnaire Instrument for Measuring Professionals' Attitudes Toward Technical and Sociotechnical Infrastructure.

Miikka Kuuttila, Paul Ralph, Huilian Sophie Qiu, Ronnie de Souza Santos, Morakot Choetkiertikul, Amin Milani Fard, Rana Alkadhi, Xavier Devroey, Gregorio Robles, Hideaki Hata, [Sebastian Baltes](#), Hera Arif, Vladimir Kovalenko, Shalini Chakraborty, Eray Tuzun, Hera Arif, Gianisa Adisaputri, Kelly Garcés, Anielle S. L. de Andrade, Eyram Amedzor, Bimpe Ayoola, Keisha Gaspard-Chickoree, Arazoo Hoseyni.

Proceedings of the 48th International Conference on Software Engineering (ICSE 2026).

Acceptance rate: 20% ((72+88)/809).

<https://empirical-software.engineering/publications#icse26-sias>

[C12]

Not Real or Too Soft? On the Challenges of Publishing Interdisciplinary Software Engineering Research.

Sonja M. Hyrynsalmi, Grischa Liebel, Ronnie de Souza Santos, [Sebastian Baltes](#).

Proceedings of the 47th International Conference on Software Engineering: Software Engineering in Society (ICSE SEIS 2025).

<https://empirical-software.engineering/publications#icse25-interdisciplinary-se>

[C11]

Do Test and Environmental Complexity Increase Flakiness? An Empirical Study of SAP HANA.

Alexander Berndt, Thomas Bach, [Sebastian Baltes](#).

Proceedings of the 18th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM IGC 2024).

<https://empirical-software.engineering/publications#esem24-flakiness-correlations>

[C10]

Taming Timeout Flakiness: An Empirical Study of SAP HANA. ★

Alexander Berndt, [Sebastian Baltes](#), Thomas Bach.

Proceedings of the 46th International Conference on Software Engineering: Software Engineering in Practice (ICSE SEIP 2024).

Acceptance rate: 38% (45/120).

<https://empirical-software.engineering/publications#icse24-timeout-flakiness>

[C9]

“STILL AROUND”: Experiences and Survival Strategies of Veteran Women Software Developers. ★Sterre van Breukelen, Ann Barcomb, [Sebastian Baltes](#), Alexander Serebrenik.*Proceedings of the 45th International Conference on Software Engineering (ICSE 2023).*

Acceptance rate: 26% (209/796).

<https://empirical-software.engineering/publications#icse23-still-around>

[C8]

Automated Query Reformulation for Efficient Search Based on Query Logs from Stack Overflow.Kaibo Cao, Chunyang Chen, [Sebastian Baltes](#), Christoph Treude, Xiang Chen.*Proceedings of the 43rd International Conference on Software Engineering (ICSE 2021).*

Acceptance rate: 23% (138/602).

<https://empirical-software.engineering/publications#icse21-reformulation>

[C7]

Characterizing Search Activities on Stack Overflow.Jiakun Liu, [Sebastian Baltes](#), Christoph Treude, David Lo, Yun Zhang, Xin Xia.*Proceedings of the 29th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2021).*

Acceptance rate: 24% (97/396).

<https://empirical-software.engineering/publications#fse21-search>

[C6]

Towards a Theory of Software Development Expertise. ★[Sebastian Baltes](#), Stephan Diehl.*Proceedings of the 26th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2018).*

Acceptance rate: 21% (61/289).

<https://empirical-software.engineering/publications#fse18-expertise>

[C5]

SOTorrent: Reconstructing and Analyzing the Evolution of Stack Overflow Posts. ★[Sebastian Baltes](#), Lorik Dumani, Christoph Treude, Stephan Diehl.*Proceedings of the 15th International Conference on Mining Software Repositories (MSR 2018).*

Acceptance rate: 33% (37/113).

<https://empirical-software.engineering/publications#msr18-sotorrent>

[C4]

Constructing Urban Tourism Space Digitally: A Study of Airbnb Listings in Two Berlin Neighborhoods.Natalie Stors, [Sebastian Baltes](#).*Proceedings of the ACM on Human-Computer Interaction*, Volume 2, Issue CSCW, 2018.

Acceptance rate: 26% (185/722).

<https://empirical-software.engineering/publications#cscw18-airbnb>

[C3]

Visual Analysis and Coding of Data-Rich User Behavior.Tanja Blascheck, Fabian Beck, [Sebastian Baltes](#), Thomas Ertl, Daniel Weiskopf.*Proceedings of the IEEE Conference on Visual Analytics Science and Technology (VAST 2016).*

Acceptance rate: 32% (50/157).

<https://empirical-software.engineering/publications#vast16-codingtool>

[C2]

Navigate, Understand, Communicate: How Developers Locate Performance Bugs.[Sebastian Baltes](#), Oliver Moseler, Fabian Beck, Stephan Diehl.*Proceedings of the 9th International Symposium on Empirical Software Engineering and Measurement (ESEM 2015).*

Acceptance rate: 25% (20/81).

<https://empirical-software.engineering/publications#esem15-debugging>

[C1]

Sketches and Diagrams in Practice. ★

Sebastian Baltes, Stephan Diehl.

Proceedings of the 22nd ACM SIGSOFT International Symposium on Foundations of Software Engineering (FSE 2014).

Acceptance rate: 22% (61/273).

<https://empirical-software.engineering/publications#fse14-sketches>

Conference Short and Vision Papers (peer-reviewed)

[S17]

Operationalizing Ethics for AI Agents: How Developers Encode Values into Repository Context Files.

Christoph Treude, Sebastian Baltes, Marc Cheong.

Proceedings of the 3rd ACM/IEEE International Conference on AI-powered Software (AIware 2026).

<https://empirical-software.engineering/publications#aiware26-ethics>

[S16]

Context Engineering for AI Agents in Open-Source Software.

Seyedmoein Mohsenimofidi, Matthias Galster, Christoph Treude, Sebastian Baltes.

Proceedings of the 23rd IEEE/ACM International Conference on Mining Software Repositories (MSR 2026).

Acceptance rate: 30% ((43+5)/158).

<https://empirical-software.engineering/publications#msr26-context-engineering>

[S15]

Towards Evaluation Guidelines for Empirical Studies involving LLMs.

Stefan Wagner, Marvin Muñoz Barón, Davide Falessi, Sebastian Baltes.

2nd International Workshop on Methodological Issues with Empirical Studies in Software Engineering (WSESE 2025).

Acceptance rate: 68% (13/19).

<https://empirical-software.engineering/publications#wse25-llm-guidelines>

[S14]

Lost in Transition: The Struggle of Women Returning to Software Engineering Research after Career Breaks.

Shalini Chakraborty, Sebastian Baltes.

Proceedings of the 18th International Conference on Cooperative and Human Aspects of Software Engineering (CHASE 2025).

<https://empirical-software.engineering/publications#chase25-women-returning>

[S13]

UX Debt: Developers Borrow While Users Pay.

Sebastian Baltes, Veronika Dashuber.

Proceedings of the 17th International Conference on Cooperative and Human Aspects of Software Engineering (CHASE 2024).

Acceptance rate: 35% (7/20).

<https://empirical-software.engineering/publications#chase24-uxdebt>

[S12]

Visually Analyzing Company-wide Software Service Dependencies: An Industrial Case Study.

Sebastian Baltes, Brian Pfitzmann, Thomas Kowark, Christoph Treude, Fabian Beck.

11th IEEE Working Conference on Software Visualization (VISSOFT 2023).

<https://empirical-software.engineering/publications#vissoft23-service-dependency-viz>

[S11]

Applying Information Theory to Software Evolution.

Adriano Torres, Sebastian Baltes, Christoph Treude, Markus Wagner.

Proceedings of the 2nd International Workshop on Natural-Language-based Software Engineering (NLBSE 2023).

<https://empirical-software.engineering/publications#nlbse23-entropy>

[S10]

From Full-fledged ERP Systems Towards Process-centric Business Process Platforms.

Lukas Böhme, Tobias Wuttke, Benedict Bender, Ralf Teusner, [Sebastian Baltes](#), Christoph Matthies, Michael Pertsch.

29th Americas Conference on Information Systems (AMCIS 2023).

<https://empirical-software.engineering/publications#amcis23-bpp>

[S9]

Paving the Way for Mature Secondary Research: The Seven Types of Literature Review.

Paul Ralph, [Sebastian Baltes](#).

Proceedings of the 30th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2022).

Acceptance rate: 25% (7/28).

<https://empirical-software.engineering/publications#fse22-literature-reviews>

[S8]

Code Duplication on Stack Overflow.

[Sebastian Baltes](#), Christoph Treude.

Proceedings of the 42nd International Conference on Software Engineering (ICSE-NIER 2020).

Acceptance rate: 30% (28/93).

<https://empirical-software.engineering/publications#icse20-clones>

[S7]

SOTorrent: Studying the Origin, Evolution, and Usage of Stack Overflow Code Snippets.

[Sebastian Baltes](#), Christoph Treude, Stephan Diehl.

Proceedings of the 16th International Conference on Mining Software Repositories (MSR 2019).

Acceptance rate: 33% (1/3).

<https://empirical-software.engineering/publications#msr19-sotorrent>

[S6]

Round-Trip Sketches: Supporting the Lifecycle of Software Development Sketches from Analog to Digital and Back.

[Sebastian Baltes](#), Fabrice Hollerich, Stephan Diehl.

2017 IEEE Working Conference on Software Visualization (VISOFT 2017).

Acceptance rate: 59% (10/17).

<https://empirical-software.engineering/publications#vissoft17-livelysketches>

[S5]

Worse Than Spam: Issues In Sampling Software Developers.

[Sebastian Baltes](#), Stephan Diehl.

Proceedings of the 10th International Symposium on Empirical Software Engineering and Measurement (ESEM 2016).

Acceptance rate: 37% (23/61).

<https://empirical-software.engineering/publications#esem16-sampling>

[S4]

Effects of Sketching on Program Comprehension (Research Plan).

[Sebastian Baltes](#), Stefan Wagner.

Proceedings of the 17th International Conference on Agile Processes in Software Engineering and Extreme Programming (XP 2016).

Acceptance rate: 38% (5/13).

<https://empirical-software.engineering/publications#xp16-sketching-experiment>

[S3]

VisualCues: Visually Explaining Source Code in Computer Science Education.

Benjamin Biegel, [Sebastian Baltes](#), Bob Prevos, Stephan Diehl.

Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC 2015).

Acceptance rate: 48% (36/75).

<https://empirical-software.engineering/publications#vlhcc15-visualcues>

[S2]

Linking Sketches and Diagrams to Source Code Artifacts.

Sebastian Baltes, Peter Schmitz, Stephan Diehl.

Proceedings of the 22nd ACM SIGSOFT International Symposium on Foundations of Software Engineering (FSE 2014 Research Demos).

Acceptance rate: 65% (15/23).

<https://empirical-software.engineering/publications#fse14-sketchlink>

[S1]

RegViz: Visual Debugging of Regular Expressions.

Fabian Beck, Stefan Gulan, Benjamin Biegel, Sebastian Baltes, Daniel Weiskopf.

Proceedings of the 36th International Conference on Software Engineering (ICSE-NIER 2014).

Acceptance rate: 24% (35/146).

<https://empirical-software.engineering/publications#icse14-regviz>

Workshop Papers and Extended Abstracts (peer-reviewed)

[W11]

Flaky Tests in a Large Industrial Database Management System: An Empirical Study of Fixed Issue Reports for SAP HANA.

Alexander Berndt, Thomas Bach, Sebastian Baltes.

Proceedings of the 3rd International Workshop on Flaky Tests (FTW 2026).

Acceptance rate: 60% (3/5).

<https://empirical-software.engineering/publications#ftw26-flakiness-issue-reports>

[W10]

On the Impact of AGENTS.md Files on the Efficiency of AI Coding Agents.

Jai Lal Lulla, Seyedmoein Mohsenimofidi, Matthias Galster, Jie M. Zhang, Sebastian Baltes, Christoph Treude.

1st Journal Ahead Workshop (JAWs@ICSE 2026).

Acceptance rate: 39% (31/80).

<https://empirical-software.engineering/publications#jaws26-agents.md-efficiency>

[W9]

User Misconceptions of LLM-Based Conversational Programming Assistants.

Gabrielle O'Brien, Antonio Pedro Santos Alves, Sebastian Baltes, Grischa Liebel, Mircea Lungu, Marcos Kalinowski.

1st Journal Ahead Workshop (JAWs@ICSE 2026).

Acceptance rate: 39% (31/80).

<https://empirical-software.engineering/publications#jaws26-llm-misconceptions>

[W8]

Ethics of Care for Software Engineering.

Alexander Serebrenik, Sebastian Baltes.

ICSE 2026 Future of Software Engineering (FOSE 2026).

<https://empirical-software.engineering/publications#fose26-ethics-of-care>

[W7]

Political and Ideological Pressure in Software Engineering Research: The Case of DEI Backlash.

Sonja M. Hyrynsalmi, Chris Brown, Alexander Serebrenik, Sebastian Baltes, Letizia Jaccheri.

ICSE 2026 Future of Software Engineering (FOSE 2026).

<https://empirical-software.engineering/publications#fose26-dei-backlash>

[W6]

Forecasting Developer Environments with GenAI: A Research Perspective.

Raula Gaikovina Kula, Christoph Treude, Xing Hu, Sebastian Baltes, Earl T. Barr, Kelly Blincoe, Fabio Calefato, Junjie Chen, Marc Cheong, Youmei Fan, Daniel M. German, Marco Gerosa, Jin Guo, Shinpei Hayashi, Robert Hirschfeld, Reid Holmes, Yintong Huo, Takashi Kobayashi, Michele Lanza, Zhongxin Liu, Olivier Nourry, Nicole Novielli, Denys Poshyvanyk, Shinobu Saito, Kazumasa Shimari, Igor Steinmacher, Mairieli Wessel, Markus Wagner, Annie Vella, Laurie Williams, Xin Xia.

3rd International Workshop on Integrated Development Environments (IDE 2026).

<https://empirical-software.engineering/publications#ide26-shonan-vision>

[W5]

A Penny a Function: Towards Cost Transparent Cloud Programming.

Lukas Böhme, Tom Beckmann, [Sebastian Baltes](#), Robert Hirschfeld.

2nd ACM SIGPLAN International Workshop on Programming Abstractions and Interactive Notations, Tools, and Environments (PAINT 2023).

<https://empirical-software.engineering/publications#paint23-cost-code>

[W4]

An Annotated Dataset of Stack Overflow Post Edits.

[Sebastian Baltes](#), Markus Wagner.

Genetic and Evolutionary Computation Conference Companion Proceedings (GECCO 2020 Companion), 9th Genetic Improvement Workshop.

<https://empirical-software.engineering/publications#geccogi20-soedits>

[W3]

(No) Influence of Continuous Integration on the Commit Activity in GitHub Projects.

[Sebastian Baltes](#), Jascha Knack, Daniel Anastasiou, Ralf Tymann, Stephan Diehl.

Proceedings of the 4th International Workshop on Software Analytics (SWAN 2018).

Acceptance rate: 64% (7/11).

<https://empirical-software.engineering/publications#swan18-ci>

[W2]

Attribution Required: Stack Overflow Code Snippets in GitHub Projects.

[Sebastian Baltes](#), Richard Kiefer, Stephan Diehl.

Proceedings of the 39th International Conference on Software Engineering Companion (ICSE 2017).

<https://empirical-software.engineering/publications#icse17-snippets>

[W1]

CodeBasket: Making Developers' Mental Model Visible and Explorable.

Benjamin Biegel, [Sebastian Baltes](#), Ivan Scarpellini, Stephan Diehl.

Proceedings of the 2nd International Workshop on Context for Software Development (CSD 2015).

<https://empirical-software.engineering/publications#csd15-codebasket>

Book Chapters (peer-reviewed)

[B1]

Teaching Literature Reviewing for Software Engineering Research.

[Sebastian Baltes](#), Paul Ralph.

Handbook on Teaching Empirical Software Engineering.

<https://empirical-software.engineering/publications#emseedu24-literature-reviews>

Other

[O2]

Generative AI in Software Engineering Must Be Human-Centered: The Copenhagen Manifesto.

Daniel Russo, [Sebastian Baltes](#), Niels van Berkel, Paris Avgeriou, Fabio Calefato, Beatriz Cabrero-Daniel, Gemma Catolino, Jürgen Cito, Neil A. Ernst, Thomas Fritz, Hideaki Hata, Reid Holmes, Maliheh Izadi, Foutse Khomh, Mikkel Baun Kjærgaard, Grischa Liebel, Alberto Lluch-Lafuente, Stefano Lambiase, Walid Maalej, Gail C. Murphy, Nils Brede Moe, Gabrielle O'Brien, Elda Paja, Mauro Pezzè, John Stouby Persson, Rafael Prikladnicki, Paul Ralph, Martin P. Robillard, Thiago Rocha Silva, Klaas-Jan Stol, Margaret-Anne D. Storey, Viktoria Stray, Paolo Tell, Christoph Treude, Bogdan Vasilescu.

Journal of Systems and Software, Volume 216, 2024.

<https://empirical-software.engineering/publications#chaseai24-manifesto>

[O1]

ACM SIGSOFT Empirical Standards.

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