

Alberto Bacchelli

University of Zurich

contacts

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publication

indexes

<http://Google Scholar>
<http://DBLP>

languages

Italian: native speaker
English: fluent
French: conversational

professional memberships

ACM

about

Dr. Bacchelli is an associate professor of **Empirical Software Engineering** at University of Zurich, Switzerland, where he leads the Zurich Empirical Software Engineering Team (ZEST).

His broader research vision is to innovate software engineering and support software quality through novel evidence-based methods and tools, also exploiting the large amount of information produced during the software engineering process.

He has received the MSR Ric Holt Early Career Achievement Award 2020 for his seminal contributions to modern code review. He is recipient of in total seven Best Paper Awards and ACM SIGSOFT Distinguished Paper Awards, awarded from the top academic venues in software engineering and computer supported collaborative work.

education

04.2009–06.2013	Ph.D. in Informatics Thesis: <i>Mining Unstructured Software Data</i> Supervisor: <i>Prof. Dr. Michele Lanza</i>	Università della Svizzera Italiana, Switzerland
04.2006–03.2008	M.Sc. in Computer Science Final grade: <i>110/110 cum laude</i>	University of Bologna, Italy
09.2006–06.2007	M.Sc. year within EU Erasmus program Main subjects: Software Engineering and Probabilistic Models	Université Libre de Bruxelles, Belgium
09.2002–03.2006	B.Sc. in Computer Science Final grade: <i>110/110 cum laude</i>	University of Bologna, Italy

professional appointments

10.2020–now	Associate professor (with tenure)	University of Zurich, Switzerland
07.2019–12.2020	Scientific Consultant	Huawei Technologies Co., Ltd., China
08.2017–09.2020	SNSF Assistant professor	University of Zurich, Switzerland
09.2013–08.2017	Assistant professor (tenured after tenure-track)	TU Delft, The Netherlands
04–08.2013	Microsoft Research intern	Microsoft Research, Redmond, USA
05–08.2012	Microsoft Research intern	Microsoft Research, Redmond, USA
04.2008–04.2009	Software Engineer	CINECA, Italy
05–08.2007	Student software engineer	Google Summer of Code

research

awards and honors

- 2021 **ACM SIGSOFT Distinguished Paper Award** ICSE 2021
“Why Don’t Developers Detect Improper Input Validation? ’ ; DROP TABLE Papers; -- ”
- 2020 **Mining Software Repositories Ric Holt Early Career Achievement Award** MSR 2020
Awarded to junior researchers who provided outstanding contributions in the field.
- ACM SIGSOFT Distinguished Artifact Award** ICSE 2020
Artifact of “Primers or Reminders? The Effects of Existing Review Comments on Code Review”
- 2018 **Best Paper Honorable Mention** CSCW 2018
“Information Needs in Contemporary Code Review”
- 2017 **ACM SIGSOFT Distinguished Paper Award** MSR 2017
“Classifying code comments in Java open-source software systems”
- 2016 **ACM SIGSOFT Distinguished Paper Award** ICSE 2016
“Work Practices and Challenges in Pull-Based Development: The Contributor’s Perspective”
- 2015 **Best Paper Award** CSCW 2015
“Supporting Developers’ Coordination in The IDE”
- 2014 **Google Faculty Research Award** Google 2014
Program focused on funding world-class technical research in Computer Science and Engineering.
- 2009 **Best Paper Award** WCRE 2009
“Benchmarking Lightweight Techniques to Link E-Mails and Source Code”
- 2008 **Best Paper Award** ICSEA 2008
“On the Effectiveness of Manual and Automatic Unit Test Generation”

nominations for awards and honors

- 2018 **Nomination for ACM SIGSOFT Distinguished Paper Award** ESEC/FSE 2018
“What Makes A Code Change Easier To Review: An Empirical Investigation On Code Change Reviewability”
- 2016 **Nomination for Best Paper Award** ICSME 2016
“On the reaction to deprecation of 25,357 clients of 4+1 popular Java APIs”
- 2015 **Nomination for Best Paper Award** SANER 2015
“Untangling Fine-Grained Code Changes”
- 2014 **Finalist for the Cor Baayen Award** ERCIM 2014
ERCIM awards promising young researchers in computer science and applied mathematics.
- 2013 **Nomination for ACM SIGSOFT Distinguished Paper Award** ICSE 2013
“Expectations, Outcomes, and Challenges of Modern Code Review”

grants and funding

2021	SNSF Intl. Co-investigator Project - Software Engineers as Quality Experts Investigating Expertise in Software Quality.	co-PI – ca. 500k CHF of 760k
2020	SNSF Project - Enhanced Code Review Using Context and Learning from Review Experience.	PI – approx. 800k CHF
2019	Hasler Stiftung - Test Authority: A New Path to Measure Test Quality Defining a new way to measure test quality beyond code coverage.	Co-PI – approx. 50k CHF
2018	AdNovum - Knowledge Awareness in Solution Development Lifecycle On software artifacts traceability for code reuse.	Co-PI – 60k CHF
2017	SNSF Professorship - Data-driven Contemporary Code Review On transforming code review into an engineering approach.	PI – ca. 1.5M CHF
2016	STW Take Off - PReview Code On an approach to improve the understandability of changes under review.	PI – 40k EUR
2015	NWO Top-1 grant - Persistent Code Reviewing On investigating techniques to persist and generalize code review efforts.	Co-PI – ca. 650k EUR
2014	EU Horizon 2020 MSCA-ITN-2014-EID - SENECA On data science for software engineering in the cloud.	Co-PI – 255k EUR of 2.2M EUR
	INRIA Associate Team - Improving code review tools On creating novel code review tools for dynamically typed languages.	Co-PI – 10K EUR
	Google Faculty Research Award On investigating the code review process.	PI – approx. 50k EUR

invited talks

- 2019 **Software Analytics: Understanding and Supporting Programming With Data** St. Gallen, Switzerland
University of St. Gallen
- Contemporary Code Review Practices** Shenzhen, China
Huawei Technologies Co., Ltd.
- 2018 **What Do Code Reviews at Microsoft and in OSS Have in Common?** Zurich, Switzerland
adesso Schweiz
- 2017 **Evidence-based Code Review** London, United Kingdom
56th CREST Open Workshop, University College London
- Contemporary Peer Code Review** Zurich, Switzerland
Software Evolution and Architecture Lab, University of Zurich
- 2016 **Advances in Code Review** Amsterdam, The Netherlands
BESTSELLER
- What Do Code Reviews at Microsoft and in OSS Have in Common?** Bruxelles, Belgium
FOSDEM 2016
- Data-driven Contemporary Code Review** Zurich, Switzerland
University of Zurich, Switzerland
- Data-driven Contemporary Code Review** Lugano, Switzerland
Università della Svizzera Italiana, Switzerland
- 2015 **Code review needs the right approach** Bodegraven, The Netherlands
Stabiplan BV
- Expectations, Outcomes, and Challenges of Modern Code Review** Berlin, Germany
Software engineering research group (AG SE), Freie Universität Berlin
- Software Analytics needs the right data and the right questions** London, England
Software Systems Engineering Group, University College London
- Mining Unstructured Software Data** Nijmegen, The Netherlands
Digital security group, Radboud Universiteit Nijmegen
- Supporting Developers' Teamwork in The IDE** Vancouver, BC, Canada
Software Analysis and Testing (SALT) lab, University of British Columbia
- 2014 **Mining Unstructured Software Data** Namur, Belgium
PReCISE Research Center, Université de Namur
- 2012 **Pearls In The MUD, Mining Structured Data in NL Artifacts** Delft, The Netherlands
Software Engineering Research Group (SERG), TU Delft
- Mining Development Email Archives** Victoria, Canada
Computer Human Interaction & Software Engineering Lab, University of Victoria
- Mining Development Email Archives** Montreal, QC, Canada
SOCCER Lab, École Polytechnique de Montréal
- Mining Development Email Archives** Kingston, ON, Canada
Software Analysis and Intelligence Lab, Queen's University

professional service

conferences

- 2023 **ICSE** (PC member)
- 2022 **ASE** (PC member), **ICSE** (PC member), **MSR** (PC member, SC member)
- 2021 **ASE** (PC member), **EASE** (PC member), **ESEC/FSE** (PC member), **MSR** (SC member)
- 2020 **ASE** (PC member), **CSCW** (Associate chair), **MSR** (PC member, SC member)
- 2019 **ASE** (PC member), **CSCW** (Associate chair), **ESEC/FSE** (PC member), **ICPC** (PC member), **ICSME** (PC member), **MSR** (PC member, SC member)
- 2018 **ASE** (PC member), **ESEC/FSE** (PC member), **ICPC** (PC member), **MSR** (PC member, SC member)
- 2017 **ESEC/FSE** (PC member), **ICSE** (PC member)
- 2016 **ICSE** (PC member), **ICPC** (PC member), **ICSME** (Tool demo track, co-chair), **IWESEP** (PC member), **MSR** (PC member), **MUD** (SC member), **SANER** (ERA track, co-chair),
- 2015 **ASE** (Tool demo track, PC member), **FSE** (Tool demo track, PC member), **ICPC** (PC member), **ICSE** (social networking co-chair), **ICSME** (PC member), **ISEC** (PC member), **MSR** (PC member), **MUD** (SC member), **SANER** (PC member)
- 2014 **ACM SRC** (PC member), **CSEE&T** (PC member), **CSMR-WCRE** (PC member), **ECOOP** (artifact evaluation, PC member), **ICSME** (PC member), **MSR** (PC member), **MUD** (co-organizer)
- 2013 **CSS&T** (PC member), **CSMR** (ERA track, PC member) **ICPC** (ERA track, PC member), **ICSM** (Tool demo track, PC member), **MSR** (Mining challenge chair), **MUD** (co-organizer), **NaturalISE** (co-organizer), **WCRE** (PC member)
- 2012 **CSEE&T** (PC member), **CSMR** (publicity chair), **ICSM** (publicity chair), **MSR** (Mining challenge, PC member), **MUD** (co-organizer)

journal referee

- TOSEM** ACM Transactions on Software Engineering and Methodology, ACM.
- TSE** IEEE Transactions on Software Engineering, IEEE Computer Society.
- EMSE** Empirical Software Engineering: An International Journal, Springer.
- JSEP** Journal of Software: Evolution and Process (formerly known as Journal on Software Maintenance and Evolution: Research and Practice, JSME), John Wiley & Sons.
- JSS** Journal of Systems and Software, Elsevier.
- PeerJ** PeerJ Computer Science.

Reviewer for Funding Organizations

- Chan Zuckerberg Initiative** Reviewer for the Essential Open Source Software for Science initiative. Years: 2018, 2019, 2020, 2021.
- DFG, German Research Foundation** Reviewer for Project Proposals. Year 2019.
- SNF, Swiss National Science Foundation** Reviewer for Project Proposals. Year 2014.

Miscellanea

- ACM SIGSOFT** Committee member for the Doctoral Dissertation Award 2020.

teaching

instructor

2019–2020	Software Testing (B. Sc. and M.Sc.)	instructor – University of Zurich
	START Hackademy (B.Sc. and M.Sc.)	instructor – HSG
	Data Science for Software Engineering (B.Sc. and M.Sc.)	instructor – University of Zurich
	Software Construction (B.Sc.) Students learn the fundamental principles and practices to design large software systems that are simple to maintain and evolve.	instructor – University of Zurich
2018–2019	SHSG Summer School (B. Sc. and M.Sc.)	instructor – HSG
	Software Testing (B. Sc. and M.Sc.) Students learn theoretical aspects of software testing and how to apply them.	co-instructor – University of Zurich
	START Hackademy (B.Sc. and M.Sc.)	instructor – HSG
	Data Science for Software Engineering (B.Sc. and M.Sc.)	instructor – University of Zurich
2017–2018	SHSG Summer School (B. Sc. and M.Sc.) Students without knowledge in programming learn how to program.	instructor – HSG
	START Hackademy (B.Sc. and M.Sc.) Students without knowledge in programming learn how to program.	instructor – University of Zurich
	Data Science for Software Engineering (B.Sc. and M.Sc.) Students explore the topic and work on creating a research proposal on a novel idea.	instructor – University of Zurich
	Mining Software Repositories (M.Sc.)	instructor – TU Delft
	Software Engineering Methods (B.Sc.)	co-instructor – TU Delft
2015 ... 2017	Context Project (B.Sc.)	co-coordinator, SE instructor, and context teacher – TU Delft
	Mining Software Repositories (M.Sc.)	instructor – TU Delft
	Software Engineering Methods (B.Sc.)	instructor – TU Delft
2014–2015	Context Project (B.Sc.)	co-coordinator and SE instructor – TU Delft
	Mining Software Repositories (M.Sc.) Students learn about recent research on software analytics and implement a full data mining approach, from data collection and analysis scripts to final report writing.	instructor – TU Delft
	Software Engineering Methods (B.Sc.)	instructor – TU Delft
2013–2014	Context Project (B.Sc.) Students learn to develop, implement, validate, present, and demonstrate a software product that satisfies the needs of an external party in a given non-ICT context. I co-coordinated the eight teachers involved and I was responsible for supervising and evaluating the software engineering aspects of the course.	co-coordinator and SE instructor – TU Delft
	Software Engineering Methods (B.Sc.) Students learn the basics of software engineering. Topics include requirements engineering, advanced OO programming, design patterns, UML, agile methodologies, software visualization.	instructor – TU Delft

student supervision (since being assistant professor)

in progress	David Ackermann <i>Fuzz Testing</i>	since Aug 2020, Ph.D. student
	Fernando Petruccio <i>Defect Prediction</i>	since Aug 2019, Ph.D. student
	Larissa Barbosa <i>Code review and security</i>	since Nov 2018, Ph.D. student
	Enrico Fregnan <i>Supporting Code Review</i>	since Aug 2018, Ph.D. student
	Pavlna Wurzelová <i>Social Aspects Of Code Review</i>	since Jun 2018, Ph.D. student
2021	Vladimir Kovalenko <i>Data-Driven Software Engineering</i>	Oct 2016 - Mar 2021, Ph.D.
	Davide Spadini <i>Supporting Quality In Test Code For Higher Quality Software Systems</i>	Jul 2016 - Mar 2021, Ph.D.
2020	Luca Pascarella <i>Augmented fine-grained defect prediction for code review</i>	Jan 2016 - Sep 2020, Ph.D.
2019	Anand Ashok Sawant <i>Mining fine-grained large-scale API usage</i>	Jan 2016 - Oct 2019, Ph.D.
	David Ackermann <i>Curiosity Guided Fuzz Testing</i>	M.Sc. Thesis , University of Zurich
	Andrea Capobianco <i>Software Vulnerability Prediction on Commit Level</i>	M.Sc. Thesis , University of Zurich
	Lorenzo Gasparini <i>Software Visualization for Code Review</i>	M.Sc. Thesis , TU Delft
2018	Enrico Fregnan <i>Auto-ordering Code Changes for Review</i>	M.Sc. Thesis , TU Delft
	Moritz Eck <i>Automatic Categorization Of Flaky Tests</i>	B.Sc. Thesis , University of Zurich
2017	Menno Oudshoorn and Bart de Jonge <i>Unobtrusive automated support for software developers</i>	Honors program , TU Delft
	Jorden van Breemen <i>On the Effect of Code Quality on Agile Effort Estimations: The Case of Shell</i>	M.Sc. Thesis , TU Delft
2016	Eva Anker and Tim van der Lippe and Thomas Smith <i>Enhanced GitHub code review</i>	B.Sc. Project , TU Delft
2015	Reinier Hartog <i>Octopull: Supporting reviews of pull-requests</i>	M.Sc. Thesis , TU Delft
	Ahmad Yandriansyah Reza <i>Requirements Engineering Practices in Global Software Engineering Organization</i>	co-supervision with D.M. van Solingen, M.Sc. Thesis , TU Delft
	Anand Sawant <i>Mining fine-grained API usage from GitHub</i>	M.Sc. Thesis , TU Delft
	Vincent Hellendoorn <i>Empirical Software Linguistics: An Investigation of Code Reviews, Recommendations and Faults</i>	M.Sc. Thesis , TU Delft
	Best Master Thesis of the EEMCS Faculty 2015	

References

prof. dr. Harald Gall

Role: Professor and Dean
Affiliation: University of Zurich
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Email: gall@ifi.uzh.ch
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prof. dr. Premkumar T. Devanbu

Role: Professor
Affiliation: University of California, Davis
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Web: <http://www.cs.ucdavis.edu/~devanbu>
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dr. Thomas Zimmermann

Role: Sr. Principal Researcher
Affiliation: Microsoft Research
Address: One Microsoft Way, Redmond, WA 98052 USA
Email: tzimmer@microsoft.com
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Phone: +1 425 703 8450

prof. dr. Margaret-Anne Storey

Role: Professor
Affiliation: University of Victoria
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STN CSC Victoria, B.C. Canada, V8W 3P6
Email: mstorey@uvic.ca
Web: <http://margaretstorey.com>
Phone: +1 250 472 5713

prof. dr. Michele Lanza

Role: Professor
Affiliation: Università della Svizzera Italiana
Address: Via G. Buffi 13, CH-6904 Lugano, Switzerland
Email: michele.lanza@usi.ch
Web: <http://www.inf.usi.ch/lanza/>
Phone: +41 58 666 4659

Complete list of publications - Alberto Bacchelli

Peer-reviewed conferences are accepted in software engineering as high-quality scholarly articles. This point is expressed in the article “Research Evaluation for Computer Science” in *Communications of the ACM* (April 2009).¹

The ACM/IEEE International Conference on Software Engineering (ICSE) and the ACM SIGSOFT International Symposium on the Foundations of Software Engineering (ESEC/FSE) are considered the most prestigious conferences, with the highest standards in the software engineering field.² I have published 14 papers in the main tracks at ICSE and FSE, of which two have been nominated for an ACM SIGSOFT Distinguished Paper Award (ICSE 2013, FSE 2018), one has received an ACM SIGSOFT Distinguished Artifact Award (ICSE 2020), and two have received an ACM SIGSOFT Distinguished Paper Award (ICSE 2016, ICSE 2021).

The ACM CHI Conference on Human Factors in Computing Systems (CHI) and ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW) are considered the most prestigious conferences, with the highest standards in the human computer interaction field. I have published 3 papers in the main tracks at CHI and CSCW, of which one has received a best paper honorable mention (CSCW 2018) and one has received a best paper award (CSCW 2015).

According to Google scholar (Nov 10, 2021), my h-index is 34 with 4,551 citations showing an upward trend.

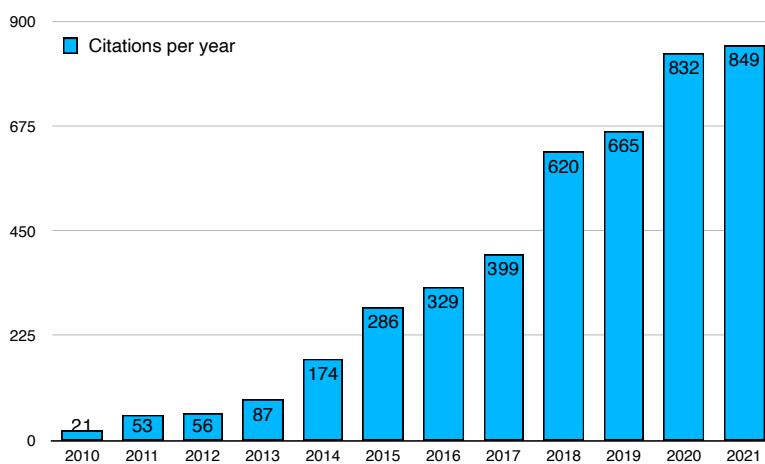


Figure 1: Citations per year, according to Google Scholar on Nov 10, 2021.

international peer-reviewed conference papers

[CSCW 2022] Interpersonal Conflicts During Code Review - Developers’ Experience and Practices

Pavlına Wurzel Gonçalves, Gül Çalikli, Alberto Bacchelli

25th ACM Conference On Computer-Supported Cooperative Work And Social Computing, forthcoming, 2022

[ESEC/FSE 2021] Authorship Attribution of Source Code: A Language-Agnostic Approach and Applicability in Software Engineering

Egor Bogomolov, Vladimir Kovalenko, Yurii Rebryk, Alberto Bacchelli, Timofey Bryksin

29th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, forthcoming, 2021

[ICSE 2021] Why don’t Developers Detect Improper Input Validation?; DROP TABLE Papers; –

Larissa Braz, Enrico Fregnan, Gül Çalikli, Alberto Bacchelli

43rd ACM/IEEE International Conference on Software Engineering, p. xxx, 2021

ACM SIGSOFT Distinguished Paper Award

[CHI 2020] UI Dark Patterns and Where to Find Them

Linda Di Geronimo, Larissa Braz, Fabio Palomba, Enrico Fregnan, Alberto Bacchelli

ACM CHI Conference on Human Factors in Computing Systems, pp. 1–14, 2020

¹This point is also underlined by Michael D. Ernst (Professor at the University of Washington, and previously researcher at Microsoft Research and tenured professor at MIT): “conference papers are arguably more prestigious than journal publications: oftentimes, conferences have higher standards and lower acceptance rates.” For a copy: <http://sback.it/other/ernst-conf-vs-journal-uscis.pdf>.

²This is also expressed in the article: “Automatic and versatile publications ranking for research institutions and scholars” in *Comm. of the ACM* (June 2007)

- [ICSE 2020] Primers or Reminders? The Effects of Existing Review Comments on Code Review
Davide Spadini, Gül Çalikli, [Alberto Bacchelli](#)
42nd ACM/IEEE International Conference on Software Engineering, pp. 1171–1182, 2020
ACM SIGSOFT Distinguished Artifact Award
- [MSR 2020] Investigating Severity Thresholds for Test Smells
Davide Spadini, Martin Schvarcbacher, Ana Oprescu, Magiel Bruntink, [Alberto Bacchelli](#)
17th International Conference on Mining Software Repositories, forthcoming, 2020
- [ICSE 2019] When Code Completion Fails: A Case Study On Real-World Completions
Vincent Hellendoorn, Sebastian Proksch, Harald C. Gall, [Alberto Bacchelli](#)
41st ACM/IEEE International Conference on Software Engineering, pp. 960–970, 2019
- [ICSE 2019] Test-Driven Code Review: An Empirical Study
Davide Spadini, Fabio Palomba, Tobias Baum, Stefan Hanenberg, Magiel Bruntink, [Alberto Bacchelli](#)
41st ACM/IEEE International Conference on Software Engineering, pp. 1061–1072, 2019
- [MSR 2019 - Tool] PathMiner: A Library for Mining of Path-Based Representations of Code
Vladimir Kovalenko, Egor Bogomolov, Timofey Bryksin, [Alberto Bacchelli](#)
16th International Conference on Mining Software Repositories, pp. 13–17, 2019
- [MSR 2019] On the Effectiveness of Manual and Automatic Unit Test Generation: Ten Years Later
Domenico Serra, Giovanni Grano, Fabio Palomba, Filomena Ferrucci, Harald C. Gall, [Alberto Bacchelli](#)
16th International Conference on Mining Software Repositories, pp. 121–125, 2019
- [ESEC/FSE 2019] Understanding Flaky Tests: The Developer’s Perspective
Moritz Eck, Fabio Palomba, Marco Castelluccio, [Alberto Bacchelli](#)
27th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, pp. 830–840, 2019
- [CSCW 2018] Information Needs in Contemporary Code Review
Luca Pascarella, Davide Spadini, Fabio Palomba, Magiel Bruntink, [Alberto Bacchelli](#)
21st ACM conference on Computer-Supported Cooperative Work and Social Computing, 135:1–135:27, 2018
Best Paper Honorable Mention
- [MOBILESoft 2018] Self-reported activities of Android developers
Luca Pascarella, Fabio Palomba, Franz-Xaver Geiger, Dario Di Nucci, Ivano Malavolta, [Alberto Bacchelli](#)
5th International Conference on Mobile Software Engineering and Systems, pp. 144–155, 2018
- [ICSE 2018 - SEIP] Modern Code Review: A Case Study at Google
Caitlin Sadowski, Emma Söderberg, Luke Church, Michal Sipko, [Alberto Bacchelli](#)
40th ACM/IEEE International Conference on Software Engineering, Software Engineering in Practice Track, pp. 181–190, 2018
- [ICSE 2018] Understanding Developers’ Needs on Deprecation as a Language Feature
Anand Ashok Sawant, Mauricio Aniche, Arie van Deursen, [Alberto Bacchelli](#)
40th ACM/IEEE International Conference on Software Engineering, pp. 561–571, 2018
- [ICSE 2018] When Testing Meets Code Review: Why and How Developers Review Tests
Davide Spadini, Mauricio Aniche, Margaret Storey, Magiel Bruntink, [Alberto Bacchelli](#)
40th ACM/IEEE International Conference on Software Engineering, pp. 677–687, 2018
- [ICSME 2018] On The Relation of Test Smells to Software Code Quality
Davide Spadini, Fabio Palomba, Andy Zaidman, Magiel Bruntink, [Alberto Bacchelli](#)
34th IEEE International Conference on Software Maintenance and Evolution, pp. 1–12, 2018
- [ICSME 2018] Why are features deprecated? An investigation into the motivation behind deprecation
Anand Ashok Sawant, Guangzhe Huanag, Gabriel Vilen, Stefan Stojkovski, [Alberto Bacchelli](#)
34th IEEE International Conference on Software Maintenance and Evolution, pp. 13–24, 2018
- [ASE 2018] Mining File Histories: Should We Consider Branches?
Vladimir Kovalenko, Fabio Palomba, [Alberto Bacchelli](#)
33rd IEEE/ACM International Conference on Automated Software Engineering, pp. 202–213, 2018
- [ASE 2018 - New Ideas] Continuous Code Quality: Are We (Really) Doing That?
Carmine Vassallo, Fabio Palomba, [Alberto Bacchelli](#), Harald C. Gall
33rd IEEE/ACM International Conference on Automated Software Engineering, New Ideas Track, pp. 790–795, 2018
- [MSR 2018 - Data] A graph-based dataset of commit history of real-world Android apps
Franz-Xaver Geiger, Ivano Malavolta, Luca Pascarella, Fabio Palomba, Dario Di Nucci, [Alberto Bacchelli](#)

15th International Conference on Mining Software Repositories, Data Track, pp. 30–33, 2018

[MSR 2018] How Is Video Game Development Different from Software Development in Open Source?

Luca Pascarella, Fabio Palomba, Massimiliano Di Penta, [Alberto Bacchelli](#)

15th International Conference on Mining Software Repositories, pp. 392–402, 2018

[ESEC/FSE 2018] What Makes A Code Change Easier To Review: An Empirical Investigation On Code Change Reviewability

Achyudh Ram, Anand Ashok Sawant, Marco Castelluccio, [Alberto Bacchelli](#)

26th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, pp. 201–212, 2018

Nominated for ACM SIGSOFT Distinguished Paper Award

[ESEC/FSE 2018 - Tool Demo] PyDriller: Python framework for mining software repositories

Davide Spadini, Maurício Finavaro Aniche, [Alberto Bacchelli](#)

26th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, pp. 908–911, 2018

[SANER 2018] Re-evaluating method-level bug prediction

Luca Pascarella, Fabio Palomba, [Alberto Bacchelli](#)

25th International Conference on Software Analysis, Evolution and Reengineering, RENE track, pp. 592–601, 2018

[ICSE 2017 - Introspection] Double-blind review in software engineering venues: the community’s perspective

[Alberto Bacchelli](#), Moritz Beller

39th ACM/IEEE International Conference on Software Engineering (Companion Volume), pp. 385–396, 2017

[ICSME 2017] On the Optimal Order of Reading Source Code Changes for Review

Tobias Baum, Kurt Schneider, [Alberto Bacchelli](#)

33rd IEEE International Conference on Software Maintenance and Evolution, pp. 329–340, 2017

[MSR 2017] Classifying code comments in Java open-source software systems

Luca Pascarella, [Alberto Bacchelli](#)

14th International Conference on Mining Software Repositories, pp. 227–237, 2017

ACM SIGSOFT Distinguished Paper Award

[MSR 2017] To mock or not to mock? An empirical study on mocking practices

Davide Spadini, Mauricio Aniche, Magiel Bruntink, [Alberto Bacchelli](#)

14th International Conference on Mining Software Repositories, pp. 402–412, 2017

[ESEM 2016] Social Diversity and Activity Levels of Open Source Software Projects on GitHub

Joop Aué, Michiel Haisma, Kristin Fjola Tomasdottir, [Alberto Bacchelli](#)

10th International Symposium on Empirical Software Engineering and Measurement, 41:1–41:6, 2016

[GECCO 2016] A Search-based Training Algorithm for Cost-aware Defect Prediction

Annibale Panichella, Carol V. Alexandru, Sebastiano Panichella, [Alberto Bacchelli](#), Harald C. Gall

Genetic and Evolutionary Computation Conference, pp. 1077–1084, 2016

[ICSE 2016] Work Practices and Challenges in Pull-Based Development: The Contributor’s Perspective

Georgios Gousios, Margaret-Anne Storey, [Alberto Bacchelli](#)

38th ACM/IEEE International Conference on Software Engineering, pp. 285–296, 2016

ACM SIGSOFT Distinguished Paper Award

[ICSE 2016] On the “Naturalness” of Buggy Code

Baishakhi Ray, Vincent Hellendoorn, Saheel Godhane, Zhaopeng Tu, [Alberto Bacchelli](#), Premkumar Devanbu

38th ACM/IEEE International Conference on Software Engineering, pp. 428–439, 2016

[ICSME 2016] On the reaction to deprecation of 25,357 clients of 4+1 popular Java APIs

Anand Sawant, Romain Robbes, [Alberto Bacchelli](#)

32nd International Conference on Software Maintenance and Evolution, pp. 400–410, 2016

Nominated for Best Paper Award

[SCAM 2016] A Security Perspective on Code Review: The Case of Chromium.

Marco Biase, Magiel Bruntink, [Alberto Bacchelli](#)

16th IEEE International Working Conference on Source Code Analysis and Manipulation, pp. 21–30, 2016

[FSE 2016 - Tool Demo] Visualizing code and coverage changes for code review

Sebastian Oosterwaal, Arie Deursen, Roberta Coelho, Anand Ashok Sawant, [Alberto Bacchelli](#)

24th ACM SIGSOFT International Symposium on Foundations of Software Engineering, pp. 1038–1041, 2016

[CSCW 2015] Supporting Developers’ Coordination in the IDE

Anja Guzzi, [Alberto Bacchelli](#), Yann Riche, Arie van Deursen

18th ACM conference on Computer-Supported Cooperative Work and Social Computing, pp. 518–532, 2015

Best Paper Award

- [MSR 2015] Will they like this? Evaluating Code Contributions With Language Models
Vincent Hellendoorn, Premkumar Devanbu, [Alberto Bacchelli](#)
12th Working Conference on Mining Software Repositories, pp. 157–167, 2015
- [MSR 2015 - Data] A Dataset For API Usage
Anand Sawant, [Alberto Bacchelli](#)
12th Working Conference on Mining Software Repositories, Data Track, pp. 506–509, 2015
- [SANER 2015] Untangling Fine-Grained Code Changes
Martin Dias, [Alberto Bacchelli](#), Georgios Gousios, Damien Cassou, Stéphane Ducasse
22nd IEEE International Conference on Software Analysis, Evolution, and Reengineering, pp. 341–350, 2015
Nominated for Best Paper Award
- [ICSME 2014] Improving Low Quality Stack Overflow Post Detection
Luca Ponzanelli, Andrea Mocci, [Alberto Bacchelli](#), Michele Lanza, David Fullerton
30th International Conference on Software Maintenance and Evolution, Industrial Track, pp. 541–544, 2014
- [MSR 2014] Modern Code Reviews in Open-Source Projects: Which Problems Do They fix?
Moritz Beller, [Alberto Bacchelli](#), Andy Zaidman, Elmar Juergens
11th Working Conference on Mining Software Repositories, pp. 202–211, 2014
- [QSIC 2014] Quantitatively Exploring Non-code Software Artifacts
Luca Bigliardi, Michele Lanza, [Alberto Bacchelli](#), Marco D'Ambros
14th International Conference on Quality Software, pp. 286–295, 2014
- [QSIC 2014] Understanding and Classifying the Quality of Technical Forum Questions
Luca Ponzanelli, Andrea Mocci, [Alberto Bacchelli](#), Michele Lanza
14th International Conference on Quality Software, pp. 343–352, 2014
- [CSMR 2013] Leveraging Crowd Knowledge for Software Comprehension and Development
Luca Ponzanelli, [Alberto Bacchelli](#), Michele Lanza
17th European Conference on Software Maintenance and Reengineering, pp. 57–66, 2013
- [ICSE 2013] Expectations, Outcomes, and Challenges of Modern Code Review
[Alberto Bacchelli](#), Christian Bird
35th ACM/IEEE International Conference on Software Engineering, pp. 710–719, 2013
Nominated for ACM SIGSOFT Distinguished Paper Award
- [ICSE 2013 - Tool Demo] Seahawk: Stack Overflow in the IDE
Luca Ponzanelli, [Alberto Bacchelli](#), Michele Lanza
35th International Conference on Software Engineering, Tool Demo Track, pp. 1295–1298, 2013
- [ICSM 2013 - ERA] Which Feature Location Technique is Better?
Emily Hill, [Alberto Bacchelli](#), Dave W. Binkley, Bogdan Dit, Dawn J. Lawrie, Rocco Oliveto
29th IEEE International Conference on Software Maintenance, pp. 408–411, 2013
- [ICPC 2013] Manhattan: Supporting Real-Time Visual Team Activity Awareness
Michele Lanza, Marco D'Ambros, [Alberto Bacchelli](#), Lile Hattori, Francesco Rigotti
21st IEEE International Conference on Program Comprehension, ERA Track, pp. 207–210, 2013
- [MSR 2013] Communication in Open Source Software Development Mailing Lists
Anja Guzzi, [Alberto Bacchelli](#), Michele Lanza, Martin Pinzger, Arie Deursen
10th IEEE Working Conference on Mining Software Repositories, pp. 277–286, 2013
- [ICSE 2012] Content Classification of Development Emails
[Alberto Bacchelli](#), Tommaso Sasso, Marco D'Ambros, Michele Lanza
34th ACM/IEEE International Conference on Software Engineering, pp. 375–385, 2012
- [CSMR 2011] RTFM (Read The Factual Mails) –Augmenting Program Comprehension with REmail
[Alberto Bacchelli](#), Michele Lanza, Vitezslav Humpa
15th IEEE European Conference on Software Maintenance and Reengineering, pp. 15–24, 2011
- [ICSE 2011 - Tool Demo] Miler: A Toolset for Exploring Email Data
[Alberto Bacchelli](#), Michele Lanza, Marco D'Ambros
33rd ACM/IEEE International Conference on Software Engineering, pp. 1025–1027, 2011
- [ICSE 2011 - DocSym] Exploring, exposing, and exploiting emails to include human factors in software engineering

Alberto Bacchelli

33rd ACM/IEEE International Conference on Software Engineering, pp. 1074–1077, 2011

[ASE 2011] **Extracting Structured Data from Natural Language Documents with Island Parsing**

Alberto Bacchelli, Anthony Cleve, Michele Lanza, Andrea Mocchi

26th IEEE/ACM International Conference On Automated Software Engineering, pp. 476–479, 2011

[FASE 2010] **Are Popular Classes More Defect Prone?**

Alberto Bacchelli, Marco D'Ambros, Michele Lanza

13th International Conference on Fundamental Approaches to Software Engineering, pp. 59–73, 2010

[ICSE 2010] **Linking E-Mails and Source Code Artifacts**

Alberto Bacchelli, Michele Lanza, Romain Robbes

32nd International Conference on Software Engineering, pp. 375–384, 2010

[ICPC 2010] **Extracting Source Code from E-Mails**

Alberto Bacchelli, Marco D'Ambros, Michele Lanza

18th IEEE International Conference on Program Comprehension, pp. 24–33, 2010

[QSIC 2010] **On the Impact of Design Flaws on Software Defects**

Marco D'Ambros, Alberto Bacchelli, Michele Lanza

10th International Conference on Quality Software, pp. 23–31, 2010

[WCRE 2009] **Benchmarking Lightweight Techniques to Link E-Mails and Source Code**

Alberto Bacchelli, Marco D'Ambros, Michele Lanza, Romain Robbes

16th IEEE Working Conference on Reverse Engineering, pp. 205–214, 2009

Best Paper Award

[ICSEA 2008] **On the Effectiveness of Manual and Automatic Unit Test Generation**

Alberto Bacchelli, Paolo Ciancarini, Davide Rossi

3rd International Conference on Software Engineering Advances, pp. 252–257, 2008

Best Paper Award

peer-reviewed journal articles

[EMSE 2021] **The indolent lambdification of Java: Understanding the support for lambda expressions in the Java ecosystem**

Fernando Petrulio, Anand Sawant, Alberto Bacchelli

Empirical Software Engineering. EMSE 2021 26.134 (2021) pp. 1–36. Springer, 2021

[TSE 2020] **Does reviewer recommendation help developers?**

Vladimir Kovalenko, Nava Tintarev, Evgeny Pasyukov, Christian Bird, Alberto Bacchelli

IEEE Transactions on Software Engineering. TSE 2020 46.7 (2020) pp. 710–731. IEEE, 2020

[JSS 2020] **On the Performance of Method-Level Bug Prediction: A Negative Result**

Luca Pascarella, Fabio Palomba, Alberto Bacchelli

Journal of Systems and Software. JSS 2020 161 (2020) p. 110493. Springer, 2020

[EMSE 2019] **Associating Working Memory Capacity and Code Change Ordering with Code Review Performance**

Tobias Baum, Kurt Schneider, Alberto Bacchelli

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[PeerJ 2019] **The effects of change decomposition on code review - A controlled experiment**

Marco di Biase, Magiel Bruntink, Arie van Deursen, Alberto Bacchelli, Alberto Bacchelli

PeerJ Computer Science. PeerJ 2019 (2019) e193. PeerJ, 2019

[IST 2019] **A Survey on Software Engineering Coupling Relations and Tools**

Enrico Fregnan, Tobias Baum, Fabio Palomba, Alberto Bacchelli

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[EMSE 2019] **Classifying code comments in Java software systems**

Luca Pascarella, Magiel Bruntink, Alberto Bacchelli

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[JSS 2019] **Fine-Grained Just-In-Time Defect Prediction**

Luca Pascarella, Fabio Palomba, Alberto Bacchelli

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Anand Sawant, Romain Robbes, [Alberto Bacchelli](#)
Empirical Software Engineering. *EMSE 2019 (2019) in press. Springer, 2019*

[SCP 2019] A Large-Scale Empirical Exploration on Refactoring Activities in Open Source Software Projects
Carmine Vassallo, Giovanni Grano, Fabio Palomba, Harald Gall, [Alberto Bacchelli](#)
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[EMSE 2019] Mock objects for testing Java systems: Why and how developers use them, and how they evolve
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[EMSE 2018] On the reaction to deprecation of clients of 4+1 popular Java APIs and the JDK
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[SCNTDX 2017] Does single blind peer review hinder newcomers?
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[Alberto Bacchelli](#), Andrea Mocchi, Anthony Cleve, Michele Lanza
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Chrysi Rapanta, Marcelo Maina, Nicole Lotz, [Alberto Bacchelli](#)
Educational Technology Research and Development. *ETRD 2015 61.4 (2013) pp. 581–605. Springer, 2013*

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[Alberto Bacchelli](#), Paolo Ciancarini, Davide Rossi
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[CHASE 2020] Building Implicit Vector Representations of Individual Coding Style
Vladimir Kovalenko, Egor Bogomolov, Timofey Bryksin, [Alberto Bacchelli](#)
13th International Workshop on Cooperative and Human Aspects of Software Engineering, forthcoming, 2020

[GE 2018] Characterizing Women (Not) Contributing To Open-Source
Pavlina Wurzelova, Fabio Palomba, [Alberto Bacchelli](#)
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Mariaclaudia Nicolai, Luca Pascarella, Fabio Palomba, [Alberto Bacchelli](#)
3rd ACM SIGSOFT International Workshop on App Market Analytics, pp. 33–39, 2019

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Vladimir Kovalenko, [Alberto Bacchelli](#)
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Luca Pascarella, Achyudh Ram, Azqa Nadeem, Dinesh Bisesser, Norman Knyazev, [Alberto Bacchelli](#)
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Mark Juchli, Lars Krombeen, Shashank Rao, Chak Shun Yu, Anand Ashok Sawant, [Alberto Bacchelli](#)
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[Alberto Bacchelli](#), Luca Ponzanelli, Michele Lanza

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- [MSR 2015 - Mining Challenge] ETA: Estimated Time of Answer, Predicting Response Time in Stack Overflow
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35th International Conference on Software Engineering, 2013
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[Alberto Bacchelli](#), Nicolas Bettenburg, Latifa Guerrouj, Sonia Haiduc
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- [MUD@WCRE 2012] Workshop on Mining Unstructured Data (MUD)
[Alberto Bacchelli](#), Nicolas Bettenburg, Latifa Guerrouj
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- [CSEET 2011 - Poster] Erase and Rewind - Learning by Replaying Examples
Lile Hattori, [Alberto Bacchelli](#), Mircea Lungu, Michele Lanza
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Mining Unstructured Software Data

[Alberto Bacchelli](#)

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