

Sebastian Baltes

Software Engineering · Human Aspects · Empirical Research

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Research Interests

Empirical Software Engineering, Human Aspects in Software Development, Data Mining, Software Licenses, Information Visualization.

Education

- Since 07/2013 **Researcher, teaching assistant, and Ph.D. student**, Software Engineering Group, University of Trier, Germany.
- 04/2018–05/2018 **Research visit**, Senior Lecturer Christoph Treude, The University of Adelaide, Australia.
- 06/2013 **M.Sc. in Computer Science**,
Thesis: *SketchLink – A Prototype for Linking Sketches with Source Code Artifacts*,
Advisor: Prof. Dr. Stephan Diehl, University of Trier, Germany.
- 08/2012–01/2013 **Exchange semester**, Linnaeus University, Sweden.
- 04/2011–06/2013 **Computer science student (M.Sc.)**, University of Trier, Germany.
- 10/2010–03/2011 **Computer science student (M.Sc.)**, Saarland University, Germany.
- 09/2010 **B.Sc. in Computer Science**,
Thesis: *Automatic Generation of Test Cases for Protocol Robustness Testing using XML and Java*,
Advisor: Prof. Dr. Ralf Küsters, University of Trier, Germany.
- 10/2007–09/2010 **Computer science student (B.Sc.)**, University of Trier, Germany.
- 03/2007 **Abitur**, *Advanced courses in Mathematics, English and Social Studies*,
Staatliches Gymnasium Saarburg, Germany.

Awards and Funding

- 04/2018–05/2018 **DAAD fellowship**, *FITweltweit program of the German Academic Exchange Service (DAAD)*.
- 06/2017 **Funding from Google to conduct research using Google BigQuery**.
- 03/2015 **Funding from the University of Trier for research on using tablets in classrooms**.
- 11/2013 **Best Master's degree in Computer Science**, Grade: 1.1 (A).
- 11/2011 **IT-Security promotion prize**, *CAST-Förderpreis 2011*, Category: Bachelor's thesis.
- 11/2010 **Best Bachelor's degree in Computer Science**, Grade: 1.4 (A).

Internships and Side Jobs

- 03/2012–07/2012 **Software Developer**, JAM Software GmbH, Trier, Germany.
- 08/2011–09/2011 **Software Development Internship**, JAM Software GmbH, Trier, Germany.
- Since 01/2008 **Family-Owned Winery**, *Marketing, viticulture, and enology*, Weingut Baltes, Ayl, Germany.
- 04/2007–07/2007 **Internship (Logistics)**, Kuehne+Nagel S.à.r.l., Contern, Luxembourg.

Languages

German, English,

Basic knowledge in French, Swedish, and Luxembourgish.

Other Interests

Member of the volunteer fire department,

Training as machinist and squad leader, member of the management board.

Traveling and (analog) photography.

Committee Work

12/2016–12/2018 **Elected representative of Ph.D. students in the graduate center,**
Faculty IV, University of Trier.

06/2016–01/2017 **Member of the faculty council,** Faculty IV, University of Trier.

05/2015–08/2015 **Member of the search committee for a full professorship (W3),**
Databases and information systems, University of Trier.

Services

Mining Challenge Co-Chair.

MSR, 2019.

Program Committee Member.

ICSME NIER Track, 2018.

ESEM Poster Track, 2018.

VISSOFT Artifact Evaluation Committee, 2018.

VISSOFT NIER and Tool Track, 2016.

VISSOFT Artifact Evaluation Committee, 2015.

Journal Reviewer.

Empirical Software Engineering, 2018.

Journal of Systems and Software, 2018.

Information and Software Technology, 2018.

Conference (Co-)Reviewer.

CHI, 2017.

PacificVis, 2017.

ICSME, 2015.

InfoVis, 2015.

MSR, 2014.

ICSME ERA Track, 2014.

InfoVis, 2014.

VISSOFT NIER Track, 2013.

Memberships

Gesellschaft für Informatik e.v. (GI).

Association for Computing Machinery (ACM).

ACM Special Interest Group on Software Engineering (SIGSOFT).

ACM Special Interest Group on Computer-Human Interaction (SIGCHI).

Institute of Electrical and Electronics Engineers (IEEE).

IEEE Computer Society (IEEE CS).

Selected Publications

A complete publication list is available on my website.

- FSE 2018 **Towards a Theory of Software Development Expertise**,
Sebastian Balthes and Stephan Diehl,
Acceptance rate: 21% (61/289),
<http://empirical-software.engineering/assets/pdf/fse18-expertise.pdf>.
- EMSE 2018 **Usage and Attribution of Stack Overflow Code Snippets in GitHub Projects**,
Sebastian Balthes and Stephan Diehl,
<http://empirical-software.engineering/assets/pdf/emse18-snippets.pdf>.
- MSR 2018 **SOTorrent: Reconstructing and Analyzing the Evolution of Stack Overflow Posts**,
Sebastian Balthes, Lorik Dumani, Christoph Treude, and Stephan Diehl,
Acceptance rate: 33% (37/113),
<http://empirical-software.engineering/assets/pdf/msr18-sotorrent.pdf>.
- ESEM 2016 **Worse Than Spam: Issues In Sampling Software Developers**,
Sebastian Balthes and Stephan Diehl,
Acceptance rate: 37% (23/61),
<http://sbalthes.com/assets/pdf/esem16-sampling.pdf>.
- ESEM 2015 **Navigate, Understand, Communicate: How Developers Locate Performance Bugs**,
Sebastian Balthes, Oliver Moseler, Fabian Beck, and Stephan Diehl,
Acceptance rate: 25% (20/81),
<http://sbalthes.com/assets/pdf/esem15-debugging.pdf>.
- FSE 2014 **Sketches and Diagrams in Practice**,
Sebastian Balthes and Stephan Diehl,
Acceptance rate: 22% (61/273),
<http://sbalthes.com/assets/pdf/fse14-sketches.pdf>.

Teaching Experience

A complete list of the courses I taught is available on my website.

- Since 10/2015 **Lecturer**, Lecture on Empirical Software Engineering in the Advanced Software Engineering Course for Master students.
University of Trier, Germany.
- 10/2016–03/2017 **Lecturer**, Software Engineering course for Bachelor students.
University of Trier, Germany.
- Since 07/2013 **Thesis Supervision**, Supervision of Bachelor and Master students.
University of Trier, Germany.
- Since 07/2013 **Teaching Assistant (Wissenschaftlicher Mitarbeiter)**,
Seminars, research internships, and tutorials on Software Engineering, Information Visualization, and Programming (Bachelor and Master).
University of Trier, Germany.
- 04/2011–07/2011 **Teaching Assistant (HiWi)**,
Tutorial for lecture about IT security (IT-Sicherheit II).
University of Trier, Germany.
- 11/2009–02/2010 **Teaching Assistant (HiWi)**,
Tutorial for lecture about Java programming (Programmierung I).
University of Trier, Germany.

Talks

A complete list of talks, including links to the slides, is available on my website.

- Since 11/2014 **Conference talks and poster presentations**, FSE 2014 (Hong Kong, China), SE 2015 (Dresden, Germany), VL/HCC 2015 (Atlanta, USA), ESEM 2015 (Beijing, China), XP 2016 (Edinburgh, UK), ESEM 2016 (Ciudad Real, Spain), ICSE 2017 (Buenos Aires, Argentina), VISSOFT 2017 (Shanghai, China), MSR 2018 (Gothenburg, Sweden), FSE 2018 (Lake Buena Vista, USA).
- Since 11/2015 **Invited talks**, *TU Delft (Netherlands), University of Stuttgart (Germany), Java User Group Saar (Germany), George Mason University (USA)*.

Open Source Projects

- SOTorrent <https://github.com/sotorrent>,
Implementation of various string similarity metrics in Java (sotorrent/string-similarity), Extractor for post blocks and links from Stack Overflow data dump, implemented in Java with Hibernate (sotorrent/posthistory-extractor), data retrieval and analysis scripts mainly written in SQL and R (sotorrent/db-scripts and sotorrent/r-scripts).
- api-retriever <https://github.com/sbalttes/api-retriever>,
Configurable Python script to retrieve, filter, and export data from public APIs.
- git-log-parser <https://github.com/sbalttes/git-log-parser>,
Java tool to parse files containing git-log data (retrieved with git-log-extractor) and export the extracted information to CSV files.
- so-edit-viz <https://github.com/sotorrent/so-edit-viz>,
Web tool to visually explore edit and comment events in Stack Overflow threads (live demo available [here](#)).