## Dr. Marcel Taeumel

### (a) Professional preparation

| Period | Degree | Institution |
|---|---|---|
| 2011 – 2020 | Dr. rer. nat. | Hasso Plattner Institute |
| 2009 – 2011 | M.Sc. IT-Systems Engineering | Hasso Plattner Institute |
| 2006 – 2009 | B.Sc. IT-Systems Engineering | Hasso Plattner Institute |

### (b) Appointments

| Period | Position | Institution | Activities |
|---|---|---|---|
| Since 2020 | Post-doc Researcher | Hasso Plattner Institute | Research and teaching on Exploratory Programming Practices |
| 2011 – 2020 | Research Assistant | Hasso Plattner Institute | Research and teaching on Programming Languages, Tools, and Environments |
| 2009 – 2011 | Student Research Assistant | Hasso Plattner Institute | Design and development of research prototypes for Design Thinking, Agile Development, and Collaboration |

### (ci) Publications related to the proposed project

- Marcel Taeumel, Patrick Rein, Robert Hirschfeld. Toward Patterns of Exploratory Programming Practice. In Design Thinking Research, 24 pages. 2021, Springer. (To appear)
- Marcel Taeumel, Robert Hirschfeld. Exploring Modal Locking in Window Manipulation: Why Programmers Should Stash, Duplicate, Split, and Link Composite Views. In Proceedings of the 7th Programming Experience Workshop (PX), co-located with <Programming> 2021, 7 pages, Online/Virtual, United Kingdom, March 23, 2021, ACM. (To appear)
- Patrick Rein, Marcel Taeumel, Robert Hirschfeld. *Towards a Theory of Factors That Influence Text Comprehension of Code Documents*. In Design Thinking Research: Interrogating the Doing, pages 307-325. 2020, Springer.
- Marcel Taeumel. *Data-driven Tool Construction in Exploratory Programming Environments*. PhD Thesis. 2020, University of Potsdam.
- Patrick Rein, Marcel Taeumel, Robert Hirschfeld. *Towards Empirical Evidence on the Comprehensibility of Natural Language Versus Programming Language*. In Design Thinking Research: Investigating Design Team Performance, pages 111-131. 2019, Springer.
- Fabio Niephaus, Tim Felgentreff, Tobias Pape, Robert Hirschfeld, and Marcel Taeumel. *Live Multi-language Development and Runtime Environments*. In Journal on The Art, Science, and Engineering of Programming, vol. 2, no. 3, art. 8, 30 pages, 2018.
- Marcel Taeumel, Stephanie Platz, Bastian Steinert, Robert Hirschfeld. *Unravel Programming Sessions with THRESHER: Identifying Coherent and Complete Sets of Fine-granular Source Code Changes.* In Journal of the Japan Society for Software Science and Technology (JSSST) on Computer Software, vol. 34, no. 1, pages 103-118, 2017, Japan.
- Marcel Taeumel, Robert Hirschfeld. *Making Examples Tangible: Tool Building for Program Comprehension.* In Design Thinking Research: Taking Breakthrough Innovation Home, pages 161-182. 2016, Springer.
- Marcel Taeumel, Robert Hirschfeld. *Evolving User Interfaces Within Self-sustaining Programming Environments: Exploring the Project Concept of Squeak/Smalltalk to Bootstrap UIs.* In Proceedings of the 1st International Workshop on Programming Experience (PX), co-located with ECOOP 2016, pages 43-59, Rome, Italy, July 18, 2016, ACM.

### (cii) Other significant publications

- Patrick Rein, Marcel Taeumel, Robert Hirschfeld. *Gramada: Immediacy in Programming Language Development.* In Proceedings of the ACM Symposium for New Ideas, New Paradigms, and Reflections on Everything to do with Programming and Software (Onward!) 2016, co-located with OOPSLA 2016, pages 165-179, Amsterdam, The Netherlands, October 30-November 4, 2016, ACM.
- Michael Perscheid, Benjamin Siegmund, Marcel Taeumel, Robert Hirschfeld. *Studying the Advancement in Debugging Practice of Professional Software Developers.* In Software Quality Journal, pages 1-28. 2016, Springer.
- Marcel Taeumel. *Leveraging Programmers' Skills: Interleaving of Modification and Use in Data-driven Tool Development.* In Proceedings of the 8th Ph.D. Retreat of the HPI Research School on Service-oriented Systems Engineering, pages 191-202. 2015, Hasso Plattner Institute.
- Marcel Taeumel, Michael Perscheid, Bastian Steinert, Jens Lincke, and Robert Hirschfeld. *Interleaving of Refinement and Use in Data-driven Tool Development.* In Proceedings of the ACM Symposium for New Ideas, New Paradigms, and Reflections on Everything to do with Programming and Software (Onward!) 2014, co-located with OOPSLA 2014, pages 185-200, Portland, Oregon, USA, October 20-24, 2014, ACM.
- Marcel Taeumel. *No Tools but Objects: Towards Direct Manipulation Programming Environments.* In Proceedings of the 7th Ph.D. Retreat of the HPI Research School on Service-oriented Systems Engineering, pages 161-172. 2014, Hasso Plattner Institute.
- Marcel Taeumel. *Interleaving Programming Tasks: Challenges for Interruption Handling in Programming Environments.* In Proceedings of the 6th Ph.D. Retreat of the HPI Research School on Service-oriented Systems Engineering, pages 179-190. 2013, Hasso Plattner Institute.
- Marcel Taeumel, Bastian Steinert, Robert Hirschfeld. *The VIVIDE Programming Environment—Connecting Run-time Information with Programmers' System Knowledge.* In Proceedings of the ACM Symposium on New Ideas, New Paradigms, and Reflections on Programming and Software (Onward!) 2012, pages 117-126, Tucson, Arizona, USA, October 19-26, 2012, ACM.

### (d) Synergistic activities

- Program committee co-reviewer: ECOOP'18, Onward'19, <Programming>'17, <Programming>'18, INTERACT'17, OOPSLA'20
- Program committee: PX'18, PX'19, PX'20, PX'21
- Squeak/Smalltalk core developer; Squeak Oversight Board 2015-2021 (http://www.squeak.org)
- Squeak/Smalltalk open-source projects (https://www.github.com/hpi-swa)
- First chairman of the Squeak Deutschland e.V. Q4 2016-2021

### (ei) Collaborations and other affiliations

Dr. Vanessa Freudenberg (Croquet Corporation, Los Angeles), Dr. Carl Friedrich Bolz (Heinrich-Heine-Universität Düsseldorf), Dr. Michael Haupt (eBay Deutschland, Potsdam), Dr. Michael Perscheid (EPIC Chair Representative, HPI, Potsdam), Dan Ingalls (Y Combinator Research, San Francisco), Dr. Malte Appeltauer (Zalando, Berlin), Dr. Bastian Steinert (Signavio, Berlin)

### (eii) Graduate advisors

Prof. Dr. Robert Hirschfeld (Hasso Plattner Institute)