

Christoph Matthies

Curriculum Vitae

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Education

- Since Jan. 2016 **Research Assistant / PhD candidate, HPI, Potsdam.**
Research in the field of data-driven software development methodologies, especially concerning measurement and improvement, at the “Enterprise Platform and Integration Concepts” chair of Prof. Plattner.
- Oct. 2012 – Oct. 2015 **M.Sc. IT-Systems Engineering, Hasso Plattner Institute, University of Potsdam, Grade: 1.3.**
Areas of specialization: Internet & Security Technology, Operating Systems
- Oct. 2012 – Feb. 2013 **“Basic Track” Design Thinking, HPI School of Design Thinking, University of Potsdam.**
Designing novel service experiences in cooperation with the AOK Northeast health insurance.
- Oct. 2009 – Aug. 2012 **B.Sc. IT-Systems Engineering, Hasso Plattner Institute, University of Potsdam, Grade: 1.6.**
Bachelor’s thesis: Analysis and implementation of administrators’ requirements of the Berlin lifeguard.
- June 2009 **Abitur, Schiller-Oberschule, State Europe School Berlin (SESB), Berlin, Grade: 1.4.**
Partner Tongue English

Master’s Thesis

- Title *ScrumLint – Deriving Knowledge About the Implementation of Scrum from Development Artifacts*
- Supervisors Prof. Dr. h.c. Hasso Plattner, Dr. Matthias Uflacker
- Abstract In the context of a course teaching agile methodologies we developed ScrumLint, an application which identifies deviations from defined agile practices, based on analyses of development artifacts.

Experience

Vocational

- Since March 2016 **Software developer, HPI, Potsdam.**
Development and operations of a Ruby on Rails application for the administration of employee contracts.
- Jan. – Dec. 2015 **Research Assistant, HPI, Potsdam.**
Design and implementation of a debugger front-end in Javascript for interacting with stored procedures in a prototypical database.

- Oct. 2012 – March 2015 **Teaching Assistant**, *HPI*, Potsdam.
Tutor of the course “Software Engineering II” for three consecutive semesters. Mentoring and evaluation of student teams in implementing agile methods in a large-scale (40+ participants) software development project. (<https://github.com/hpi-swt2>).
- Oct. 2012 – March 2013 **Research Assistant**, *HPI*, Potsdam.
Mentoring of the course “Model-Driven Software Engineering”. Design and implementation of the technical exercises using the Eclipse Modeling Framework.
- April – Sept. 2010 **Research Assistant**, *HPI*, Potsdam.
Tutor of the course “Internet- and WWW-Technologies”. Supervision and evaluation of exercises on internet networking and communication protocols.
- Miscellaneous
- June 2015 **HERE Mapathon**, *Nokia HERE*, Berlin.
One-day Hackathon. Development of a Javascript heatmap visualizing past traffic accident data in the vicinity, aggregated from HERE APIs.
- Oct. 2010 – March 2011 **Scrum Process Owner**.
Process Owner of a student team. Requirements analysis and management of the development process of a customer relationship management system.
- 2009 – 2012 **Member of the HPI “Debating Society”**.
Regular debates in English. Participation in debating competitions.

Qualifications

- Languages **German and English**: Native, **French**: Basic knowledge
- Programming languages Python, Javascript, Ruby, Java, Smalltalk, R, C, C++
- Technologies Django, Ruby on Rails, AngularJS, HTML, CSS, \LaTeX , Git, Bash, JQuery, Bootstrap, SQLite, MySQL, TYPO3, Ubuntu Linux, Windows.
See also projects on Github (<https://github.com/chrisma>) and Slideshare (<http://slideshare.net/chrisma0>)
- Certifications Certified ScrumMaster, Scrum Alliance.
Microsoft Technology Associate: Database Administration Fundamentals.

Selected Courses and Projects

- IT Enterprise Architecture Introduction to IT portfolio management, strategic IT planning and the role of information technology in enterprises.
- Introduction to Design Thinking Development of innovative sales channels in cooperation with the “Wort & Bild Verlag” in a multidisciplinary team.
- Constraint-Based Programming “Pybelsberg”, Constraint-based programming approaches in Python. (<https://github.com/Pybelsberg/pybelsberg>).
- Cloud Computing Technologies “Introduction to Homomorphic Encryption”, research on using homomorphic encryption to enable secure computations in the cloud.
- Dependable Systems Introduction, theoretical foundations & modeling of availability, reliability, and maintainability of software systems.
- Finding Vulnerabilities through Rev. Eng. Practical study on the security of microtransactions in an Android application through disassembly and code analysis.

Peer-Reviewed Publications

- Oct. 2016, **C. Matthies**, T. Kowark, M. Uflacker and H. Plattner. “Agile Metrics for a University Software Engineering Course”. *46th IEEE Frontiers in Education Conference (FIE)*. Erie, PA, USA. pp. 1-5.
- Sept. 2016, T. Kowark, **C. Matthies**, M. Uflacker and H. Plattner. “Lightweight ASE Collection and Storage of Software Repository Data with DataRover”. *Proceedings of the 31st IEEE/ACM International Conference on Automated Software Engineering (ASE)*. Singapore. pp. 810–815.
- July 2016, **C. Matthies**, M. Uflacker and H. Plattner. “Teaching Agile the Agile ASEE IF Way — Employing Self-Organizing Teams in a University Software Engineering Course”. *American Society for Engineering Education International Forum, collocated with ASEE 123rd Annual Conference & Exposition*. New Orleans, LA.
- May 2016, **C. Matthies**, T. Kowark, K. Richly, M. Uflacker and H. Plattner. “How ICSE Surveys, Tutors, and Software Help to Assess Scrum Adoption in a Classroom Software Engineering Project”. *Proceedings of the 38th International Conference on Software Engineering (ICSE)*. Austin, TX. pp. 313–322.
- May 2016, **C. Matthies**, T. Kowark, K. Richly, M. Uflacker and H. Plattner. CHASE “ScrumLint: Identifying Violations of Agile Practices Using Development Artifacts”. *Proceedings of the 9th International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE), collocated with ICSE’16*. Austin, TX. pp. 40–43.
- Sept. 2015, **C. Matthies**, L. Pirl, A. Azodi and C. Meinel. “Beat Your Mom at Solitaire — a Review of Reverse Engineering Techniques and Countermeasures”. *6th IEEE International Conference on Software Engineering and Service Science (ICSESS)*. Beijing, China. pp. 1094–1097.