



Michael Schlichtig

PhD Candidate (Computer Science)

Secure Software Engineering · Paderborn University · Heinz Nixdorf Institute

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 schlichtig.github.io |  github.com/schlichtig |  linkedin.com/in/schlichtig

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Skills: Java, Python, C++ · Static Analysis (Soot, SootUp, CogniCrypt) · Android

Research Interests

Usability of static code analysis tools · Software API security and cryptographic library misuse
• AI-assisted repair of security defects (LLMs + static analysis) · Software engineering with and for AI-based systems · Android privacy and GDPR compliance automation · Developer tooling (IDE plugins, static analysis frameworks)

Professional Experience

Research Associate, Heinz Nixdorf Institute

09/2019 – 09/2026

*Paderborn University, “Secure Software Engineering” group
(until 08/2019: “Didactics of Computer Science”) – combined with doctoral studies*

- CRC 1119 CROSSING, subproject E1 “Secure Integration of Cryptographic Software” (DFG) – Maintainer of CogniCrypt; SAST with Soot, SootUp, CI/CD integration
- Research on improving the usability of SAST tools
- AI-assisted repair of cryptographic API misuses (LLMs + SAST); SecAI tool
- Research on Android privacy and GDPR-compliant software development

Project Lead (Principal Investigator)

02/2023 – 08/2024

Software Campus project “Specifiable automated detection of API misuse in CI pipelines” (API_ASSIST), BMBF – 100,000 EUR

Research Associate

08/2018 – 08/2019

Paderborn University

“Didactics of Computer Science” group, project “Data Science and Big Data in Schools” (ProDaBi)

- Development and testing of a Data Science and AI curriculum for secondary school (age 16–18)

Selected Publications (peer-reviewed)

- [1] M. Khedkar, M. Schlichtig, N. Atakishiyev, and E. Bodden. Between law and code: Challenges and opportunities for automating privacy assessments. *Automated Software Engineering*, 33(2):56, 2026.
- [2] M. Khedkar, M. Schlichtig, M. Soliman, and E. Bodden. Challenges in Android data disclosure: An empirical study. In *Proceedings of the IEEE/ACM 13th International Conference on Mobile Software Engineering and Systems*. ACM, 2026.
- [3] M. Nachtigall, M. Schlichtig, and E. Bodden. A large-scale study of usability criteria addressed by static analysis tools. In *Proceedings of the 31st ACM SIGSOFT International Symposium on Software Testing and Analysis*, pages 532–543, 2022.

- [4] A. K. Wickert, M. Schlichtig, M. Vogel, L. Winter, M. Mezini, and E. Bodden. Supporting error chains in static analysis for precise evaluation results and enhanced usability. In *2024 IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER)*, pages 693–704. IEEE, 2024.
- [5] M. Schlichtig, S. Sassalla, K. Narasimhan, and E. Bodden. FUM – a framework for API usage constraint and misuse classification. In *Proceedings of the 2022 IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER)*, pages 673–684, 2022.

Full list: schlichtig.github.io/publications | [Google Scholar](#)

Education

Doctorate in Computer Science 10/2018 – 08/2026

Paderborn University, “Secure Software Engineering” group (until 08/2019 “Didactics of Computer Science”)

Dissertation submitted; defense 31 August 2026

M.Sc. Computer Science (English-language program) 04/2017 – 08/2018

Paderborn University

Overall grade 1.2 (with distinction); incl. semester abroad at University of Oklahoma (08–12/2015, GPA 3.75)

B.Sc. Computer Science 10/2011 – 03/2017

Paderborn University – minor in Economics

Thesis: “Evaluation of design recommendations in the context of hypothesis-guided technology design” (grade 1.0) – overall grade 2.2

Awards

CROSSING Collaboration Award 2021

Collaborative Research Center (CRC) 1119 CROSSING, TU Darmstadt

Grants and Funding

API_ASSIST – “Specifiable automated detection of API misuse in CI pipelines” 02/2023 – 08/2024

100k EUR, BMBF Software Campus – Principal Investigator

Teaching and Supervision

Teaching Assistant (Course Support and Supervision) Since 09/2019

Paderborn University

- “Designing Code Analyses for Large-Scale Software Systems” (DECA) – master level
WS 19/20, 20/21, 21/22, 23/24, 24/25
- “Secure Software Engineering” (SSE) – bachelor level
SS 2020
- “Software Engineering Internship” (SWTPra) – bachelor level
WS 21/22, 22/23
- Project Group “AI-supported Security Testing” (SecAI) – one-year master’s project, WS 24/25 – SS 25, independently conceived and led; SonarQube plugin for visualizing CogniCrypt analysis results with a focus on usability and AI assistance

Supervision of Theses, Student Assistants (SHK) and Research Assistants (WHB)

Since 08/2018

Professional Service

Reviewer

2025 – 2026

Journals

- *IEEE Transactions on Software Engineering*
- *ACM Computing Surveys*
- *The Journal of Systems & Software*

Program Committee Member

2025

IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER '25) — Tool Demo Track

Research Visits

Research Visit

04/2025 – 05/2025

Universidade de Brasília (UnB) and Universidade Federal de Pernambuco (UFPE), Brazil

- Host: Prof. Rodrigo Bonifácio, UnB, Brasília
- Invited talks: “Helping Developers Reduce Misuses of Java APIs” (UnB and UFPE)