



MARTIN LEINBERGER

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EDUCATION

PhD Student
University of Koblenz-Landau
Since 2013

M. Sc. Computer Science
University of Koblenz-Landau
Grade: 1,2 2011-2013

B. Sc. Computer Science
University of Mainz
Grade: 1,4 2007-2011

EXPERTISES

- Java, C#, Python •
- Scala, F# •
- Prolog •
- MySQL •
- CouchDB •
- Graph databases (e.g. Stardog) •
- Apache Spark •
- Data Integration •
- Knowledge Graphs / Ontologies •
- Unity3D •

EXPERIENCE

Research Employee, Akademischer Rat since April 2020
Institute for Web Science, University of Koblenz-Landau | 2013-Present
Research focuses on programming with semantic graph data.

Intern at TPC Development
IBM Research & Development GmbH, Mainz | Aug. 2009-Oct. 2009
Worked on setting up a virtual Scale-out File Services (SoFS) cluster.

DISSERTATION

Type-safe Programming for the Semantic Web (under submission)
Advised by Prof. Dr. Steffen Staab and Prof. Dr. Ralf Lämmel
Investigates type-checking programs working semantic graph data.

TEACHING

Big Data, Lecture | 2020
Course includes Cloud Computing, Apache Spark, OLAT, and NoSQL.

Artificial Intelligence, Tutorials | 2015-2019
Course includes knowledge representation, Prolog, planning, and MAS.

Algorithms and Data structures, Tutorials | 2013-2018
Course includes dynamic data structures and graph algorithms.

SELECTED SOFTWARE PROJECTS

- **101companies:** Extraction of facts, patterns, and code fragments from source code repositories.
- **LITEQ:** Mapping of types from ontologies into programs based on queries in the program.
- **λ-DL:** Research language investigating type checking programs that query semantic graph data.

SELECTED PUBLICATIONS AND PROPOSALS

- M. Leinberger, P. Seifer, C. Schon, R. Lämmel, S. Staab. **Type Checking Program Code Using SHACL.** *Proceedings of the 18th International Semantic Web Conference (ISWC), Auckland, New Zealand, 2019.*
- M. Leinberger, S. Staab, R. Lämmel. **The Essence of Functional Programming on Semantic Data.** *Proceedings of the 26th European Symposium on Programming (ESOP), Uppsala, Sweden, 2017.*
- **Project Proposal LISeQ - Language Integrated Semantic Queries | Sept. 2018-Aug. 2020**
Funded by the Deutsche Forschungsgemeinschaft (DFG) with 197.200€