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#
- PHP, Javascript
- Prolog
- MySQL
- CouchDB
- Graph databases (e.g. Stardog)
- Apache Spark
- Data Integration
- Knowledge Graphs / Ontologies
- Information Retrieval
- Modelling with UML
- Unity3D

DISSERTATION

Type-safe Programming for the Semantic Web (under submission)
Advised by Prof. Dr. Steffen Staab and Prof. Dr. Ralf Lämmel

Focuses on type-checking programs working semantic graph data to avoid run-time errors by leveraging ontologies.

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. Teaching responsibilities include Algorithms and Data structures, AI, and Big 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.

TEACHING

Big Data, Lecture | 2020

Course content includes Apache Spark, OLAT and NonSQL databases.

Artificial Intelligence, Tutorials | 2015-2019

Course content includes knowledge representation, Prolog, search and planning, and Multi-Agent Systems.

Algorithms and Data structures, Tutorials | 2013-2018

Course content includes sorting, dynamic data structures (e.g., hashing, trees), and graph algorithms (e.g., shortest path).

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€