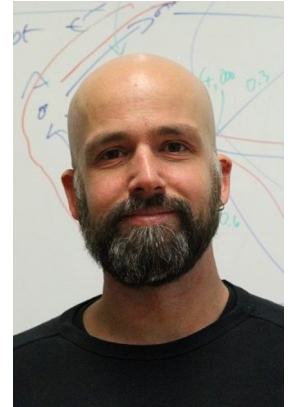


Database Technology Organization



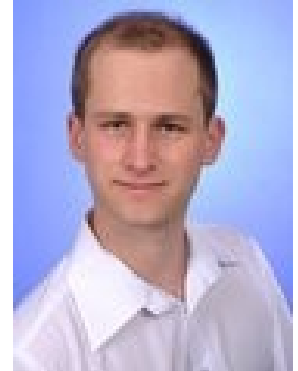
Hello

- Prof. Dr. Heiko Paulheim
- Chair of Data Science
- Research Interests:
 - Knowledge Graphs on the Web and their Applications
 - Data Quality and Data Cleaning on Knowledge Graphs
 - Machine Learning and Data Mining on Linked Data
- Room: B6 – B.022
- Consultation: Tuesdays, 9-10 am
 - Please make an appointment w/ Ms. Lermer upfront
- Heiko will teach the lectures



Hello

- Sven Hertling
- Ph.D. Student
- Research Interests:
 - Semantic Technologies / Semantic Web
 - Linked Data
 - Knowledge Graphs
- Room: B6 – B0.01
- Consultation: by appointment
- Sven will teach the exercises



Introduction and Course Outline

- Administration
- Introduction
 - Concept and (brief) history of relational databases
 - Introduction to the relational model

Course Organization

- Lecture
 - Database concepts
 - Theory of relational algebra, relational modeling, query processing
 - Introduction to SQL
- Exercise
 - Creating example databases
 - Hands-on experience
- Final exam

Course Contents and Schedule

- 16.2.: Introduction
- 23.2+2.3.: :SQL
- 9.3. : ER Models
- 16.3.: Normal Forms
- 23.3.: Index and Hashing
- 30.3.: DB Architectures
- 6.4.: Query Processing
- 13.4.: Easter Break
- 20.4.: Easter Break
- 27.4.: Query Optimization
- 4.5.: Transactions and Concurrency
- 11.5.: Recovery
- 18.5.: Application Development

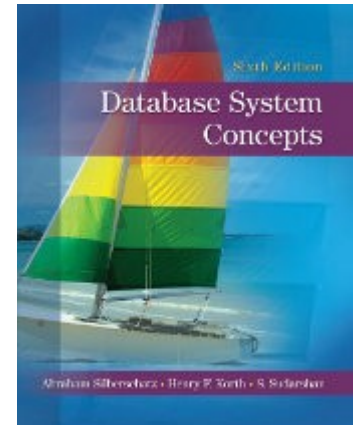
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eggercise assignment here

Course Organization

- Lecture Webpage: Slides, Announcements, Web Links
 - <https://www.uni-mannheim.de/dws/teaching/course-details/courses-for-master-candidates/cs-460-database-technology/>
 - hint: look at version tags!
- Additional Material
 - ILIAS eLearning System, <https://ilias.uni-mannheim.de/>
- Time and Location
 - Lecture: Wednesday, 12.00 – 13.30, B6 A104 (as of today)
 - Exercise: Wednesday, 13.45 – 15.15, B6 A104 (as of today)
- Remote teaching
 - For those who can't be there, we provide video recordings in ILIAS (from last year, but they are widely identical)

Material and Sources

- This course (and the majority of the slides) are based on the book
 - Silberschatz et al.: Database System Concepts
- Several copies are available in the library
- Additional material online
 - www.db-book.com



Questions?

