

Introduction to to the course

Data Management for Big Data, Part II:
Advanced database models, languages, and
systems

Dario Della Monica

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Teacher's information

Dario Della Monica

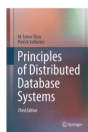
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33100 Udine
- ▶ **office hours:** Wednesday, 10:30-12:30 (or by appointment)
- ▶ more info (**cell**, **skype**, ...) on my webpage

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Material

- Database System Concepts
Silberschatz, Korth, Sudarshan
6th Edition
McGraw-Hill, 2011
<https://www.db-book.com/db6/index.html>
(extra contents: original slides, solutions, etc)
- Principles of Distributed Database Systems
Özsu and Valduriez
3rd Edition
Springer, 2011
ISBN: 978-1-4419-8834-8
<http://extras.springer.com/>
(original slides)
- other material (e.g., slides) is available on my webpage



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Overview of this part of the course

Data Management for Big Data
Part II: Advanced database models, languages, and systems
3 cfu (24 hours)

- ▶ Query processing and optimization
 - ▶ Query processing
 - ▶ Algorithms for the join operation
 - ▶ Cost-based optimization and heuristics
- ▶ Distributed database architectures
 - ▶ An introduction to distributed DBMS
 - ▶ Design of distributed databases (fragmentation and allocation)
 - ▶ Distributed query processing
 - ▶ Transaction processing in distributed databases
 - ▶ the two-phase commit (2PC) protocol
- ▶ Semistructured Data and XML
 - ▶ Definition of semistructured data in XML
 - ▶ Querying XML data (XPath and XQuery)
 - ▶ XML and relational DBMS
 - ▶ Native XML databases
- ▶ Cloud computing and DBMS, Parallel DBMS

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