

# Distributed Systems Part II:

## Distributed Transactional Systems

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# Outline

- (1) Introduction
- (2) Distributed Systems Architectures
- (3) Transaction Model
- (4) Distributed Concurrency Control
- (5) Reliability
- (6) Modeling and Analysis of Distributed Applications
- (7) Replication
- (8) Distributed Processing of “Big Data”

# Organization

- Time and location:
  - Course: Monday, 14:00 - 16:00 c.t., Room 101-01-009/013  
Friday, 14:00 - 16:00 c.t., Room 101-01-009/013, every two weeks
  - Exercises: Friday, 14:00 - 16:00 c.t., Room 101-01-009/013, every two weeks
- The final examination is oral. Please register on-line using the campus management system.
- There are no requirements for the registration and please observe the registration deadline.

**All material about lectures and exercises can be found at the web page for Part 1 of the course!**

# Literature:

- G. Weikum, G. Vossen. *Transactional Information Systems*. Morgan Kaufmann, 2002.
- P. Bernstein, V. Hadzilacos and N. Goodman. *Concurrency Control and Recovery in Database Systems*. Addison Wesley, 1987. Download:  
<http://research.microsoft.com/en-us/people/philbe/ccontrol.aspx>
- M.T. Özsu, P. Valduriez. *Principles of Distributed Database Systems*. Springer Verlag, 2001, 3Ed.
- T. White. *Hadoop: The Definitive Guide*. O'Reilly Media, 2012, 3Ed.