

Content of the Course

Part I



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KTH



Reliable distributed algorithms

Part I

- **First week**
 - Introduction to distributed systems (Lecture 1)
 - Formal models of asynchronous systems (Lecture 2)
- **Second week**
 - Basic abstractions (Lecture 3)
 - Failure detectors (Lecture 4)
- **Third week**
 - Reliable broadcast (Lecture 5)
 - Causal-order broadcast (Lecture 6)

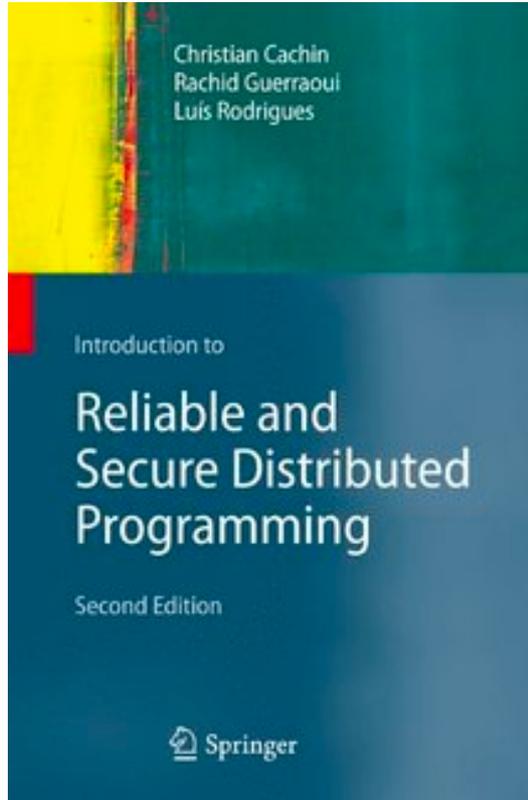


Reliable distributed algorithms

Part I

- **Fourth week**
 - Distributed shared memory and consistency models (Lecture 7)
- **Fifth week**
 - Consensus problems (Lecture 8)
 - Paxos for single value consensus (Lecture 9)
- Programming assignment and graded quizzes

Recommended Readings



Luis Rodrigues

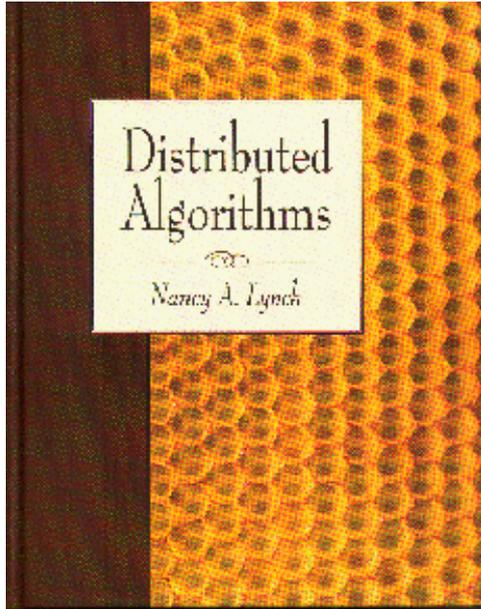


Rachid Guerraoui



Christian Cachin

Readings: Input-Output Automata



Nancy Lynch



Other Readings

- **Second week**

- Failure detectors (Lecture 4)
 - Reducibility and equivalence of various distributed abstractions

- **Fourth week**

- Distributed shared memory (Lecture 7)
 - Algorithms for sequential consistency
 - Compositionality of consistency conditions

- **Fifth week**

- Consensus using weaker failure detectors in a control-oriented notations (Lecture 8)
- Paxos (Lecture 9)



Acknowledgments

Course Team



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