Content of the Course
Part I

Seif Haridi
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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Contributors

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