

INF5040/9040

Open Distributed Systems

Course overview

Lecturers: Frank Eliassen (frank)
Roman Vitenberg (romanvi)

Teaching assistant:
Lucas L. Provensi (provensi)

Lectures and exercises

➤ **Excercises**

➤ Monday 10:15 -12:00, OJD 3438 Seminar room Caml.

➤ First time 29. August

➤ **Lectures**

➤ Tuesday 14:15-16:00, OJD 3438 Seminar room Caml.

Learning goals

- Provide a basic understanding of
 - fundamental principles, concepts and state-of-the-art
 - key technologies for realising distributed interactive systems of the future
- Gain practical experience with state-of-the-art platforms to realise distributed applications
- Provide knowledge about today's challenges to open distributed processing technology, including
 - multimedia
 - ubiquitous and mobile computing
 - sensor networks

Course elements

- 13 lectures
 - overview
- About 10 exercises
 - Introduction to Mandatory programming exercises
 - Programming exercises (2 small projects)
 - A few theoretical exercises (discussions)
- Mandatory programming exercises
- Detailed teaching plans and copy of slides will be made available on web
 - NOTE: only the INF5040 pages will be maintained (not INF9040)

Syllabus

- Taken from
 - G. Coulouris, J. Dollimore, T. Kindberg, G. Balir "Distributed Systems – Concepts and Design", fifth edition, Addison-Wesley.
 - A. Tanenbaum, M. van Steen, "Distributed Systems – Principles and Paradigms", 2nd edition, Prentice-Hall
- A detailed plan will be provided

Topics

- Introductory lecture (overview)
- System models
- Distributed objects and object-based middleware
- Object interaction using RMI
- Software components and distributed systems
- Communication paradigms
- Time and coordination
- Distributed transactions
- Replication
- Peer-to-peer
- Mobile and ubiquitous computing
- Distributed multimedia systems
- Web-based systems