

Course Intro

TDTS04 – Computer Networks and Distributed Systems

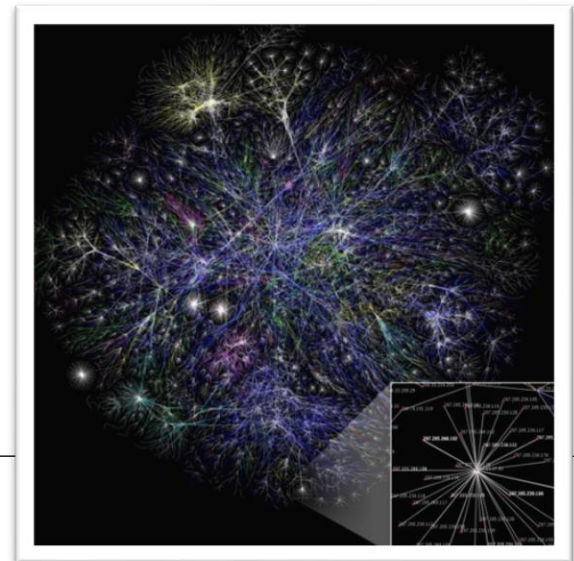
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Why study computer networks?

Everything is connected today \Rightarrow

- Very likely that you will need to troubleshoot networked devices
 \Rightarrow Important to be able to analyze traffic and figure out what goes wrong
- Very likely that you will be developing networked devices/software
 \Rightarrow Important to understand network programming principles
- Opportunity to learn how *distributed algorithms* are designed
 - Algorithms based on “collaboration” between multiple devices rather than running on one device – can be very tricky...



Course organization

Examination

- Written exam (5 hp/ECTS)
- Lab assignments (3 hp/ECTS)

Course language is English

- Important to know English terminology (what to Google for)
- Availability to exchange students

Course web: <https://www.ida.liu.se/~TDTS04/>

- All course info
- Lectures slides (+ other material)
- Lab assignments

Examination – Written exam

4-hour sit-in exam at campus

Random selection of 5 questions from list published on web page

- Final list of questions still being revised – will be published well ahead of exam

Examination – Labs

Four assignments

- Assignments 2 and 4 require considerable time – plan accordingly!
- Need to both **demo** to supervisor and hand in your **report + code**
- **Recommended and hard deadlines:** see course web

11 scheduled lab sessions – opportunity to get help from supervisors

- Work aside from these sessions also needed

Need to sign up in Webreg (registered students only). **Deadline: January 28th**

- Lab done in **groups of 2 students**
- Looking for a lab partner? See if someone signed up by themselves and email them!
- One-person groups only allowed if very good reason exists.
 - **If we start to run out of space, I will randomly group lone students together...**

Prerequisites

Decent programming skills in some language (e.g., C, Java, Python) is required for the labs (see course syllabus)

- Is your programming a bit rusty? Expect to spend **much** more time on labs!

Lectures

- 1: Welcome + introduction (today)
- 2: Applications (HTTP, DNS, ...)
- 3: Transport layer part 1 (Design of TCP, etc.)
- 4: Transport layer part 2
- 5: Network layer – data plane (IP protocol, etc.)
- 6: Network layer – control plane (Routing algorithms)
- 7-10: Distributed systems
- 11: Link layer
- 12: Wireless networks
- 13: Security and course wrap-up

People

Ulf Kargén

Assistant
professor

**Examiner
and lecturer**
(1-6, 11-13)



Carl Magnus
Bruhner

PhD student

Lecturer
(distributed syst.)



Mohammad
Borhani

PhD student

Lab assistant



Suleman Khan

PhD student

Lab assistant

