

TDT01: Architecture of Computing Systems

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(Slides by Rakesh Kumar)

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Course Staff

- Coordinator
 - Magnus Jahre
- Instructors
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Course Structure

- Four meetings
 - First one is today: course organization
 - Four more to come: ~3 weeks apart
 - Each student (or group of two) presents a research paper
- Structure of upcoming meetings
 - Three presentations per meeting: 15 minutes each
 - Discussion after each presentation: 15 minutes

Research papers for presentations

- Paper list is already on the course webpage
- You need to choose a paper for presentation
 - Read abstracts of all papers to get an idea about them
 - Choose the ones you are most enthusiastic about
 - Papers will be allocated in **first-come first-serve basis**

You can submit your paper choice from coming Wednesday 11:00 AM onwards. Wait for the link.

Grading

- Presentation/discussion: Pass/Fail
 - Prepare and practice your presentation well
 - Participate in the discussion
 - You need to read and understand each paper to contribute to the discussion
- Final exam/test: graded

Research Papers



Types of CS research papers

- Conference papers
 - Primary form of dissemination in CS
- Workshop papers
 - Early results on hot topics
- Journal paper
 - Longer and (usually) simpler to read
 - More detailed than conference/workshop papers

Why read research papers

- To understand the latest developments
- Learn how to write and present ideas
 - Very useful (and hard) skill. Make others believe it's their idea!
- Start with other people's ideas to feel the process
- Read critically
 - Ask the right questions, challenge assumptions!

How to read a paper: Three pass approach

- First pass: get a general idea
 - Read Abstract, Introduction and Conclusion
 - 20-30 minutes
- Second pass: understand the content
 - Read full paper, ignore details
 - Find key points, check figures carefully, mark text for further reading
 - 1-2 hours
- Third pass: understand in depth
 - Fully understand everything, question everything, attention to details.
 - No time limits

What to look for when reading papers

- What is the research problem the paper addresses?
 - What impact would solving the problem have?
- What are the key insights and ideas of the paper?
- What are the strengths of the papers?
 - Why do you like the paper?
- What are the weaknesses of the paper?
 - What didn't you like about the paper? Think critically!
- How is it related to your work? Can you build on it?

Take-away: What did you learn from the paper?

Reading on reading (CS) research papers

- S. Keshav, How to Read a Paper, ACM SIGCOMM Computer Communication Review, 2007
- Philip W. L. Fong, Reading a Computer Science Research Paper, SIGCSE 2009
- Amanda Stent, How to Read a Computer Science Research Paper, Technical Report.