Context-aware Computing: Course Overview

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Distributed Systems Group
Vienna University of Technology
https://www.infosys.tuwien.ac.at/teaching/courses/caws/
Overview

- Instructors
- Course objectives
- Course topics
- Course form
- Evaluation
Instructors

- **Prof. Schahram Dustdar**
  - Research Interest:
  - Web: [http://www.infosys.tuwien.ac.at/staff/sd](http://www.infosys.tuwien.ac.at/staff/sd)
  - Email: dustdar@infosys.tuwien.ac.at

- **Dr. Hong-Linh Truong**
  - Research Interest:
    - monitoring and analysis of the behavior and quality of distributed and parallel applications and systems (applied to Performance Analysis Techniques and Tools, Parallel Processing and Grid Computing, Internet Technologies and Web Services, Workflows and Collaborative Computing, Autonomic Computing and Context-Aware Computing)
  - Web: [http://www.infosys.tuwien.ac.at/staff/truong](http://www.infosys.tuwien.ac.at/staff/truong)
  - Email: truong@infosys.tuwien.ac.at
Course Objectives

- Understand the role and concepts and techniques for context-aware computing
  - Context → context sensing and analysis → context adaptation
  - System-oriented and quality-oriented
  - Environments: large scale, complex service-oriented systems

- System- and applied-oriented focus
  - From bottom up approach: learn what is there

- Establish and develop the concept of context-aware computing into your own research directions, in particular, in
  - Knowledge management
  - Ambient Intelligence
  - Natural Computing
  - Business process management
  - Computer Supported Cooperative Work
  - Internet Computing
  - Fault-tolerance systems
Course Topics

- Context, Context-awareness and Context-aware Systems
  - Definitions and Background
- Context-aware Web services systems – models, techniques and algorithms
  - Architectural styles
  - Context coupling
  - Quality of context
  - Context adaptation
- Case studies of Real-world context-aware systems
- Future trend and research topics in context-aware computing
The Form of the Course

- Goals:
  - Minimize lectures and maximize discussion and research projects

- Participation and Research
  - Overview lectures gave by instructors
  - Reading, presentation and summary made by course participants
  - Participants perform course projects to learn and address hand-on and open scientific topics
    - Aim at publishable papers
Schedule

- Course link: https://www.infosys.tuwien.ac.at/teaching/courses/caws/
- Schedule: see the website (update regular)
- Reading assignments and course projects will be announced as soon as possible.
- The next two schedules:
  - Lecture: Overview of context-aware computing
  - Discussion and presentation:
    - the roles, concepts and techniques of context-aware computing: a bird view from different sub-disciplines
  - Tue, 15-17 pm?
Evaluation

- **Final marks**
  - 1 (excellent), 2 (good), 3 (satisfactory), 4 (pass), 5 (failed)
- We use the 100 scale

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<tr>
<th>100 scale</th>
<th>Final mark</th>
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<tbody>
<tr>
<td>90-100</td>
<td>1</td>
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<td>5</td>
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Evaluation (cont.)

- Participation, presentation and discussion in the course
  - 30 Marks

- Course project and final exam
  - Option 1
    - Mini course project: 40 marks
      - One course project, individual – 8 weeks
    - Final exam (oral): 30 marks
  - Option 2
    - Medium course project: 70 marks
      - Can be carried out by a(n) team/individual in 12 weeks
      - You can also propose a topic
      - Reading assignment will strongly be related to the projects
Thanks for your attention!

For further information, pls. check the course link:
https://www.infosys.tuwien.ac.at/teaching/courses/caws/