Advanced Seminar "Research Topics for Intelligent Interactive Robots"

Interactive robots that perceive their surroundings, act intelligently and collaborate with number of application domains. Underlying research questions include, for example, learning, sensory analysis of humans, imitation learning, human behavior modeling a manipulation, and social human-robot interaction.

Learning to efficiently and effectively read a paper is a critical skill taught and practice selection of recent, particularly relevant scientific publications from which you will pick read, analyze, summarize, present the paper, and in addition, implement it, or run experiments.

We will deal with questions such as:
1. What is the underlying research question addressed in the paper?
2. Why is it relevant?
3. How does the paper relate to other papers?
4. What are the paper's contributions and hypotheses?
5. How are the experiments designed to investigate the hypotheses?
6. Can you reproduce the results?
7. How does the paper's method work under conditions different from the reported ones?
8. What are the flaws and limitations of the paper and its proposed method?
9. How would you extend the work?

During the seminar, students are expected to contribute with questions, answers, comments, and observations. We emphasize the importance of everyone attending class and actively engaging in all discussions.

Requirements/Tasks
- Read and understand your paper thoroughly to answer questions 1-5 (don't underestimate the time necessary for that)
- Implement the paper or run it's code to answer questions 6-9
- Present the paper and your experimental result in two talks of around 15 min plus 5 min for discussion
- Attend the seminar and actively participate in the discussions. Read all presented papers in "first-pass" fashion (you will learn how to do this).
- Talks can either be given in German or English (we recommend English)
- The final mark is a combination of three grades for presentation, implementation, and active participation

Information
- Organizer: Prof. Kai Arras
- Co-Organizers: Till Hielscher, Dennis Rotondi
- Language: English
- The seminar is limited to 12 students, first come first serve.