RAI 932: Social Robotics

Textbook

1. Designing Sociable Robots (Intelligent Robotics and Autonomous Agents series) by Cynthia Breazeal. The course will also be research paper based. Depending upon the module, the instructor(s) may also assign a reference book.

Objective

2. This is a highly research oriented course with the basic objective of bringing the students face to face with the latest cutting edge research in the world. This will play a key role in helping them select suitable topics for their research that would lead to publications in leading international journals and conferences.

Pre-Requisite

3. This is a graduate course meant for students interested in HRI research. It will be assumed that students have some background in AI, Robotics, or HCI and an interest in all three.

Course Outcome

4. Students graduating from this course are expected to develop a deep insight into cutting edge robotics technologies with an overview of the underlying theory and methodologies in each subject area. This course will be very helpful for students to take up research theses of good technical value in the cutting edge research areas.

Course Outline

5. This course will cover a variety of topics related to social intelligence and socially intelligent robots. 1-2 weeks on each topic, and readings/lectures will cover (1) what's known about how this ability arises in human intelligence, and (2) state-of-the-art approaches to building computational systems with this type of social ability.

Topics	Allocated Periods
Anthropomorphism and Embodiment Case Studies of Autonomous Interactive Robots Assistive Technologies ExpeRAIntal Design Percieving Intentional Action Collaboration Tasks Worker Satisfaction in Mixed Human-Robot Teams Learning from Demonstration Dialog and Turntaking Emotional Intelligence Engineering Psychology Social Learning Assistive and Telepresence Autism and Robots HRI Ethics Impact of Robotics on Society	45