

RIME 835: Human-Robot Interaction

Textbook

1. Designing Sociable Robots (Intelligent Robotics and Autonomous Agents series) by Cynthia Breazeal ISBN: 9780262025102. The course will also be research paper based. Depending upon the module, the instructor(s) may also assign a reference book.

Reference Books

2. • Human -Robot Interaction in Social Robotics by Hiroshi Ishiguro and Takayuki Kanda
• Human -Robot Interactions: Principles, Technologies and Challenges. Editor: Diana Coleman.

Pre-Requisite

3. CSE 860 Artificial Intelligence (or equivalent), Robotics, Strong programming background.

Objective

4. 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

Course Outcome

5. Students completing this course are expected to have developed a firm knowledge base of critical understanding of the main theories, principles and concepts relating to the domain of Human-Robot Interaction.

Course Outline

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

Topics	Allocated Periods
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<ul style="list-style-type: none">· The Vision of Sociable Robots· Robot in Society: A Question of Interface· Insights from Developmental Psychology· Designing Sociable Robots· The Physical Robot· The Vision System· The Auditory System· The Motivation System· The Behavior System· Facial Animation and Expression· Expressive Vocalization System· 12. Social Constraints on Animate Vision	45
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