INFO-H440 (33161) Human Robot Interaction
Selma Sabanovic
MW 2:30pm-3:45pm
I 107

Course description:
This course surveys the emerging field of human-robot interaction (HRI). In the near future, robots are expected to take part in our everyday lives as assistants, teammates, guides, caretakers, and companions. HRI researchers tackle the social and technical challenges involved in developing such technologies—understanding how people perceive and are affected by robots, as well as creating robots that interact in ways that are natural and intuitive for human partners. In this class, we will discuss the design, evaluation, and societal significance of interactive robots from a human-centered perspective. Topics covered will include robot form and function, methods commonly used in HRI research, real-world applications of robots (e.g. domestic, health and rehabilitation, education, entertainment), and various social and cultural aspects of robot design.

As HRI is an interdisciplinary field, readings and assignments will include material from robotics, psychology, HCI, cognitive science, design, ethics, and other relevant disciplines. Classes will combine individual critical readings and group assignments with in-class discussion and practical instruction on how to design a prototype human-robot interaction system using the Arduino platform. Students will have a chance to follow their interests in exploring HRI through a final team-based project.

Course objectives:
In the course, students will:
- Learn about various theoretical perspectives on interaction, design, and applications of robots relevant to human-robot interaction,
- Become familiar with human-centered methods for designing and evaluating interactive human-robot systems, including integrating reflective practices into research, and
- Gain practical skills for creating an original human-robot interaction project and presenting it to an interdisciplinary audience.