

Introduction and Fundamentals

Class 1 – Jan 6th - Introduction

- Kiesler and Hinds – introduction to this special issue
- HRI overview from thesis
- Episode of real humans

Class 2 – Jan 8th – Fundamentals I

- Wikens et al., Chapter 2: “research methods,” “An Introduction to Human Factors Engineering,” 1998
- (discuss class logistics)
- (lecture: introduction to HRI)

Class 3 – Jan 13th – Embodiment

- (stats quiz) refresher, <http://allpsych.com/stats/index.html>
- Embodiment chapter
- S. Klemmer et al., “How bodies matter”, DIS 2006. **(Kyle)**
- Fischer et al., levels of embodiment: linguistic analyses of factors influencing hri, HRI 2012

Optional:

- Osawa et al. Partially Disembodied Robot: Social Interactions with a Robot's Virtual Body, ICSR 2012

Robot Control and Programming

Class 4 – Jan 15th – basics, remote control

- Drury et al., “Awareness in Human-Robot Interaction,” SMC 2003. **(Anik)**
- Drury et al., “LASSOing HRI: Analyzing Situation Awareness in Map-Centric and Video-Centric Interfaces,” HRI 2007

Optional

- Richer and Drury, “A Video Game Based Framework for analyzing Human-Robot Interaction,” HRI 2006 **(Brendan)**
- Kadous et al., “Effective User Interface Design for Rescue Robotics,” HRI 2005

Class 5 – Jan 20th – robot control 2

- Sakamoto et al., “Sketch and Run: A Stroke-based Interface for Home Robots” CHI 2009
- Yanco and Drury, “Classifying Human-Robot Interaction: An Updated Taxonomy,” SMC 2004

- Hoffman and Breazeal, “Collaboration in Human-Robot Teams”, AIAA 2004.

Optional

- Liu et al., “Robotshop: multi-layered sketching interface for robot housework assignment and management”. CHI 2011
- Guo and Sharlin. “Exploring the use of tangible user interfaces for human-robot interaction,” CHI 2008
- Wang and Lewis. “Human Control for Cooperating Robot Teams,” HRI 2007
- Singh et al., An Interface for Remote Robotic Manipulator Control That Reduces Task Load and Fatigue, RO-MAN 2013

Class 6- Jan 22nd – Programming by Demonstration

- Young et al., “Style by Demonstration: Teaching Interactive Movement Style to Robots,” IUI 2012 **(Kyle)**
- Cakmak et al., “Designing robot learners that ask good questions”, HRI 2012 **(Peter)**

Optional

- Leeper et al., “Strategies for human in the loop robotic grasping,” HRI 2012

Fundamentals, cont.

Class 7 – Jan 27th – Sociology of Artifacts and Robots

- Winner, “Do Artifacts Have Politics?”, from “The Whale and the reactor”, 1986
- Latour, “Mixing Humans and Nonhumans Together: The Sociology of a Door Closer”, Social Problems, 1988
- Young et al., “Toward acceptable domestic robots,” SORO 1(1). **(Peter)**

Optional

- Recommended but long: Bijker, “King of the Road,” The Social Construction of the Safety Bicycle

Class 8 – Jan 29th – Evaluation

- Steinfeld et al., “Common Metrics for Human-Robot Interaction,” HRI 2006
- Young et al., “Evaluating human-robot interaction: Focusing on the holistic interaction experience” SORO 3(1) **(Zhao)**

Optional:

- Kamide et al., “New Measurement of Psychological Safety for Humanoid” HRI 2012
- Riek, “Wizard of Oz Studies in HRI: A Systematic Review and New Reporting Guidelines” **(Brendan)**

Robots in Spaces

Class 9 – February 3rd – Domestic vacuum robots

- Forlizzi and DiSalvo, “Service Robots in the Domestic Environment” HRI 2006
- Sung et al., “my Roomba is Rambo,” UBICOMP 2007 (**Geoff**)

Optional

- Fink et al., “Living with a vacuum cleaning robot”, SORO 2013 (**Kyle**)

Class 10 – February 5th – Domestic robots – elderly care

- Sabelli et al., “A Conversational Robot in an Elderly Care Center: an Ethnographic Study” HRI 2011 (**Anik**)
- Shibata et al., “Investigations on people living with seal robot at home” (SORO 2012)
- Frennert et al., “Would Granny Let an Assistive Robot into Her Home?”, ICSR 2012

Optional:

- Wada and Shibata, “Living With Seal Robots – Its Sociopsychological and Physiological Influences on the Elderly at a Care House,” IEEE Trans Robo 23(5) 2007

Class 11 – February 10th – Robots in the Wild

- Hayashi et. al., “Humanoid Robots as a Passive-Social Medium” HRI 2007
- Weiss et al., “Robots asking for directions: the willingness of passers-by to support robots” HRI 2010 (**Peter**)
- Kitade et al., “Understanding suitable locations for a waiting robot,” HRI 2013

Optional

- Nabe et al., “Analysis of Human Behavior to a Communication Robot in an Open Field” HRI 2007
- Kanda et al., “An Affective Guide Robot in a Shopping Mall,” HRI 2009 (**Geoff**)

Robots as Social Actors

Class 12 – February 12th – Robots and Affect

- R Picard, “Affective Computers,” Ch 2 I Affective Computing, 1999 (**Geoff**)
- D. Norman “Emotional Design”, Ch. 6 & 7, 2004

Feb 14th - In class mid term

Class 13 – February 26th – Intro to Social Robots - overview

- “A survey of socially interactive robots,” Fong et. al., RAS 2003

Class 14 – March 3rd – Interpersonal variation

- Wang et al., “When in rome: the role of culture & context in adherence to robot recommendations” HRI 2010 **(Peter)**
- Fischer, “Interpersonal variation in understanding robots as social actors”, HRI 2010

Class 15 – March 5th -- Anthropomorphism

- Garreau, “Bots on the ground” Washington Post, 2008
- Bartneck et al., “To Kill a Mockingbird Robot” **(Kyle)**
- Short et al., “No Fair!! An interaction with a cheating robot”, HRI 2010 **(Brendan)**

Class 16 – March 10th – Treating Robots like People

- Rae et al., “The influence of height in robot-mediated communications,” HRI 2013 **(Geoff)**
- Niculescu et al., “Making social robots more attractive: the effects of voice pitch, humor, and empathy” SORO 2013
- Nakagawa et al., “Effect of robot’s whispering behavior on people’s motivation,” SORO 2013 **(Zhao)**

Class 17 – March 12th – Social Cues

- Choi et al., “have you ever lied? The impacts of gaze avoidance on people’s perceptions of a robot” HRI 2013 **(Zhao)**
- Liu et al., “It’s not polite to point: generating socially appropriate deictic behaviors towards people” HRI 2013

Optional

- Moon et al., “Design and impact of hesitation gestures during human-robot resource conflicts” HRIJ 2013
- Shimida et al., “Effects of observing eye contact between a robot and another person” SORO 2011

Class 18 – March 17th – Animals

- Coeckelbergh, “Humans, animals, and robots: a phenomenological approach to human-robot relations.” SORO 2011 **(Anik)**
- Singh et al., “Evaluating a Dog-Tail Interface for Communicating Robotic States,” Interact 2013

Optional

- Fink et al., “Anthropomorphic Language in Online Forums about Roomba, AIBO, and the iPad” ARSI 2012

Android Science

Class 19 – March 19th – Android Science

- Ishiguro, “Android Science,” Cogsci 2005
- Minato et al., “Development of an Android Robot for Studying Human-Robot Interaction”, IEA/AIE 2004
- Ogawa et al., “Exploring the Natural Reaction of Young and Aged Person with Telenoid in a Real World” Journal of Advanced Computational Intelligence and Intelligent Informatics 15(5) 2011

Optional

- MacDorman, “Assessing Human Likeness by Eye Contact in an Android Testbed”, CogSci 2005
- Sidner et al., “The effect of head-nod recognition in human-robot interaction” HRI 2006 (Zhao)

Class 20 – March 24th – The Uncanny Valley

- Mori, “Bukimi no Tani: The Uncanny Valley”, Energy 7(4) 1970
- Hanson et al., “upending the uncanny valley”, AAAI 2005
- Ho et al., “Human Emotion and the Uncanny Valley”, HRI 2008

Topics

Class 21 – March 26th – The Power of Movement

- Michalowski et al., “A dancing robot for rhythmic social interaction”, HRI 2007
- Sharma et al., “Affective Flying-Robot Motions via the Laban Effort System” HRI 2013

Optional

- J. Lasseter, “Principles of Traditional Animation applied to 3D Computer Animation”, in Computer Graphics, 1987.
- Harris et al., “Exploring the affect of abstract motion in social human-robot interaction.” Ro-MAN 2011
- Saerbeck and Bartneck, “Perception of affect elicited by robot motion”, HRI 2010

Class 22 – March 31st – Gender Studies

- Wang et al., “Beyond Pink and Blue: Gendered Attitudes towards Robot Development”, GenderTech 2014 (Anik)
- Eyssel, F., & Hegel, F. (2012). (S)he’s Got the Look: Gender Stereotyping of Robots1. Journal of Applied Social Psychology, 42(9), 2213–2230.

Optional

- Schermerhorn, P., Scheutz, M., & Crowley, C. R. (2008). Robot Social Presence and Gender: Do Females View Robots Differently than Males? In Proc. HRI 2008 (pp. 263–270). Retrieved from <http://dl.acm.org/citation.cfm?id=1349857>
- Siegel, M., Breazeal, C., & Norton, M. I. (2009). Persuasive Robotics: The Influence of Robot Gender on Human Behavior. In Intelligent Robots and Systems (pp. 2563–2568). Ieee. Retrieved from

Class 23 – April 2nd – Listening to Robots

- Cormier et al., “Would you do as a robot commands?” iHAI 2013
- Ham et al., “A Persuasive Robotic Agent to Save Energy: The Influence of Social Feedback, Feedback Valence and Task Similarity on Energy Conservation Behavior” SORO 2013

Optional

- Groom et al., “Critic, compatriot, or chump?: responses to robot blame attribution”, HRI 2010
- Kahn et al., “Do people hold a humanoid morally accountable for the harm it causes?” HRI 2012
- Wagner et al., “Acting Deceptively: Providing Robots with the Capacity for Deception” SORO 2011 (**Brendan**)