

cisc3650  
human-computer interaction  
spring 2012  
lecture # VI.1  
human-robot interaction, part 1

**topics:**

- human-robot interaction

**references:**

- The Real Transformers, by Robin Marantz Henig, The New York Times Magazine, July 29, 2007.
- Human-Robot Interaction, by Robin R. Murphy, Tatsuya Nomura, Aude Billard and Jennifer L. Burke, IEEE Robotics and Automation Magazine, June 2010.

human-robot interaction

- what is the difference between an interface designed for interacting with a computer and an interface designed for interacting with a robot?
- this is the essence of the difference between *human-computer interaction* and *human-robot interaction*
- today, since I have laryngitis, we will watch a number of videos that illustrate the history and current state-of-the-art in human-robot interaction

• TED talks:

- Rodney Brooks, 2003  
[http://www.ted.com/talks/lang/en/rodney\\_brooks\\_on\\_robots.html](http://www.ted.com/talks/lang/en/rodney_brooks_on_robots.html)
- David Hanson, 2009  
[http://www.ted.com/talks/lang/en/david\\_hanson\\_robots\\_that\\_relate\\_to\\_you.html](http://www.ted.com/talks/lang/en/david_hanson_robots_that_relate_to_you.html)
- Heather Knight, 2010  
[http://www.ted.com/talks/lang/en/heather\\_knight\\_silicon\\_based\\_comedy.html](http://www.ted.com/talks/lang/en/heather_knight_silicon_based_comedy.html)

• Human-Robot Interaction (HRI) 2012 conference, selected videos:

- *SDT: A "KonKon" Interface to Buildup the Connotation Interactions*, by Yu Arita (Toyohashi University of Technology), Hirota Shinya (Toyohashi University of Technology), Yuta Yoshiike (Toyohashi University of Technology), P. Ravindra S. De Silva (Toyohashi University of Technology) and Michio Okada (Toyohashi University of Technology)
- *Human-Human vs. Human-Robot Teamed Investigation*, by Caroline E. Harriott (Vanderbilt University), Glenna L. Buford (Vanderbilt University), Tao Zhang (Purdue University) and Julie A. Adams (Vanderbilt University)
- *MARIOBOT: Marionette Robot that Interact with an Audience*, by Woong-Ji Kim (INHA University), Sun-Wook Choi (INHA University) and Chong Ho Lee (INHA University)
- *Encounters: From Talking Heads to Swarming Heads*, by Damith C. Herath (University of Western Sydney), Christian Kroos (University of Western Sydney) and Stelarc (University of Western Sydney)
- *Johnny-0, a Compliant, Force-Controlled and Interactive Humanoid Autonomous Robot*, by François Ferland (Université de Sherbrooke), Arnaud Aumont (Université de Sherbrooke), Dominic Létourneau (Université de Sherbrooke), Marc-Antoine Legault (Université de Sherbrooke) and François Michaud (Université de Sherbrooke)

- *Situation Understanding Bot Through Language and Environment*, by Daniel J. Brooks (University of Massachusetts, Lowell), Constantine Lignos (University of Pennsylvania), Mikhail S. Medvedev (University of Massachusetts, Lowell), Ian Perera (University of Pennsylvania), Cameron Finucane (Cornell University), Vasumathi Raman (Cornell University), Abraham Shultz (University of Massachusetts, Lowell), Sean McSheehy (University of Massachusetts, Lowell), Adam Norton (University of Massachusetts, Lowell), Hadas Kress-Gazit (Cornell University), Mitch Marcus (University of Pennsylvania) and Holly A. Yanco (University of Massachusetts, Lowell)
- *How to Sustain Long-Term Interaction between Children and ROBOSEM in English Class*, by Jeonghye Han (Cheongju National University of Education), Bokhyun Kang (Yujin Robot Co., Ltd.), Seongju Park (Yujin Robot Co., Ltd.) and Seongwook Hong (Grafizix Co., Ltd.)
- *Whole-Body Imitation of Human Motions with a Nao Humanoid*, by Jonas Koenemann (University of Freiberg) and Maren Bennewitz (University of Freiberg)