Cynthia Matuszek
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"Robotic Acquisition of Grounded Semantic Concepts"

Thursday, March 24, 2016   *Note date change*
1:15-2:15 pm
CIT Building, Room 368

A critical element of understanding human language is mapping that language to ideas in the external world, sometimes called the symbol grounding problem. Recent advances in both natural language processing and robotics have made possible new breakthroughs in directly understanding such tangibly grounded concepts. This allows the construction of communicative, interactive robots, but also enables novel kinds of language understanding. In this talk, I describe systems that learn situated language – specifically, robots that can learn to follow instructions, understand descriptions of objects, and build models of language and the physical world, all from interactions with users. I will discuss our work on allowing robots to learn from untrained end-users in an intuitive way, building linguistic models at different levels of abstraction from multimodal human input. Finally, I will talk about how robots with these learning capabilities can address a number of near-term challenges.

Cynthia Matuszek is an Assistant Professor at the Interactive Robotics and Language Lab in University of Maryland, Baltimore County's Computer Science and Electrical Engineering department. She completed her Ph.D. at the University of Washington in 2014, where she was a member of both the Robotics and State Estimation lab and the Language, Interaction, and Learning group. Her research interests include robotics, human-robot interaction, natural language processing, and machine learning.