HCR HUMANITY CENTERED ROBOTICS INITIATIVE

BROWN

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"Human-Centered Principles and Methods for Designing Robotic Technologies"

Monday, December 7, 2015
1-2 pm
CIT Building, Lubrano Room 477

The increasing emergence of robotic technologies that serve as automated tools, assistants, and collaborators promises tremendous benefits in everyday settings from the home to manufacturing facilities. While robotic technologies promise interactions that can be far more complex than those with conventional ones, their successful integration into the human environment requires these interactions to also be natural and intuitive. To achieve complex but intuitive interactions, designers and developers must simultaneously understand and address human and computational challenges. In this talk, I will present my group's work on building human-centered guidelines, methods, and tools to address these challenges in order to facilitate the design of robotic technologies that are more effective, intuitive, acceptable, and even enjoyable. In particular, through a series of projects, this work demonstrates how a marrying of knowledge about people and computational methods can enable effective user interactions with social, assistive, and telepresence robots and the development of novel tools and methods that support complex design tasks across the key stages of the design process. The talk will also include our ongoing work that applies these guidelines to the development of real-world applications of robotic technology and that targets the successful integration of these technologies into everyday settings.

Bilge Mutlu is an associate professor of computer science, psychology, and industrial engineering at the University of Wisconsin–Madison. He received his Ph.D. degree from Carnegie Mellon University's Human-Computer Interaction Institute in 2009. His background combines training in interaction design, human-computer interaction, and robotics with industry experience in product design and development. Dr. Mutlu is a former Fulbright Scholar and the recipient of the NSF CAREER award as well as several best paper awards and nominations, including HRI 2008, HRI 2009, HRI 2011, UbiComp 2013, IVA 2013, RSS 2013, HRI 2014, CHI 2015, and ASHA 2015. His research has been covered by national and international press including the NewScientist, MIT Technology Review, Discovery News, Science Nation, and Voice of America. He has served in the Steering Committee of the HRI Conference and the Editorial Board of IEEE Transactions on Affective Computing, co-chairing the Program Committees for ROMAN 2016, HRI 2015, ROMAN 2015, and ICSR 2011, the Program Sub-committees on Design for CHI 2013 and CHI 2014, and the organizing committee for HRI 2017.

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