

Department of Computer Science and Engineering

Distinguished Speakers Series Presents



Matthew T. Mason, Carnegie Mellon University

The Idea of a Hand

For about fifty years robotics researchers have been designing and testing robot hands. The designs vary dramatically in complexity, from a simple pair of tongs to a hand with complexity approaching the human hand in some respects. This talk will focus on the simple approach, mostly using a gripper with a single motor and just a few sensors. The long-term goal is to explore the tradeoff between complexity and generality, and specifically to demonstrate broad manipulation capabilities with simple hands. Our earliest experiments in a bin-picking scenario demonstrated robust grasp classification and in-hand localization using simple statistical techniques. More recently we have been exploring a wider range of manipulation techniques, including placing, assembly, and even manipulation in the hand.

Matthew T. Mason earned the BS, MS, and PhD degrees in Computer Science and Artificial Intelligence at MIT, finishing his PhD in 1982. Since that time he has been on the faculty at Carnegie Mellon University, where he is presently Professor of Computer Science and Robotics, and in July 2004 became the Director of the Robotics Institute. His research interests are in robotic manipulation, mobile robot error recovery, mobile robots, and robotic origami. He is co-author of "Robot Hands and the Mechanics of Manipulation" (MIT Press 1985), co-editor of "Robot Motion: Planning and Control" (MIT Press 1982), and author of "Mechanics of Robotic Manipulation" (MIT Press 2001). He is the 2009 IEEE Pioneer Award winner and a winner of the System Development Foundation Prize, as well as a Fellow of the AAAI, and a Fellow of the IEEE.

Thursday, April 18, 2013

3:30–4:30 PM

University at Buffalo- North Campus – Clemens 120

This talk is free and open to the public - Refreshments for attendees after the talk