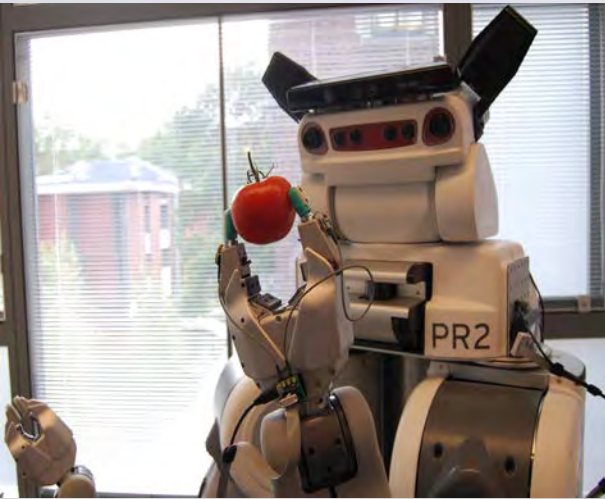




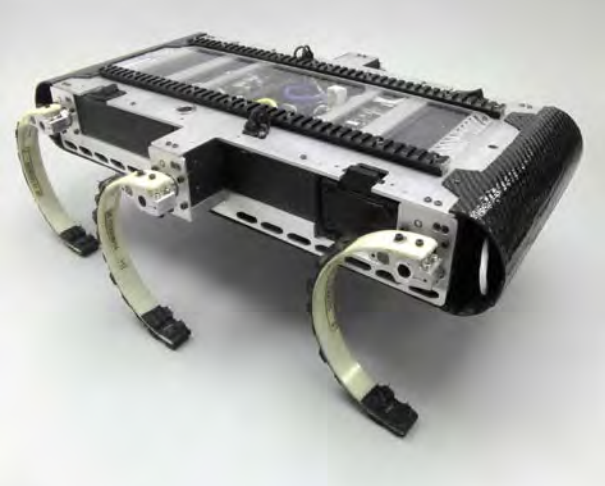
PENN ROBOTICS


INDUSTRY DAY

JANUARY 24, 2014



KRISHNA P. SINGH CENTER
3205 WALNUT ST.,
PHILADELPHIA, PA
9:00 AM — 4:00 PM



 **Penn**
Robotics
GRASP Laboratory

WELCOME INDUSTRY

3D Data Ltd	Matthew Cabrera
3D Data Ltd	Chris Fitzhugh
Anki	Mark Palatucci
Fellow Robotics	James Fahn
Flyby Media, Inc.	Oleg Naroditsky
Humanistic Robotics, Inc.	Samuel Reeves
Intel	Mei Chen
Intuitive Surgical	Jonathan Sorger
Kiva Systems LLC	Parris Wellman
Lockheed Martin, ATL	Robert Mandelbaum
Lockheed Martin	Steve Gray
NEC Research	Yuanqing Lin
Neocis, Inc	Alon Mozes
Neocis, Inc	Will McMahan
ReThink Robotics	Kyle Maroney
Savioke	Steve Cousins
SRI	Aveek Das
SRI	Jayan Eledath
UTRC	Jason Derenick
UTRC	Alberto Speranzon

GRASP LAB

The General Robotics, Automation, Sensing and Perception (GRASP) Lab is an inter-disciplinary research center at the University of Pennsylvania, consisting of students, faculty and staff from the departments of Computer and Information Science, Electrical and Systems Engineering, and Mechanical Engineering and Applied Mechanics. Founded in 1979, GRASP has grown today to be one of the premier research centers focusing on fundamental research in robotics, vision, perception, control, automation, and machine learning. **www.grasp.upenn.edu**

INDUSTRY DAY 2014

The Penn Robotics Industry Day is a day-long symposium of leading executives and engineering involved in cutting-edge robotics. Prominent speakers from industry and academia will be featured, along with ample networking opportunities with GRASP students, alumni and industry representatives.

UNIVERSITY *of* PENNSYLVANIA

AGENDA

09:00 – 10:00	Registration and Continental Breakfast
10:00 – 11:00	Presentations Kathleen Stebe - Welcome from SEAS Robert Mandelbaum - Lockheed Martin, ATL Aveek Das - SRI Mark Palatucci - Anki Vijay Kumar (Intro) / Rebecca Hayward – GRASP Outreach <i>Presentation of Student Award</i>
11:00 – 12:00	Keynote Speaker: Dr. Hadas Kress-Gazit, Cornell University
12:00 – 13:30	Lunch (Singh Galleria, 1st Floor)
12:30 – 13:30	Student Poster Session (Singh Galleria, 1st Floor)
13:30 – 14:30	Presentations Kyle Maroney - ReThink Robotics Jonathan Sorger - Intuitive Surgical Alon Mozes - Neocis, Inc
14:30 – 14:45	Break
14:45 – 15:45	Presentations Samuel Reeves - Humanistic Robotics Mei Chen - Intel Yuanqing Lin - NEC Research
15:45 – 16:00	Closing Remarks: Dr. Daniel Lee, University of Pennsylvania

KEYNOTE SPEAKER



Dr. Hadas Kress-Gazit
Cornell University

“High-level Verifiable Robotics”

Abstract:

Why don't we have robots fetching us coffee and finding our keys for us? While robots have become more capable and powerful, they are not yet integrated into everyday life. Part of the reason is that robots are difficult to program and even more difficult to verify. Therefore, to achieve the dream of a robot in every home, two key challenges must be addressed; people should be able to easily interact with robots, and robots must always do as they are told.

In this talk I will discuss the work done in my group to address these challenges. Specifically, I will describe the use of language and temporal logic to capture high-level task specifications, the development of formal methods that automatically transform task specifications into correct robot behavior, if such behavior exists, and approaches to dealing with the extra complexities of verifying autonomous robots.

Biography:

Hadas Kress-Gazit is an Assistant Professor at the Sibley School of Mechanical and Aerospace Engineering at Cornell University. She received her Ph.D. in Electrical and Systems Engineering from the University of Pennsylvania in 2008 and has been at Cornell since 2009. Her research focuses on formal methods for robotics and automation and more specifically on creating verifiable robot controllers for complex high-level tasks using logic, verification, synthesis, hybrid systems theory and computational linguistics. She received an NSF CAREER award in 2010 and a DARPA Young Faculty Award in 2012.

