



SRCCR: Social Robotics Consortium of the Capital Region (CB)

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Vision, Goals and Objectives

Build a community of people interested in using Social Robots as a platform to deliver an education in Computer Science. To explore platforms of delivery that are exciting, interesting to study, and provide mechanisms for teaching abstract concepts in a practical, hands-on way.

- organize four workshops building a community in the Capital Region in Social Robotics
- explore the possibilities of Social Robots, as a means for disseminating key CS and Engineering Principles
- encourage those from outside CS and Engineering to build Social Robots into their programs

Workshop One

20th March, 2008

What is Social Robotics?

- Humans and machines working together
- Social behavior not discrete
- Simple, social behavior improves human robot relations
- Such behavior requires both CS and non-CS input

Robots in Education

- Robots used in existing education scenarios
 - New curricula (Bryn Mawr/Georgia Tech)
 - Adapting existing work to incorporate robots (Vassar/West Point)

Industrial Perspectives

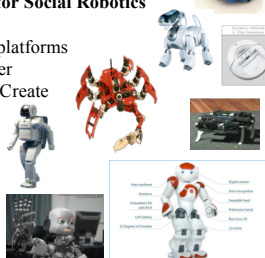
- What can a program in Social Robotics do for the graduates of tomorrow?
- Input from small robotics companies and large multinationals

Workshop Two

15th May, 2008

Platforms for Social Robotics

- Hardware platforms
 - Scribbler
 - iRobot Create
 - Edubo
 - AIBO
 - Chiara
 - NAO
 - Asimo
 - iCub
- Software
 - MYRO
 - Tekkotsu
 - Microsoft Robotics Studio



Workshop Three

November 19th, 2008

Social Robotics outside of Computer Science

- Panel: Ethics and Social Robotics
- Wendell Wallach (Yale)
 - Jim Moor (Dartmouth)

- Panel: Social Robotics and the Study of Cognition
- Daniel Levin (Vanderbilt)
 - Selma Sabanovic (Stanford)

- Panel: Relationships Between Man and Machine
- Bilge Mutlu (CMU)
 - Peter Asaro (Rutgers/New School)

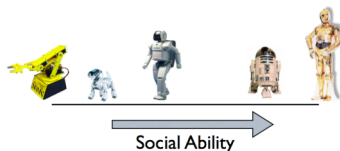
- Group Discussion: Social Robotics and Communication

Why Social Robots?

- Robots ALREADY work alongside humans
- Need to understand human behaviors
- Respond appropriately to our actions, in context
- Behave socially in given situations

To build social machines requires collaborations across disciplines

- We propose social robots as a tool to:
 - PULL students into CS
 - Robots are exciting
 - Interesting to work with
 - Address basic challenges in CS



- PUSH CS principles to a new audience
 - Robots are exciting
 - By engaging other disciplines to think about robots
 - By informing them of OUR limitations with social machines

Successes, Challenges and Lessons Learned

Successes:

- Engaging workshops
- Clear goals to improve CS teaching and learning
- Good communication through Wiki site

Challenges:

- Difficult to engage non-CS academics at this stage
- Premature platforms - basic control issues

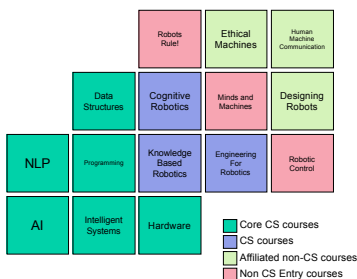
Lessons Learned

- Take time to explain vision and goals to audience

Proposed Course Details

Changing CS in upstate NY

- Union College
 - New intro CS courses for non-CS majors
- RPI
 - Teaching cognitive robotics
- UAlbany
 - New cognitive robotics course
- SCCC
 - Access to new UAlbany hardware
 - (NSF sponsored Chiara robots)
- Schenectady Museum
 - New spring program in robotics, including
 - Science show and accompanying program
 - Coincides with our final workshop



Draft architecture of new program in Social Robotics

Future Plans

- Final workshop in April 2009
- Develop site specific changes to existing course to reflect Social Robotics
- Incorporate new hardware across sites, sharing resources and personnel
- Foster closer relationships with community colleges and schools in the area, to act as feeder programs
- Develop area wide program in Social Robotics

