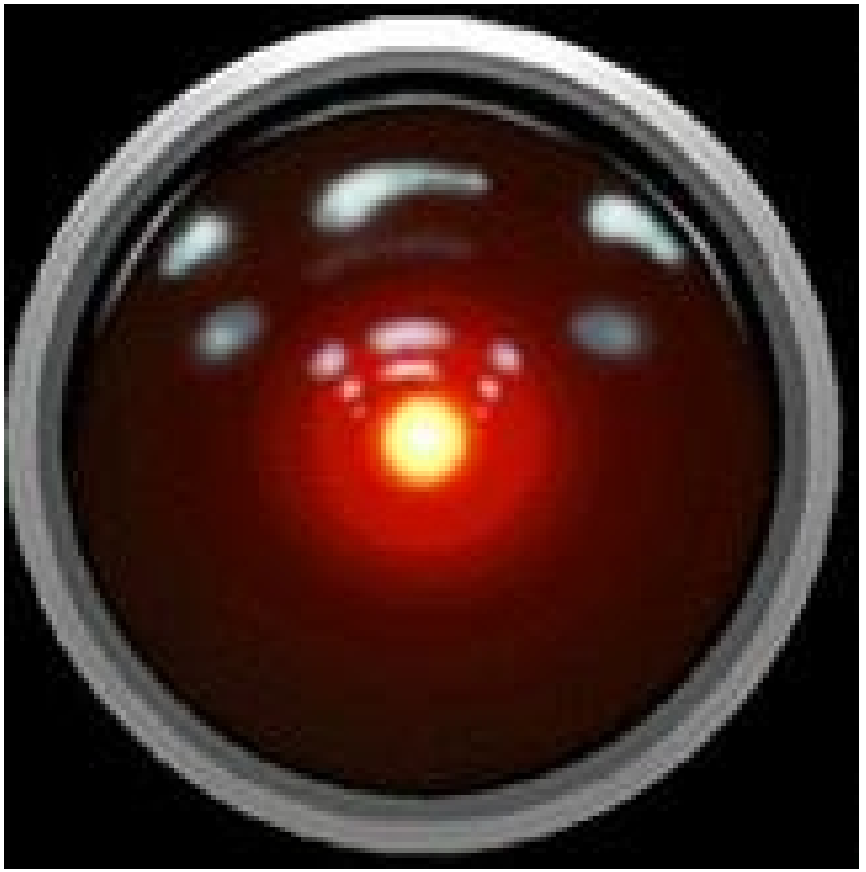


CS 378: Autonomous Intelligent Robotics FRI-II

Instructor: Jivko Sinapov

http://www.cs.utexas.edu/~jsinapov/teaching/cs378_fall2016/

Overview of the Class

- Quick Intro
- Syllabus
- Class Goals
- Policies and Procedures

Class Web Page

http://www.cs.utexas.edu/~jsinapov/teaching/cs378_fall2016/

Location

- Tuesdays: GDC 3.516 (conference room next to robotics lab)
- Thursdays: RLM 7.116

Class Goals

“At the end of this class you will have an understanding of the current state of the art in autonomous robotics and will be able to contribute to original research conducted in our lab.” - from last semester

Class Goals

By the end of the class, you will have completed a research project which advances the state of the art in AI and robotics

Organization*

This class will be taught as a seminar. The students will be expected to read the assigned papers for each lecture in advance and to actively participate in class discussions.

* The instructor reserves the right to change any and all aspects of this class for whatever reason or no reason at all (a.k.a., academic freedom).

** You agree that I have the unconditional right to exercise this discretion in a way that is most favorable or convenient to me.

Prerequisites (2 out of 3)

(all episodes)

(all episodes)

(all episodes)

Prerequisites

A strong interest in the question, ``What is intelligence and how can it be implemented in a physical robot?''

Students with Disabilities

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. To determine if you qualify, please contact the Dean of Students at 471-6529; 471-4641 TTY. If they certify your needs, I will work with you to make appropriate arrangements.

No retroactive accommodations will be provided in this class (within reason of course).

Grading

Your grade will be determined as follows:

- Class Participation: 10%
- Responses / Misc. Assignments: 10%
- Final Project: 80%

IMPORTANT

- Cheating, plagiarism, and other academic misconducts will not be tolerated and will be handled according to UT's academic dishonesty procedures, which are posted here:

http://www.cs.utexas.edu/users/ear/CodeOfConduct.html#honesty

Attendance

You are expected to attend every class and actively participate in the discussions. If you miss a class, it is your responsibility to find out what we talked about, including any announcements.

Final Project

The final project must be a research or design project that is related to the topics covered in class. You may choose to work individually or in small groups (2-3 members each). Working in groups, however, is highly recommended.

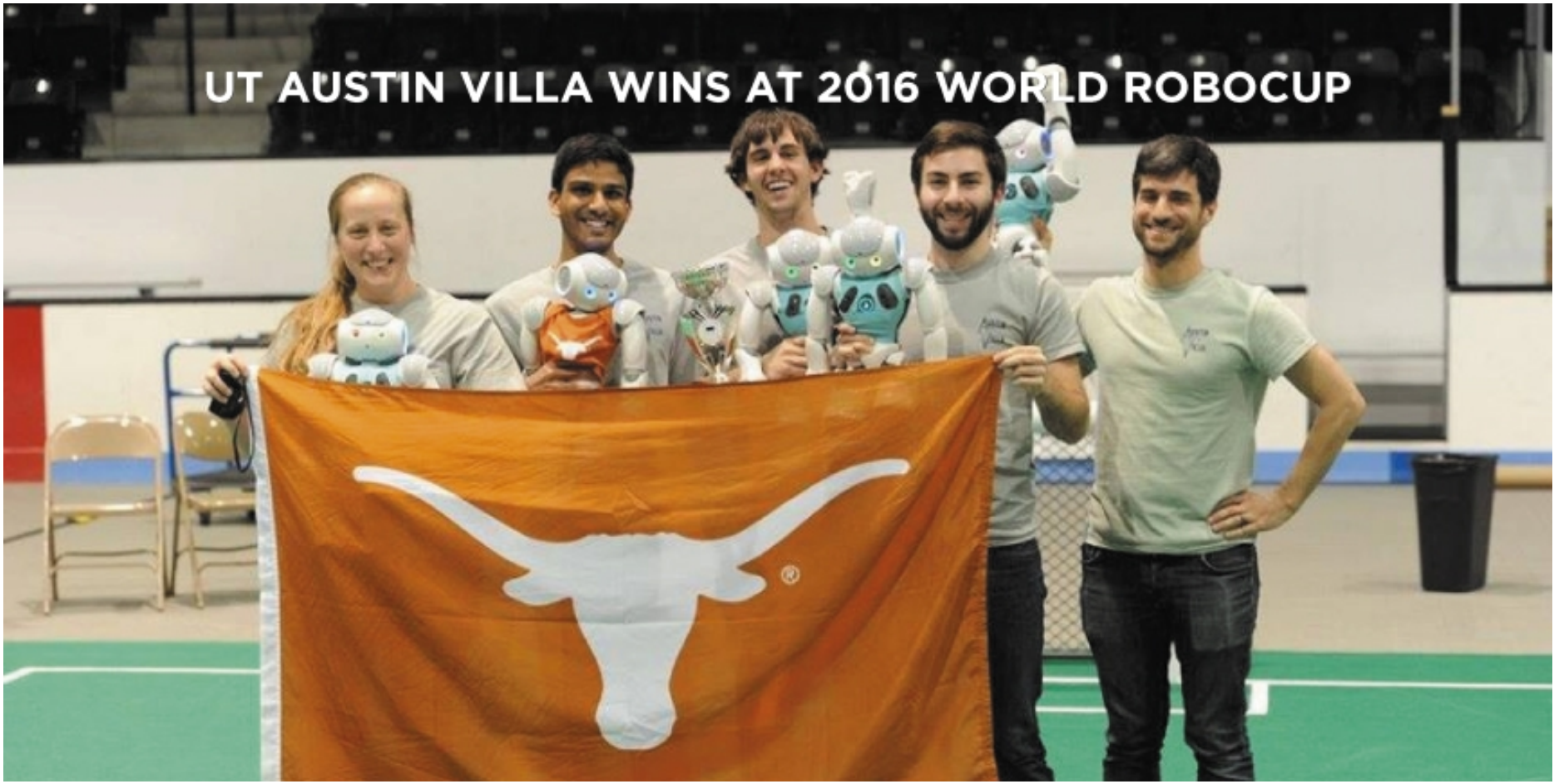
Each team will be required to present the results of their final project during the last week of the semester.

Final Project Components

- “Preliminary” proposal presentation
- Project Proposal Presentation and Writeup
- Progress Report 1
- Progress Report 2
- Final Project Report
- Final Project Presentation

Some Lab News...

http://www.cs.utexas.edu/~larg/bwi_web/


UT AUSTIN VILLA WINS AT 2016 WORLD ROBOCUP

Reading Assignments

Knox *et al.*, “Training a Robot via Human Feedback: A Case Study”. In International Conference on Social Robotics, October 2013.

Todd Hester and Peter Stone. “TEXPLORE: Real-Time Sample-Efficient Reinforcement Learning for Robots”. Machine Learning, 90(3), 2013.

Kober, Jens, J. Andrew Bagnell, and Jan Peters. "Reinforcement learning in robotics: A survey." The International Journal of Robotics Research (2013)

http://www.cs.utexas.edu/~jsinapov/teaching/cs378_fall2016/readings/week1/

Robotics Documentary