

91.451, Robotics II
Spring 2003
Prof. Yanco

Lab 7: Dancing Robots

Out: Thursday, 17 April 2003

Due: Wednesday, 23 April 2003 by 1:00 pm

Reminders:

- The *visit to iRobot* will be on Wednesday, 23 April at 2:00pm. (We'll probably leave UML around 1:30pm.) Let me know if you are planning to attend.
- A *make-up lab* will be held on Monday, 28 April from 1:30 – 4:00 pm. Attend what you can. There will not be a lab assigned during this period; instead the time will be used for project development.

Overview: In this lab, you will learn to move the gripper and the Sony Pan-Tilt-Zoom (PTZ) camera. Commands and usage will be explained at the start of lab.

For this lab, the robots will get rhythm. Make your robot dance by creating states with different dance steps, then move between the states to create a dance. You might want to repeat some states more than once before transitioning to the next state. Bonus points for synchronizing your robot's movements to music.

You may work with a partner on this lab, to prevent too much overlap of robot usage. Both robots can run the code for this lab; I'd recommend two groups picking one robot and two groups picking the other.

Turn in your state diagram and commented code. You should also demonstrate your robot to me by 1:00pm on Wednesday, 23 April. (The ending time has been changed from the usual 2:00pm to 1:00pm due to the iRobot visit.)