Robotics & Automation

Lecture 0

Course Overview

John T. Wen

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Outline

- Course organization
- Course overview

See Outline link on-line.
This course covers the tools and methods for the **kinematics and dynamics analysis and control** design for robots, including articulated manipulators, platform type of manipulators, and mobile vehicles. The classes of robots that will be considered include open chain manipulators, closed chain manipulators such as multifingered hands, parallel robots, and nonholonomic systems such as wheeled robots. The emphasis will be placed on developing a systematic understanding of the basic principles in the analysis, control, and planning of robotic systems.
Format

- Lectures (T/W/F 4:00-5:20, W used for make-up classes only)
- Homework (15%)
- Exam (30%, 35%)
- Project (20%)

Knowledge of MATLAB (>7.0) is expected! We will use the MATLAB extensively in homework.

Send me an email to get on the course mailing list (you’ll need to use your RCS ID and password to log in).
None required.

Helpful:

Notes and pages from various books will be posted on-line.

Additional references on reserve in library.
Before Next Class

- Send me an email to get on the course mailing list. Please tell me a bit of your background (Master or Ph.D., Department, research area, preparation so far, etc.)
- Check out the course web site.
- Read Chapters 1 from Jorge Angeles and other sources put on-line.
- Start on Homework #1.