MAE 163B / 263B – Dynamics of Robotic System

Project No. 0

Literature Review & Presentation

MAE 163B (Undergraduate Class) –

- No need to review any papers of your own
- Review 5 peer presentations and provide feedback using and on line form (link TBD)

MAE 263B (Graduate Class) –

- Prepare a presentation
- Record your presentation and upload it to a share directory
- Review 5 peer presentations and provide feedback using and on line form (link TBD)

Paper Review

Number of Papers to Review - Review three journal papers (1 journal paper = 2 conference paper) or 6 conference papers or any other combinations

Papers' Scope and Topics – The papers should be related to robotics manipulation in general and more particular to one of the topics coved by the class

- Serial/Parallel Robotic Arm,
- Direct/Inverse Kinematics
- Jacobian
- Dynamics
- Trajectory Generation
- Control

Presentation - Record yourself give a 10 min presentation in of a robotic system or an algorithm including the following outline:

- Algorithm based presentation – The papers should describe either the use of the same algorithm to solve three different problems or the use of the three different algorithms to solve the same problem
    - Define the problem(s)
    - Define the solution(s)
    - Describe the Algorithm(s)
    - Describe numerical / analytical problems
    - Real-time / off-line
    - Summarize the highlights and the difference between the problem(s) / solution(s)
    - Web Site
    - Link the content of the paper to one of the topics taught in class.
    - List the references.

- Robotic System based presentation - The papers should describe either the same system with three different applications or studies or three different robotic platforms solving the same application
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    - Name
    - Application
    - Physical Dimensions (Height, Length ,Weight)
    - Sensors & Actuators
    - Power Source
    - Control Algorithms
    - Cost Project
    - Status
    - Summarize the highlights and the difference between the robotic platforms / application(s)
    - Web Site
    - Link the content of the paper to one of the topics taught in class.
    - List the references.

References – Access to this journals and conferences is available via the UCLA library or through google scholar and a VPN connection to the campus

- **Journals**
    - IEEE Transactions on Robotics
    - IEEE Transactions on Automation
    - IEEE / ASME Transactions on Mechatronics
    - The International Journal of Robotics Research
    - Journal of Field Robotics
    - Journal of Intelligent and Robotic Systems
    - Robotica
    - Robotics and Autonomous Systems

- **Conferences**
    - ICRA
    - IROS
    - Biorob