Instructor Hayriye Ayhan, Room 329, 894-2308, hayhan@isye.gatech.edu
Class Times TTh 1:35 to 2:55 in IC 207
Office Hours M,W 11:30am to 1:30pm
Optional Text Book by Martin L. Puterman, Markov Decision Processes: Discrete Stochastic Dynamic Programming
Grading Exam 1 25%, Exam 2 25%, Final 30%, Presentations 15%, Homework 5%
Exam Dates Exam # 1 October 6 (Thursday), Exam # 2 November 15 (Tuesday)
Topics Covered

1. Introduction
   • Model Formulation
   • Examples

2. Finite Horizon Markov Decision Problems
   • Optimality Criteria
   • Finite Horizon Policy Evaluation
   • Optimality of Monotone Policies

3. Discounted Markov Decision Problems
   • Optimality Equations
   • Value Iteration
   • Policy Iteration
   • Linear Programming
   • Optimality of Structured Policies
4. Average Reward
   - Gain and Bias
   - Classification of Markov Decision Processes
   - Optimality of Structured Policies

5. Continuous Time Models