1023-49-1202 **Mark Lewis*** (mel47@cornell.edu). *Optimality Equations and Inequalities for Markov Decision Processes with Applications to Inventory Control.* Preliminary report.

In this talk, we discuss new conditions that guarantee existence of stationary optimal policies under the infinite horizon discounted cost and average cost criteria. We show that the discounted cost optimal values and policies converge (along a subsequence) to those in the average cost case. Since the conditions allow for non-compact action sets and weakly continuous transition probabilities, prime candidates for application of these results are several inventory control problems. (Received September 25, 2006)