## ME 115(b): Homework #1 (Due April 9, 2008)

**Problem 1:** Compute the hybrid Jacobian matrices for manipulators (ii) and (iv) in Problem 3 of MLS Chapter 3.

**Problem 2:** Find/describe the singular configurations of the regional structure (just the first 3 joints, where the goal is to place the origin of the tool frame at desired  $(x_T^D, y_T^D, z_T^D)$  cartesian position)