Lecture 19. 26 October 2004

- **Review of Lecture #18:**
  - Introduction of Simplex tableau; notation.
  - **Simplex method.** Two requirements to initiate the method:
    (1) Need an initial basic feasible solution; and
    (2) The cost function must be in terms of the nonbasic variables only.
  - Two basic steps of the algorithm are:
    (1) Which nonbasic variable should become basic?
    (2) Which basic variable should become nonbasic?

- **Two-Phase Simplex method.** Introduction of artificial variables; definition of Phase I problem - artificial cost function. Example problem.

- **How to Recognize** - multiple solutions, unbounded problems, infeasible problems. Examples

- **Post-Optimality Analysis.** Recovery of Lagrange multipliers. Ranging of right side parameters.

- **Read:** Sections 6.4, 6.5; 7.2

- **HW #10:** submit hard copy and electronically by 10-28-04

  - 6.75 Chung
  - 6.62 Danielson
  - 6.76 Han
  - 6.59 Lee, I-J
  - 6.60 Lee, S-Y
  - 6.66 Narayan
  - 6.65 Noh
  - 6.71 Williams
  - 6.72 Xiang
  - 6.69 Yang