

MATHEMATICAL PROGRAMMING

Course of the PhD Program in Mathematics

docente, Prof. Romeo Rizzi

- Professor: R. Rizzi (Univ. di Verona)
- Title: Mathematical Programming
- Outline: The course offers an introduction to Linear Programming (LP) and Combinatorial Optimization (CO) also exploring some of the links between the two. The approach adopted is algorithmic.
- Program: Introduction to Linear Programming (LP) [1] what is an LP problem [2] modeling your problem as a linear program [3] the simplex method (description and analysis) [4] duality theory [5] complementary slackness [6] economic interpretation [7] sensitivity analysis [8] geometric interpretation.
Introduction to graphs and Combinatorial Optimization (CO) [1] graphs and digraphs as models [2] a few good characterizations (bipartite graphs, eulerian graphs, Planar Graphs, Chordal Graphs) [3] shortest paths [4] minimum spanning trees [5] max flows and min cuts [6] bipartite matching.
- Period: February 2014.
- WWW page of the course: profs.sci.univr.it/~rrizzi/classes/MathProg