

# LECTURE NOTICE

Department of Electrical and Systems Engineering

## Zaborszky Distinguished Lecture Series

The Annual Zaborszky Lecture Series was created in 1990 to honor the founder and first chairman of the Department of Systems Science and Mathematics Professor John Zaborszky. Each year a distinguished scholar is invited to present a series of three lectures in his field of expertise.

### Lecture 2

#### Disciplined Convex Programming

by

Stephen Boyd

Professor of Electrical Engineering

Samsung Professor in the School of Engineering

Stanford University

(Joint work with Michael Grant)

**Abstract:** Algorithms and software for reliably and efficiently solving convex optimization problems have advanced steadily over the last 15 years. But tasks involved in developing a convex optimization model of a practical problem, such as writing software that solves the problem or transforms it to a standard form, remain time consuming and error-prone. In this talk I will give an overview of a new structured approach to convex optimization modeling, along with new software tools that support it. The basic idea is to restrict the functions, expressions, objectives, and constraints that can be used to a small set of basic or atomic ones, together with a small set of rules for composing and combining them. The atoms and operations closely follow mathematical rules from convex analysis, and so are easy to remember and learn. At the same time, problems expressed in this way are easy to automatically parse and transform to a standard form for solution. This approach, and these tools, considerably reduce the effort of specifying and solving convex optimization problems.

Tuesday, September 19, 2006

1:00 – 2:30 p.m.

Cupples II, room 217