



**The Hong Kong Polytechnic University
Department of Applied Mathematics**

**Seminar
on**

**Robust Stability Analysis and Design of Robust Stable
Systems using Optimization Techniques**

by

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Abstract

An apparently very stable system can be close to an unstable system; that is, small perturbations to the system data might cause a stable system quite unstable. It is, therefore, desirable to design a stable system which remains stable under small perturbations of the data. Such systems are called robust stable systems.

Computational methods for analysis and design of robust stable systems naturally require techniques of optimization. Indeed, such techniques have been in long use in control systems literature.

In this talk, we will present a brief overview of some of these techniques with a special attention to systems modeled by finite element techniques and other higher order models.

The talk will conclude with some research problems on this topic.

Date : June 13, 2006 (Tuesday)
Time : 3:30 – 4:30 p.m.
**Venue : Departmental Conference Room HJ610
The Hong Kong Polytechnic University**

***** ALL ARE WELCOME *****