Discrete Mathematics Seminar

Time: Friday, 12 November 2010, 12:30-1:30 PM
Room: 238 Derrick Hall
Title: Optimal Experimental Design and its Applications
Speaker: Dr. Matthias Conrad, Mathematics Department

Abstract:

How often, when and where should a phenomenon of interest be observed to receive reliable results? Generally, experimentalists face the dilemma between accuracy and costs of an experiment. Each experiment has its own specific challenges. However, optimization methods form the basic computational tool to address eminent questions of optimal experimental design. Driven by its application such as in biology, medicine, and geophysics, optimal experimental design lead to challenging optimization problems. Here, methods must address difficulties like ill-posedness, large scales, PDE or ODE constraints.