Speaker: A/Prof Juri Hinz, School of Mathematical Sciences, University of Technology Sydney

Date: Tuesday 4 November 2014, Time 2pm
Venue: E4A523

Title: Optimal Stochastic Switching under Convexity Assumptions

Abstract:
Optimal control problems of switching type with linear state dynamics are ubiquitous in applications of stochastic optimization. However, when applied in this context, most of the classical methodology makes no attempt to take advantage of their special structure. Given a specific form of the transition kernel, we show how to adapt the philosophy of function and regression-based methods to obtain an approximation of the value function in a rather generic way. We exploit specific model features to achieve remarkably strong numerical performance and show how to assess distance-to-optimality of approximate solution.