



Statistical Sciences
UNIVERSITY OF TORONTO

SEMINAR

March 17, 2016 at 3:30pm

Refreshments will be provided at 3:15pm

Sidney Smith Hall, Room 2106

Speaker: Jason Loepky, University of British
Columbia

Host: Patrick Brown

Bayesian Experiment Design for Uncertainty Quantification

Space filling designs are central to modelling complex systems and necessary to understand and quantify the behaviour of the underlying response surface. In many applications a set of constraints are imposed over the inputs that result in a non-rectangular and sometimes non-convex input space.

In these cases existing design construction techniques in the literature cannot be used. In this talk we propose a general Bayesian Experiment design approach to constructing designs over non-convex regions. Specifically, we propose the use of a sequential Monte Carlo based algorithm for efficiently generating space filling designs on constrained input spaces.