MACQUARIE UNIVERSITY
DEPARTMENT OF MATHEMATICS AND STATISTICS
STATISTICS SEMINAR SERIES

Speaker: Dr Matias Quiroz, University of New South Wales
Date: Tuesday, 2nd April 2019
Time: 1pm-2pm
Venue: 14 SCO Avenue, Access Grid Room 146

Title: Subsampling MCMC: Bayesian inference for large data problems

Abstract:

The rapid development of computing power and efficient Markov chain Monte Carlo (MCMC) simulation algorithms have revolutionized Bayesian statistics, making it a highly practical inference method in applied work. However, MCMC algorithms tend to be computationally demanding, and are particularly slow for large datasets. In this talk I will present Subsampling MCMC, a so-called pseudo-marginal MCMC approach to speeding up MCMC through data subsampling. I will cover both an approximate and an exact approach, and show how to extend them to high-dimensional problems using Hamiltonian Monte Carlo.

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