Statistics Seminar Series

Session 2, 2007

UNSW THE UNIVERSITY OF NEW SOUTH WALES

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Sequential Monte Carlo Without Likelihoods

Recent new methods in Bayesian simulation have provided ways of evaluating posterior distributions in the presence of analytically or computationally intractable likelihood functions. Despite representing a substantial methodological advance, existing methods based on rejection sampling or Markov chain Monte Carlo can be highly inefficient and accordingly require far more iterations than may be practical to implement. Here we propose a sequential Monte Carlo sampler that convincingly overcomes these inefficiencies. We demonstrate its implementation through an epidemiological study of the transmission rate of tuberculosis.

About the speaker: Scott Sisson is Senior Lecturer in the Department of Statistics at UNSW. His research interests include Bayesian statistics and MCMC, biostatistics and computational biology, and extreme value theory and environmental statistics.

Time: 4pm, Friday, 10th August
Location: Room 4082, Red Centre

Please join us after the seminar for wine and cheese in the staffroom.

Seminar co-ordinator: Sally Galbraith
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