**Towards an unbiased and scalable Monte Carlo method for Bayesian inference for big data**

**By Gareth Roberts**

Joint work with Murray Pollock, Paul Fearnhead and Adam Johansen

The talk will introduce a new SMC/MCMC methodology for exploring posterior distributions by using a modification of the exact diffusion simulation methodology developed by the presenter over the last 10 years (primarily in work with Beskos and Papaspiliopoulos as well as the co-authors of this work). The method has remarkably good scalability properties as the size of the data set increases, and therefore is a natural candidate for bid data inference.