Algorithmic Design for Big Data: The ScaLE Algorithm

Murray Pollock
University of Warwick, Coventry, United Kingdom - m.pollock@warwick.ac.uk

This talk will introduce a new methodology for exploring posterior distributions by modifying methodology for exactly (without error) simulating diffusion sample paths. This new method has remarkably good scalability properties as the size of the data set increases (it has sub-linear cost, and potentially no cost), and therefore is a natural candidate for Big Data inference. Joint work with Paul Fearnhead, Adam Johansen and Gareth Roberts.

Keywords: Big Data; Exact Simulation; Langevin Diffusion; Markov chain Monte Carlo.