

Institute for Mathematical Sciences	
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## Bayesian Computation for High-Dimensional Statistical Models

(27 Aug - 21 Sep 2018)

### Organizing Committee ∨

- **Alexandros Beskos** (University College London)
- **Hock Peng Chan** (National University of Singapore)
- **Dan Crisan** (Imperial College London)
- **Ajay Jasra** (National University of Singapore)
- **Kengo Kamatani** (Osaka University)
- **Kody Law** (The University of Manchester)
- **David Nott** (National University of Singapore)
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### Overview ∨

In recent years there has been an explosion of complex data-sets in areas as diverse as Bioinformatics, Ecology, Epidemiology, Finance, subsurface Geophysics, Meteorology, and Population genetics. In a wide variety of these applications, the mathematical models devised to accurately capture the dynamics and interactions of the data generating processes are very high dimensional and the only computationally feasible and accurate way to perform any kind of statistical inference is with Monte Carlo.

The focus of this programme is on recent innovations in the field of Monte Carlo methods for complex problems. These can be found in: Statistics, Applied Probability, Applied Mathematics, Economics, Biology, and Physics. This programme will bring together researchers from a broad base to promote discussion and development of this important and rapidly emerging cross-disciplinary area. The program will consider many aspects of Bayesian computational methods including:

- Approximate Bayesian Computation;

- Markov chain Monte Carlo;
- Multilevel Monte Carlo;
- Particle Filters.

In depth tutorials from world experts such as Pierre Del Moral (INRIA/UNSW) and Arnaud Doucet (Oxford) combined with cutting edge research in the area will be presented and discussed, by the world-class participants, both local and overseas. The program will feature reading groups and local seminars in-between an opening and closing workshop.

## Activities ☹

- **Opening Workshop:** 27 - 31 August 2018
- **Reading Groups and Local Seminars:** 3 - 18 September 2018
- **Closing Workshop:** 19 - 21 September 2018

### Venue:

- IMS Auditorium
- Department of Statistics and Applied Probability Seminar Room, NUS (Block S16, #06-118, 6 Science Drive 2) (5 Sep 2018)

## Registration ☹

## List of Participants ☹

## Media ☹