

Masterclass in Computational Methods for Large-Scale Bayesian Inference

Bayesian Analysis and Modeling Research Group
University of Melbourne

bit.ly/unimelb-masterclass2016

Sunday, 3 July 2016

Seminar Room 605, Level 6, FBE Building
111 Barry Street, Carlton, VIC 3053

Professor Mattias Villani

About the Presenter

Mattias Villani obtained his PhD in Statistics in 2000 from Stockholm University. After eight years as a researcher and advisor at the central bank of Sweden, in 2011 he was appointed Professor of Statistics at the Department of Computer and Information Science at Linköping University in Sweden. His research focuses on developing new Bayesian methods and their application to problems in econometrics, neuroimaging and machine learning. His work has appeared widely in both the econometric and statistical literature, including in the *Journal of Econometrics*, *Journal of Business and Economic Statistics*, *Econometric Theory*, *Journal of International Economics*, and the *Journal of Computational and Graphical Statistics*.

Masterclass Description

This masterclass deals with computational aspects of Bayesian econometrics and statistics, with a special focus on large datasets and other computationally demanding problems.

A variety of new generation computational tools will be presented, including pseudo-marginal Markov chain Monte Carlo (MCMC), variational methods, Gaussian process optimisation, distributed MCMC, as well as relevant CPU and GPU parallelisation techniques.

It will also cover a variety of interesting computationally demanding models that are widely used currently in machine learning, and should have their place in big data econometrics. In particular, Gaussian process regression and classification, and topic models for textual data, will be covered.

The masterclass is open to anyone interested in Bayesian econometrics. It is complemented by the [Melbourne Bayesian Econometrics Workshop](#) on Monday, 4 July 2016.

Attendance to both the workshop and the masterclass is free, although registration is required. Register at: bit.ly/unimelb-Bayes2016