

Stanford University
Department of Statistics

DEPARTMENTAL SEMINAR

*** Extra Seminar ***

4:30pm, Wednesday, December 5, 2018

*** Venue Change ***

Sloan Mathematics Center Room 380Y

Refreshments served at 4pm in Sequoia Lounge.

Speaker: Matt Wand
University of Technology Sydney,
Australia

Title: **Fast Approximate Inference for Arbitrarily Large
Statistical Models via Message Passing**

Abstract:

We explain how the notion of message passing can be used to streamline the algebra and computer coding for fast approximate inference in large Bayesian statistical models. In particular, this approach is amenable to handling arbitrarily large models of particular types once a set of primitive operations is established. The approach is founded upon a message passing formulation of mean field variational Bayes that utilizes factor graph representations of statistical models. The notion of factor graph fragments is introduced and is shown to facilitate compartmentalization of the required algebra and coding.