Department of Statistics

SCIENTIFIC AND STATISTICAL COMPUTING SEMINAR

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Fast Direct Algorithms for Gaussian Processes

THURSDAY, October 15, 2015 at 4:30 PM
133 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

The main computational bottleneck when computing with Gaussian processes is the O(n^3) cost for inverting the covariance matrix and calculating its determinant. Using recent developments in fast direct solver technology based on hierarchical matrix decomposition methods, it is possible to reduce this cost to O(n log n) without sacrificing accuracy or thresholding small covariances. This talk will give an overview of these methods and describe related on-going research.

Organizers:
Lek-Heng Lim, Department of Statistics, lekheng@galton.uchicago.edu, Ridgway Scott, Departments of Computer Science and Mathematics, ridg@cs.uchicago.edu, Jonathan Weare, Department of Statistics and The James Franck Institute, weare@uchicago.edu. SSC Seminar URL: http://www.stat.uchicago.edu/seminars/SSC_seminars.shtml.

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