THE UNIVERSITY OF CHICAGO

Department of Statistics

STATISTICS COLLOQUIUM

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Statistical and Algorithmic Robustness in Data Assimilation, Inverse Problems, and Machine Learning

FRIDAY, January 19, 2018 at 2:30 PM

Eckhart 133, 5734 S. University Avenue

ABSTRACT

Bayesian statistics provides a principled approach to learning functions and quantifying the remaining uncertainty in the recovery. The talk will focus on three Bayesian learning settings: data assimilation, inverse problems, and semi-supervised learning. I will highlight the unity that the Bayesian formulation brings to these three distinct communities. The main idea of the talk will be that understanding the statistical robustness of these learning problems is crucial to the development and analysis of robust algorithms. To illustrate this general principle I will show a provably scalable MCMC algorithm for Bayesian semi-supervised learning whose rate of convergence does not depend on the size of the unlabeled data set.

For further information and inquiries about building access for persons with disabilities, please contact Jonathan Rodriguez at 773.702.8333 or send him an email at jgrodriguez@galton.uchicago.edu. If you wish to subscribe to our email list, please visit the following website: https://lists.uchicago.edu/web/subscribe/statseminars.