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# B I O S T A T I S T I C S S E M I N A R

FALL 2012

## **Markov chain Monte Carlo Convergence Rates (& Why I Care)**

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Wednesday, November 7, 2012

3:30pm - 4:30pm, CHS 33-105A

Refreshments served at 3:00 PM in room 51-254 CHS

**ABSTRACT:** In any Markov chain Monte Carlo (MCMC) analysis, rapid convergence of the chain to its target probability distribution is of practical and theoretical importance. A chain that converges at a geometric rate is geometrically ergodic. In this talk, I will provide an overview of geometric ergodicity, including arguments for why this property should be on the mind of every MCMC practitioner. Further, I will discuss advances being made in the study of geometric ergodicity among component-wise Markov chain algorithms (eg: the Gibbs sampler) with applications to a Bayesian version of a linear mixed model.