

# Probability Seminar

Organizer: Christian Gromoll & Tai Melcher

Monday, 2:00–3:00pm, Kerchof 326

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Mar 12     **Joe Blitzstein**, Harvard

*Random network models: Sampling and estimation*

The usual Erdos-Renyi model for random graphs is mathematically beautiful, but is rarely useful as a model for real-world networks. Thus, many more-complicated models are being explored for such applications as social, biological, and information networks. We will describe a method for converting combinatorial theorems into efficient sampling schemes, and compare sequential importance sampling techniques to MCMC techniques. For the widely-studied case of exponential random graph models, we discuss challenges and approaches for parameter estimation. Parts based on joint work with Sourav Chatterjee and Persi Diaconis.