

Stanford University
Department of Statistics

DEPARTMENTAL SEMINAR

*** Extra Seminar ***

4:30pm, Wednesday, May 1, 2019

*** Special Venue ***

Sloan Mathematics Center Room 380C

Refreshments served at 4pm in Sequoia Lounge.

Speaker: Cosma Shalizi, *Carnegie Mellon University*

Title: Smoothing, Bootstrapping, and Comparing Networks

Abstract:

Scientific questions about networks are often comparative: we want to know whether the difference between two networks is just noise, and, if not, how their structures differ. I'll describe a general framework for network comparison, based on testing whether the distance between models estimated from separate networks exceeds what we'd expect based on a pooled estimate. This framework is especially useful with nonparametric network models, such as densities of latent node locations, or continuous generalizations of block models ("graphons"); the estimation methods for those models also let us generate surrogate data, predict links, and summarize structure.

This is joint work with Dena Asta, Alden Green, Brian Karrer, and Lawrence Wang.