

## Upcoming Colloquiums

**January 23**  
Pragya Sur  
Stanford University

**January 30**  
Eugene Katsevich  
Stanford University

**February 6**  
Zhengyuan Zhou  
Stanford University

**March 13**  
Xin Tong  
USC Marshall

**March 27**  
Adam Kapelner  
Queens College

**April 3**  
Jiaming Xu  
Duke University

**April 10**  
Giles Hooker  
Cornell University

**April 17**  
Bhaswar Bhattacharya  
University of Pennsylvania

**April 24**  
Karl Rohe  
UW-Madison

**May 1**  
Nancy Zhang  
University of Pennsylvania



**Subhabrata Sen**  
Microsoft Research New England  
and MIT Mathematics

## *Network Data: Modeling and Statistical Analysis*

Wednesday, January 16

4:30 - 5:30 pm

F60 Jon M. Huntsman Hall  
3730 Walnut Street

### ABSTRACT

Network data arises frequently in modern scientific applications. These networks often exhibit specific characteristics like edge sparsity, heavy-tailed degree distribution etc. Some broad challenges arising in the analysis of such datasets include (i) developing flexible, interpretable models for networks, (ii) provably recovering latent structure from such data, and (iii) testing for goodness of fit.

In this talk, we will discuss recent progress in addressing very specific instantiations of these challenges. In particular, we will

1. Interpret the Caron-Fox model using notions of graph sub-sampling,
2. Discuss recovery of community structure, given additional covariates,
3. Study model misspecification due to rare, highly “influential” nodes.

**Refreshments will be served at 4:00 pm in 423 Jon M. Huntsman Hall.**

Check out our website for details about upcoming seminars:  
<https://statistics.wharton.upenn.edu/research/seminars-conferences/>.