

THE UNIVERSITY OF GEORGIA



DEPARTMENT OF STATISTICS

FRANKLIN COLLEGE OF ARTS AND SCIENCES

The University of Georgia  
Department of Statistics

# Colloquium Series

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Haiyan Cai  
National Science Foundation

## “Some Properties of Random Networks”

I will talk briefly some of my recent research on random networks. In the first part of the talk, we will focus on the connectivity of a random network. The network is formed from a set of randomly located points and their connections depend on the distance between the points. It is clear that the probability of connection depends on the density of the points. We will explore some properties of this probability as a function of the point density. In the second part, I will discuss a possible approach in the study correlation structure of a large number of random variables. We will focus mainly on Gaussian distribution and distributions which are "similar" to Gaussian distributions. The idea is to use a single number to quantify the strength of correlation among all the random variables. Such a quantity can be derived from a latent cluster structure within a Markovian random network setting.

For more information,  
please contact:  
stat@uga.edu

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Department of Statistics  
101 Cedar Street  
Athens, GA 30602

Phone: 706-542-5232  
Fax: 706-542-3391  
[www.stat.uga.edu](http://www.stat.uga.edu)

Wednesday, October 5th, 2011

2:30 PM at 306 Statistics Building

Refreshments will be immediately after the talk in The  
Cohen Room, room 230, Statistics Building