INDIAN STATISTICAL INSTITUTE

BANGALORE CENTRE

STATISTICS AND MATHEMATICS UNIT

Telephone: 080-26985440
Email: statmath@isibang.ac.in

8th Mile, Mysore Road
R.V. College Post
BANGALORE 560 059, INDIA

Ashok Maitra Memorial Lectures (16-17)

Speaker : Mathew Penrose (University of Bath, UK)

Date : January 19, 2017

Title : The strong giant in a random digraph

Time : 2.00 pm – 3.00 pm

Abstract

Consider a random directed graph on n vertices with out-degrees sampled independently at random from an arbitrary specified probability distribution on the nonnegative integers, and destinations of arcs selected independently and uniformly at random. We say two vertices lie in the same strong component if they intercommunicate. We discuss the emergence of a unique giant component for large n, provided the mean out-degree exceeds 1. Time permitting, we discuss related results for other random graph models.

****

Title : Recent results on variants of random geometric graphs

Time : 3.15 pm – 4.15 pm

Abstract

In the classic random geometric graph (RGG) model $G(n,r)$, n vertices are placed uniformly at random in the unit square and connected by an edge whenever distant at most r apart. We consider the following variants; first the random bipartite geometric graph where there are two types of vertex and connections only between opposite types, and second the `soft' RGG where vertices at most r apart are connected with probability p (for a further parameter p).

In both variants we describe asymptotic results on connectivity, both of which illustrate that the main obstacle to connectivity is often the presence of isolated vertices. We also give a result on percolation in the first of these variants.

There will be coffee and snacks after the talk.

Both the talks will be held in II Floor auditorium. All are welcome.

If you wish to receive our seminar announcements through e-mail send a mail to : statmath@isibang.ac.in
Seminar announcements are available at: http://www.isibang.ac.in/~statmath/cgi-bin/seminar.cgi