

The University of Chicago Department of Statistics

Seminars for Fourth Year Ph.D. Students

XINGHUA ZHENG

Department of Statistics The University of Chicago

Critical Branching Random Walks and Spatial Epidemics

THURSDAY, November 1, 2007 at 3:30 PM 110 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

The first part of this talk is about critical nearest neighbor branching random walk on $\mathbb{Z}^d (d \ge 2)$. We will discuss some results about the maximal number of particles at a single site, the number of particles on a 'typical' occupied site and the number of occupied sites, all at time $m \in \mathbb{N}$ conditional on survival to then. This part is based on the paper available at http://www.arxiv.org/abs/0707.3829v1.

The second part is about spatial epidemics, more specifically, the SIS and SIR model. We will talk about their survival probabilities, ranges etc. This part is based on ongoing projects.

Information about building access for persons with disabilities may be obtained in advance by calling Karen Gonzalez (Department Administrator and Assistant to Chair) at 773.702.8335 or by email (karen@galton.uchicago.edu).