

Probability Seminar

Organizer: Tai Melcher & George Kordzakhia

Wednesday, 3:10–4:00pm, 330 Evans

Feb 1 **Paul Jung**, Cornell

The lower phase transition of the contact process

Consider the contact process on any transitive graph with bounded degree starting from one particle. Using a variational derivative form of Russo's formula, we show that the expected number of particles of the process decays exponentially in time for all infection rates λ that are below the lower critical value λ_s . Along the way we obtain certain critical exponent bounds. Some of these results have previously been proven on \mathbb{Z}^d in a well-known paper of Bezuidenhout and Grimmett.

Joint with M Aizenman.