Critical Values for Renewal Contact Processes

SPEAKER: Thomas Mountford, École Polytechnique Fédérale de Lausanne

TIME: 2:00pm-3:00pm, Tuesday, October 30, 2018

VENUE: Room 264, Geography Building, Zhongbei Campus, ECNU (华东师范大学中山北路校区，地理楼264室)

ABSTRACT

A renewal contact process is a (non Markov) process similar to the classical contact process but where the rate one Poisson processes governing “recovery” are replaced by renewal processes (transmissions are still modelled by rate lambda Poisson processes). We show that the critical values are zero if the renewal distribution has very heavy tails but is strictly positive if a moment higher than one exists (under some strict regularity condition).

BIOGRAPHY

Thomas Mountford is Professor at École Polytechnique Fédérale de Lausanne. He previously worked at UCLA. His interests include interacting particle systems (especially the contact process and its variants) and Gaussian processes, in particular Brownian motion.