

NYU
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纽约大学NYU-ECNU
Institute of Mathematical Sciences
at NYU Shanghai

PROBABILITY SEMINAR SERIES

- TOPIC:** Two-dimensional random interacements
- SPEAKER:** Serguei Popov, University of Campinas
- TIME:** 11:00am-12:00pm, Tuesday, September 19, 2017
- VENUE:** Room 264, Geography Building, Zhongbei Campus

ABSTRACT OF THE TALK

We define the model of two-dimensional random interacements using simple random walk trajectories conditioned on never hitting the origin, and then obtain some its properties. Also, for random walk on a large torus conditioned on not hitting the origin up to some time proportional to the mean cover time, we show that the law of the vacant set around the origin is close to that of random interacements at the corresponding level. Thus, this new model provides a way to understand the structure of the set of late points of the covering process from a microscopic point of view. Also, we discuss a continuous version of the model, build using the conditioned (on not hitting the unit disk) Brownian motion trajectories. This is a joint work with Francis Comets and Marina Vachkovskaia.

BIOGRAPHY

After obtaining his Ph.D. at the Moscow State University, Serguei Popov moved to Brazil to become a post-doc in the University of Sao Paulo (USP), then Assistant/Associate professor at the same place, and then Professor at the University of Campinas (UNICAMP). His main research interests focus on random walks (also in random environments), percolation, branching random walks, and random interacements.