

НАЦИОНАЛЕН СЕМИНАР ПО СТОХАСТИКА

На 21 юни 2018 г. (четвъртък) от 14:00 часа в зала 403 на ИМИ – БАН,
доклад на тема:

"Transience and Recurrence of Markov Processes with Constrained Local Time"

ще изнесе Adam Barker (University of Reading, UK).

Abstract: We study the problem of a Markov process conditioned so that its local time must grow slower than a prescribed function. Building upon recent work on Brownian motion with constrained local time, we study the problem for a large class of Markov processes.

We find a necessary and sufficient condition for transience/recurrence of the conditioned process, and also explicitly determine the distribution of the conditioned (inverse) local time. In the transient case, we explicitly determine the law of the conditioned Markov process. In the recurrent case, we further determine the "entropic repulsion envelope", which formally characterises how the process is affected by "entropic force" (the tendency of a system to increase its entropy).

This work is theoretical, but is related to problems in polymer physics in which a long polymer chain is modelled by a random process which is in some sense "weakly self-avoiding" (constraining the local time corresponds to "weak" self-avoidance). The talk provides a brief overview of some relevant random polymer models.

Поканват се всички интересуващи се.