Fakultät für Mathematik und Informatik
Institut für Mathematik

Seminar zur Stochastik

Dienstag, 30. Mai 2017
14 Uhr c. t.
SR 108 August-Bebel-Str. 4,

Herr Dr. Iurii Ganychenko

(Universität Potsdam)

„Rates of approximation of integral functionals of Markov processes "

Abstract: We provide weak and strong rates of approximation of integral functionals of Markov processes by Riemann sums. Assumptions on the processes are formulated only in terms of their transition probability densities and therefore are quite flexible. Namely, we pose a proper boundary condition on the derivative of the transition probability density of the respective Markov process with respect to the time variable. The class of processes under consideration includes diffusion processes, stable processes and models with Lévy(-type) noises.
We focus on integral functionals with non-regular kernels. As a particular important example of such a kernel, we consider an indicator function and the occupation time of a Markov process as a respective integral functional. We apply the results of weak and strong approximation rates of integral functionals to the estimates of the error of approximation of the price of an occupation time option.

Alle Interessenten sind herzlich eingeladen!

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