НАЦИОНАЛЕН СЕМИНАР ПО СТОХАСТИКА

секция „Изследване на операциите, вероятности и статистика"

Поредната сбирка на *Националния семинар по стохастика* ще се проведе на **28 юни 2023** г. (сряда) от **14:00** часа в зала **503** на ИМИ-БАН. Доклад на тема:

"The inverse first-passage time problem for general stochastic processes including Lévy processes and diffusions"

ще изнесе Alexander Klump (postdoctoral fellow (DAAD) at the IMI-BAS).

Abstract: The inverse first-passage time problem for a stochastic process X(t), t ≥ 0, consists of the following question. Given a distribution on the positive real numbers, does there exist a function b such that the first-passage time $\tau = \inf\{t > 0 : X\_t \geq b(t)\}$ has this given distribution? In this talk we will give conditions on the process X(t), t ≥ 0, under which the answer is affirmative. For a Markov process we present further additional conditions under which the solutions of the inverse first-passage time problem are unique. These conditions include Lévy processes with infinite activity or unbounded variation and diffusions on an interval with appropriate behavior at the boundaries. This extends the results in the inverse first-passage time problem for Brownian motion to a class of processes with discontinuous paths and, for example, allows a new range of applications.
The talk is based on a joint work with Mladen Savov.

Поканват се всички интересуващи се.