

# НАЦИОНАЛЕН СЕМИНАР ПО СТОХАСТИКА

секция „Изследване на операциите, вероятности и статистика“

Поредната сбирка на *Националния семинар по стохастика* ще се проведе на **20 май 2026 г.** (сряда) от **14:00** часа в зала **503** на ИМИ-БАН. Доклад на тема:

## ***"Finite time blowup and existence of global solutions of a semi-linear stochastic partial differential equation with fractional noise"***

ще изнесе **Ekaterina Todorova Kolkovska** (Center for Research in Mathematics Guanajuato, Mexico).

**Abstract:** We consider a stochastic partial differential equation driven by fractional Brownian motion with Hurst parameter  $H$  greater or equal to  $1/2$  on a bounded domain with smooth boundary and Dirichlet boundary conditions. By means of an associated random partial differential equation, lower and upper bounds for the blowup time of the solution are given. Sufficient conditions for blowup in finite time and for the existence of a global solution are deduced in terms of the parameters of the equation. For the case  $H = 1/2$  (i.e. for Brownian motion) estimates for the probability of blowup in finite time are given in terms of the laws of exponential functionals of Brownian motion.

Поканват се всички интересуващи се.