НАЦИОНАЛЕН СЕМИНАР ПО СТОХАСТИКА

секция „Изследване на операциите, вероятности и статистика“

Поредната сбирка на *Националния семинар по стохастика* ще се проведе на **14 февруари 2024** г. (сряда) от **14:00** часа в зала **503** на ИМИ-БАН. Доклад на тема:

"Computable inference for generalised Wright-Fisher processes"

ще изнесе **Nathan Judd** (University of Warwick, UK).

Abstract: In this talk, we will introduce a class of [0,1]-valued Markov processes with jumps that, as signals in hidden Markov models, admits a computable (exact) filter. By computable filter we mean that each filtering distribution, i.e., the law of the signal at a time t given the data up to time t, is explicitly and exactly available as a finite mixture of Dirichlet distributions. We exploit the tractability of the Wright-Fisher diffusion, in particular, its infinite-sum transition function and its dual process, as a base to construct a generalised version thereof, for which we derive the (exact, predictive and smoothing) filters of the associated hidden Markov model. In addition, we construct an exact sampling scheme to draw samples from the transition functions of this process.

Поканват се всички интересуващи се.