

НАЦИОНАЛЕН СЕМИНАР ПО СТОХАСТИКА
И
ИНТЕРДИСЦИПЛИНАРЕН СЕМИНАР ПО БИОМАТЕМАТИКА И НАУЧНИ ИЗЧИСЛЕНИЯ

Поредната сбирка на *Националния семинар по стохастика* ще се проведе на **4 декември 2018 г.** (вторник) от **15:00** часа в Заседателната зала на ИМИ-БАН. Доклад на тема:

"Stochastic Models of Cell Proliferation"

ще изнесе Николай М. Янев (ИМИ-БАН).

Abstract: This is a survey lecture about stochastic modeling in cell proliferation kinetics. One purpose of this work is to present also some new ideas and problems in the theory of branching stochastic processes which appear as a result of cell proliferation modeling. Recall that the terminology "branching processes" was first introduced by Kolmogorov (1946) as well as the modern base of this theory. The following topics are considered: Some characteristics of cell cycle temporal organization; Distributions of discrete and continuous labels; Age and residual lifetime distributions; Models of leukemia cell kinetics; Age-dependent branching populations with randomly chosen paths of evolution; Multitype branching populations with a large number of ancestors and asymptotic likelihood estimation of the basic mitotic parameters; Branching processes with immigration as models of two-type cell populations in vivo; Sevastyanov branching processes with non-homogeneous immigration introduced by Poisson random measures as models of the generation of terminally differentiated oligodendrocytes (cells of central nervous system) from the progenitor cells (stem cells). The last topic will be presented with more details and some asymptotic results will be demonstrated in the subcritical, critical and supercritical cases.

Поканват се всички интересуващи се.