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Einladung

zum
Oberseminar Stochastik

Am Donnerstag,18.11.2021, um **18:00 Uhr**, im Seminarraum 1 (Raum 005)
der Abteilung Mathematik, Weyertal 86-90, 50931 Köln spricht:

Prof. Dr. Jochen Blath

(TU Berlin)

zum Thema

Probabilistic structures emerging from dormancy

Throughout the tree of life, populations have evolved the capacity to contend with suboptimal conditions by engaging in dormancy, whereby individuals enter a reversible state of vanishing metabolic activity. The resulting "seed banks" serve as long-lived reservoirs of genetic and phenotypic diversity. Of particular relevance is the case of microbial dormancy, which has a fundamental impact on the evolutionary, ecological and also pathogenic character of microbial communities.

However, despite its ubiquity in nature, dormancy is a rather new subject for stochastic individual based modeling and interacting particle systems. Here, it leads to novel effects, in particular based on the introduction of memory, resilience and diversity into the underlying systems. The resulting probabilistic structures are surprisingly rich, already when considering simple `toy models?, and lead to new universal scaling limits.

In this talk, I briefly review some of the biological background for dormancy, highlight some recent mathematical models and corresponding probabilistic scaling limits, and sketch lines for future research.

Alle Interessenten sind herzlich eingeladen.

Die Dozenten der Stochastik