Stochastic Webinar

High order Fluctuation Expansions for Nonlinear Stochastic Heat Equations in Singular Limits

Rangrang Zhang（Beijing Institute of Technology）

Rangrang Zhang is currently an associate professor at Beijing Institute of Technology. She obtained a PhD from the Academy of Mathematics and Systems Science, Chinese Academy of Sciences (AMSS, CAS) under the supervision of Prof. Zhao Dong in 2017. Then, she worked as a Postdoc at Beijing Institute of Technology under the supervision of Prof.Chen Zhenqing from 2017 to 2019. She is mainly interested in stochastic conservation laws, and some conservative stochastic partial differential equations.

Abstract: Higher order fluctuation expansions for stochastic heat equations (SHE) with nonlinear, non-conservative and conservative noise are obtained. These expansions describe the asymptotic behavior of solutions in suitable joint scaling regimes of small noise intensity and diverging singularity. The results are applicable to SHE with regular and irregular diffusion coefficients, in particular the correlated Dawson-Watanabe and Dean Kawasaki SPDEs, as well as SPDEs corresponding to the Fleming-Viot and symmetric simple exclusion processes. This is a joint work with Benjiamin Gess and Zhengyan Wu.

讲座时间：

2024.12.05 周四上午10:00-11:00
会议地点：ZOOM会议室会议ID：3541437366密码：123456

主办单位：

中科院数学与系统科学研究院应用数学所
北京理工大学数学与统计学院