北京师范大学 随机数学研究中心

学术报告

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题目: Some recent results for SPDEs with transport noise

时间: 2022 年 3 月 7 日 (周一) 下午 3:00-4:00

地点: 腾讯会议 871 164 904

摘要: In this talk I will review some of our recent results on SPDES driven by multiplicative noise of transport type. Under a suitable scaling of the noise to high Fourier modes, these equations converge to the corresponding deterministic parabolic equations; moreover, larger intensity of transport noise leads to stronger dissipation in the limit equations. I will discuss some consequences of such scaling limit, including asymptotic uniqueness of stochastic 2D Euler equations and suppression of blow-up for stochastic 3D Navier-Stokes equations in vorticity form. The recent results on large deviations and Gaussian fluctuations underlying the scaling limit will also be mentioned. The talk is based on joint works with Franco Flandoli and Lucio Galeati.