

学术报告

报告题目: Gradient-type estimates for the dynamic σ -model

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报告摘要: In this talk I will discuss a possible strategy to derive σ -gradient bounds for the Markov semigroup of the dynamic σ -model on the torus. The method is based on pathwise estimates of the linearised equation with respect to the initial data. To compensate the lack of exponential integrability of the stochastic drivers we use a stopping time argument and the strong Markov property inspired by the work of Cass-Litterer-Lyons, in combination with the “coming down from infinity” property to obtain an estimate which is uniform in the initial data. For sufficiently large mass m , these type of σ -gradient bounds imply a spectral gap inequality with almost optimal Carre du Champ.

Based on a joint work with Florian Kunick.

报告人简介: Pavlos Tsatsoulis is currently a Postdoctoral researcher at Bielefeld University. Previously he was a Postdoctoral researcher at the Max Planck Institute for Mathematics in the Sciences. He was awarded his PhD degree by the University of Warwick under the supervision of Prof. Hendrik Weber. His research lies in the field of Stochastic Analysis with a particular focus to the study of qualitative and quantitative properties to (singular) SPDEs, such as well-posedness, regularisation properties, ergodicity, small noise asymptotics and synchronisation by noise.