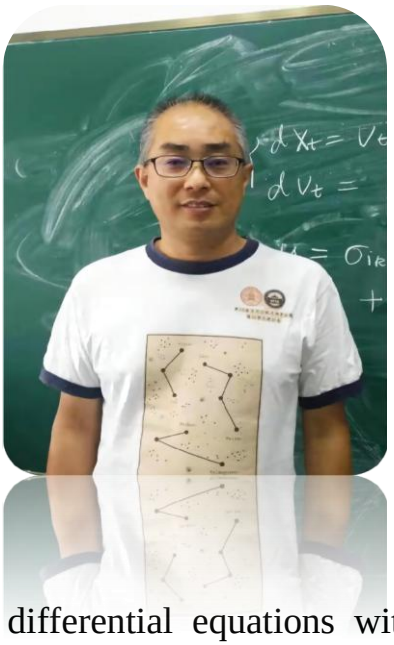
SCMS Colloquium

SECOND ORDER MCKEAN-VLASOV SDES AND KINETIC FOKKER-PLANCK-KOLMOGOROV EQUATIONS



Speaker: Xicheng Zhang

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Time：Thu, Mar 17th, 14:00-15:00

Venue: Tencent Meeting: 937832169

Abstract: In this paper we study second order stochastic differential equations with measurable and density-distribution dependent coefficients. Through establishing a maximum principle for kinetic Fokker-Planck-Kolmogorov equations with distribution-valued inhomogeneous term, we show the existence of weak solutions under mild assumptions. Moreover, by using the Hölder regularity estimate obtained recently in [GIMV19], we also show the well-posedness of generalized martingale problems when diffusion coefficients only depend on the position variable (not necessarily continuous). Even in the non density-distribution dependent case, it seems that this is the first result about the well-posedness of SDEs with measurable diffusion coefficients.