



复旦大学数学科学学院 数学综合报告会

报告题目: Singular HJB equations with applications to KPZ on the real line

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报告摘要: In this talk I will talk about the Hamilton-Jacobi-Bellman equations with distribution-valued coefficients, which is not well-defined in the classical sense and shall be understood by using paracontrolled distribution method introduced in \cite{GIP15}. By a new characterization of weighted H^{α} space and Zvonkin's transformation we prove some new a priori estimates, and therefore, establish the global well-posedness for singular HJB equations. As an application, the global well-posedness for KPZ equations on the real line in polynomial weighted H^{α} spaces is obtained without using Cole-Hopf's transformation. This is based on the joint work with Xicheng Zhang and Xiangchan Zhu.

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