



天元数学西南中心  
四川大学数学学院

# 线上学术报告

**题目: Global Well-posedness for 2D Generalized Parabolic Anderson Model via Paracontrolled Calculus**

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**时间: 3月29日 (星期五) 下午2:30-3:30**

**腾讯会议: 594-527-066 密码: 0329**

**报告人: <https://meeting.tencent.com/dm/vCD767BlgtVi>**

**摘要: In this talk we revisits the problem of global well-posedness for the generalized parabolic Anderson model on  $\mathbb{R}^+ \times \mathbb{T}^2$  within the framework of paracontrolled calculus [GIP15]. The model is given by the equation:  $(\partial_t - \Delta)u = F(u)\eta$ , where  $\eta \in C^{-1-\kappa}$  with  $1/6 > \kappa > 0$ , and  $F \in C^2_b(\mathbb{R})$ . Assume that  $\eta \in C^{-1-\kappa}$  and can be lifted to enhanced noise, we derive new a priori bounds. The key idea follows from the recent work [CFW24] by A. Chandra, G.L. Feltes and H. Weber to represent the leading error term as a transport type term, and our techniques encompass the paracontrolled calculus, the maximum principle, and the localization approach (i.e. high-low frequency argument).**

**报告人简介: 朱湘禅, 中国科学院数学与系统科学研究院应用数学研究所研究员, 2012年于北京大学和德国比勒菲尔德大学获得博士学位。主要研究方向是随机分析和随机偏微分方程, 具体包括奇异随机偏微分方程和随机流体方程等。在 *Comm. Pure Appl. Math.*, *Comm. Math. Phys.*, *Ann. Probab.*, *Probab. Theory Related Fields*, *J. Funct. Anal.* 等期刊上发表了多篇论文。**