



# 北京理工大学

## 数学与统计学院学术报告

### Some results on degenerate elliptic and parabolic equations

**报告人: 董弘桀 (Brown University)**

**时间:** 2025 年 6 月 7 日 (周六上午) 10: 00—11: 00

**地点:** 文萃楼E909

**报告人简介:** Prof. Hongjie Dong received his PhD in Mathematics from the University of Minnesota in 2005. He is currently a professor at the Division of Applied Mathematics of Brown University. His research lies in PDEs, probability theory, and numerical analysis; more specifically, he works on fully nonlinear elliptic and parabolic PDEs, probabilistic approach of PDEs, stochastic control theory, fluid equations, and more recently kinetic theory. He was awarded as a Simons Fellow in Mathematics in 2021, and won the NSF Career Award in 2011. He is on the editorial boards of several journals including SIAM J. Math. Anal., EJDE, and J. Differential Equations.

**摘要:** Degenerate equations appear naturally in geometry, biology, and finance, etc. In this talk, I will first review some recent results on elliptic and parabolic equations which are either degenerate or singular near the boundary of the domain, with homogeneous Dirichlet or conormal boundary condition, based on joint work with Tuoc Phan (University of Tennessee), Seongmin Jeon (Hanyang University), and Stefano Vita (Università di Pavia). Then I will discuss a recent work with Bekarys Bekmaganbetov (Brown) on equations with (nonhomogeneous) distributional boundary data.