



# 北京理工大学

## 数学与统计学院学术报告

### Weak and strong solutions of singular SDEs

**报告人: Damir Kinzebulatov (Université Laval)**

**时间:** 2024年10月10日 14:00——15:00

**地点:** 文萃楼E1008

**摘要:** In this talk, I will discuss recent results on weak and strong well-posedness of SDEs with singular drift. In the first part of the talk I will focus on form-bounded drifts and the minimal value of 'thermal excitation' needed to overcome the clumping effect due to attracting singularities in the drift. Here I will discuss a variant of De Giorgi's method and an extension of the method of M. Rockner and G. Zhao of proving strong well-posedness of SDEs. In the second part of the talk I will discuss an even larger class of time-inhomogeneous singular drifts in Morrey class (essentially the largest possible scaling-invariant Morrey class), and the approach to establishing weak existence and conditional uniqueness via "fractional resolvent representations" and a parabolic variant of Adams' estimate.