

# 中国科学院

## 随机复杂结构与数据科学重点实验室

# 学术报告

**报告题目:** On the asymptotic behaviour of fractional Sobolev norms

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**时间:** 2024年5月23日 (周四) 15:00 - 16:00

**地点:** S615

**报告摘要:**

In the early 2000's the study of fractional  $s$ -seminorms gained new interest, when Bourgain-Brezis-Mironescu on one hand, and Maz'ya-Shaposhnikova on the other hand showed, that they can be seen as intermediary functionals between the  $L^p$ -norm and the  $W^{1,p}$ -seminorms. These asymptotic formulas have a lot of applications and have been extended to finite dimensional Banach spaces and Riemannian manifolds.

In this talk, we will discuss a new and geometric approach to understand the asymptotic behaviours. We will show that these asymptotic formulas are true on a large family of metric measure spaces.