



复旦大学数学科学学院 数学综合报告会

报告题目: Weak derivatives and metric differentiability
almost everywhere of Sobolev functions valued in metric spaces

报告人: Nikita Evseev (Taiwan Normal University)

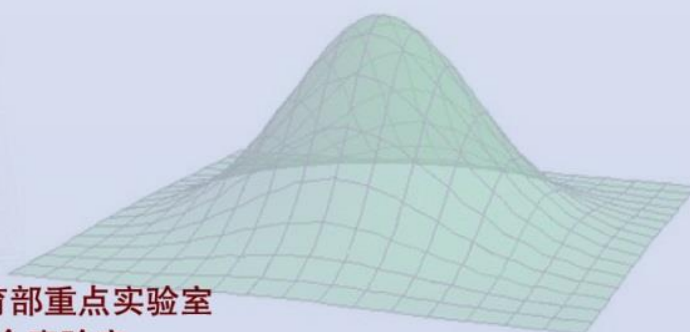
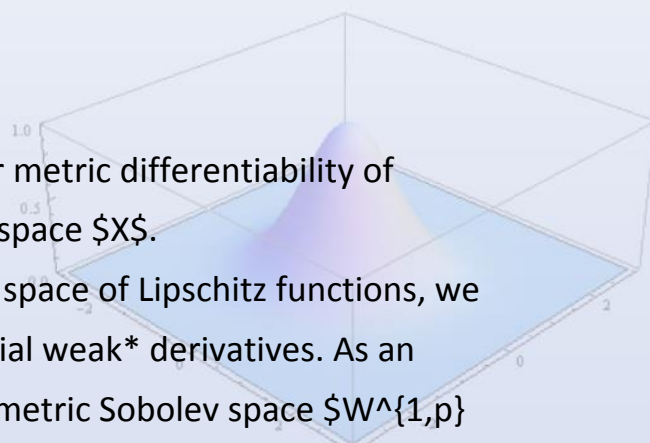
时间: 2026-10-28 星期三 15:30-16:30

地点: 光华楼西辅楼305

报告摘要:

We develop an intrinsic linearized framework for metric differentiability of mappings from Euclidean domains into a metric space X .

Using an implicit embedding into the dual of the space of Lipschitz functions, we represent the metric differential in terms of partial weak* derivatives. As an application, we show that every mapping in the metric Sobolev space $W^{1,p}(\Omega; X)$ is metrically differentiable with respect to the topology induced by the Sobolev norm, and that in the case $p > n$ it is metrically differentiable almost everywhere.



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