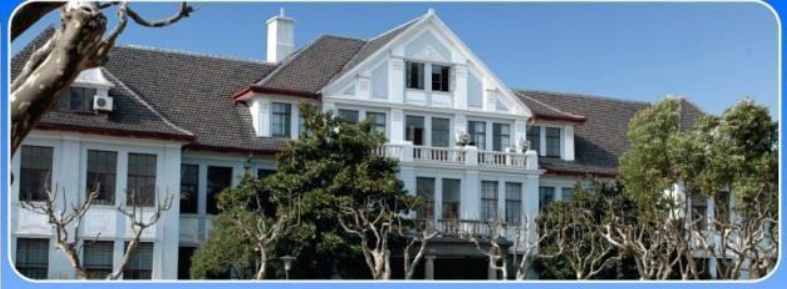


复旦大学数学科学学院

数学综合报告会

报告题目：A geometric approach to apriori estimates for optimal transport maps

报告人：Robert McCann 教授 (University of Toronto)

时间：2024-05-30 星期四 10:30-11:30

地点：光华东主楼1601室

报告摘要：

A key inequality which underpins the regularity theory of optimal transport for costs satisfying the Ma-Trudinger-Wang condition is the Pogorelov second derivative bound. This translates to an apriori interior C^1 estimate for smooth optimal maps.

Here we give a new derivation of this estimate which relies in part on Kim, McCann and Warren's observation that the graph of an optimal map becomes a volume maximizing spacelike submanifold when the product of the source and target domains is endowed with a suitable pseudo-Riemannian geometry that combines both the marginal densities and the cost.

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