



## 复旦大学数学科学学院 数学综合报告会

报告题目: Stein-Weiss and power weight Sobolev inequalities in  $L^1$

报告人: WenQi Zhang (Australian National University)

时间: 2026-10-26 星期一 14:00

地点: 光华楼东主楼1801

报告摘要:

It is known that  $L^1$  Sobolev and Stein-Weiss inequalities follow a slightly different pattern to their  $L^p$  counterparts. For instance, they serve as weaker replacement inequalities for the failure of  $L^1$  inequalities between differential operators. Recent work by P. De Napoli and T. Picon has shown that the canceling/cocanceling framework introduced by J. Van Schaftingen can be used to extend the  $L^1$  Stein-Weiss inequalities beyond their expected range. Inspired by these ideas, we investigate if the cocanceling constraint can be weakened in a subcritical setting, and we also explore how one may further extend these inequalities to a critical case.

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