



北京理工大学

数学与统计学院学术报告

Multi-linear multi-parameter eigenfunction bounds and NLS on compact manifolds

报告人: 张云峰 (辛辛那提大学)

时间: 2025.3.6 上午9:00--10:00

地点: 腾讯会议 910-574-208

摘要: The nonlinear Schrödinger equation (NLS) posed on a compact Riemannian manifold has a rich mathematical flavor and involves deep areas in analysis, geometry and number theory. In this talk I will present general multi-linear multi-parameter bounds of eigenfunctions of the Laplace--Beltrami operator on compact product manifolds, which through multi-linear Strichartz estimates can be applied to well-posedness of NLS on certain compact product manifolds such as a product of spheres. The proof of these results is a generalization of previous approaches pioneered by Burq--Gérard--Tzvetkov and Herr--Tataru--Tzvetkov. Many questions are still open: for example, is the cubic NLS posed on the product of a four-dimensional sphere and a circle locally well-posed at critical regularity?

报告人简介: 张云峰, 博士毕业于美国加州大学洛杉矶分校, 主要从事于色散方程方向的研究, 成果发表在APDE, Indiana等国际权威学术期刊上。