



# 北京理工大学

## 数学与统计学院学术报告

### Nonrelativistic Limit of Normalized Solutions to a class of nonlinear Dirac equations

**报告人:** 郭琪, 中国人民大学

**时间:** 2024年04月24日(周三)上午10:00-11:00

**地点:** 文萃楼E 1008

**摘要:** In this talk, we discuss the nonrelativistic limit of normalized solutions to a nonlinear Dirac equation. Our research first confirms the presence of normalized solutions to Dirac equations under high-speed conditions. We then illustrate that these solutions converge to normalized ground states of nonlinear Schrödinger equations. This result not only aids in the study of normalized solutions of nonlinear Schrödinger equations, but also physically explains that the normalized ground states of high-speed particles and low-speed motion particles are consistent. This is a joint work with Pan Chen, Yanheng Ding and Hua-yang Wang.

**个人简介:** 郭琪, 中科院数学与系统科学研究院数学所博士, 中国人民大学数学学院博士后, 现任中国人民大学数学学院讲师。研究兴趣为变分法, 临界点理论, 随机图等, 部分研究成果发表在 *Calc. Var. Partial Differential Equations*, *J. Differential Equations*, *SIAM J. Math. Anal.*, *J. Math. Phys.*, *Discrete Contin. Dyn. Syst.* 等杂志上, 已出版2本学术专著。主持或完成国家自然科学基金项目3项。