Seminar

Orbital magnetism in interacting electron systems

康健

上海科技大学物质科学与技术学院

Time: 1:30 pm, Nov.28, 2025 (Friday)

时间：**2025年11月28日（周五）下午1:30**

Venue: Room W563, Physics building, Peking University

地点：北京大学物理楼，西563会议室

Abstract

We present a rigorous derivation of the orbital magnetization formula for interacting electrons within the self-consistent Hartree-Fock approximation. Our results are expressed entirely in terms of the self-consistent wavefunctions and the Hartree-Fock energy spectrum at zero magnetic field. We test the formula on a two-band interacting Rashba model, finding an agreement with calculations performed at small but non-zero external magnetic field. Our method also allows us to also derive formulas for the orbital magnetic susceptibility.

Ref: https://arxiv.org/pdf/2509.20626

About the speaker

康健于2013年美国约翰霍普金斯大学物理系获博士学位，其后相继在明尼苏达大学、佛罗里达州立大学从事博士后研究工作。2019年-2002年任职于苏州大学，目前在上海科技大学物质科学与技术学院担任副教授。目前主要研究方向是凝聚态物理理论。