Weekly Seminar

非厄米能带理论: 从一维到高维

汪忠

清华大学

Time: 3:00pm, April. 26, 2023 (Wednesday)

时间: 2023年4月26日 （周三）下午3:00

Venue: Room w563, Physics building, Peking University

地点：北京大学物理楼，西563会议室

摘要

Many aspects of non-Hermitian systems are not well described in the framework of Bloch band theory. The non-Bloch band theory, in which the concept of Brillouin zone is generalized, has been widely applied to study non-Hermitian systems in one spatial dimension. However, its generalization to higher dimensions has been challenging. Here, we introduce a formulation of non-Hermitian band theory in arbitrary spatial dimensions, which is based on a natural geometrical object known as the amoeba. This theory provides a general framework for studying non-Hermitian bands beyond one dimension. Key quantities of non-Hermitian bands, including the energy spectrum, eigenstates profiles, and the generalized Brillouin zone, can be efficiently obtained from this approach.
Reference: H.-Y. Wang, F. Song, Z. Wang, arXiv:2212.11743

报告人简介

汪忠，清华大学高等研究院教授。2005年本科毕业于中国科学技术大学，2011年于中科大近代物理系获博士学位；2009-2010年访问斯坦福大学；2011年至今在清华高研院工作。主要研究方向为拓扑物态与拓扑现象，强关联体系，以及非厄米物理。

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