



Weekly Seminar

Fractional quantum Hall effects without rotational symmetry

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Time: 4:00Pm, Oct. 24, 2018 (Wednesday)

时间: 2018年10月24日 (周三) 下午4:00

Venue: Room W563, Physics building, Peking University

地点: 北京大学物理楼, 西563会议室

Abstract

Haldane pseudopotentials play a key role in understanding the physics of the fractional quantum Hall states. By using a more general class of pseudopotentials that form a complete basis in the cases where rotational symmetry is explicitly broken, e.g., due to tilted magnetic field or anisotropic dipolar interaction in cold atoms in a rotated trap. Similar to the standard isotropic pseudopotentials, the generalized pseudopotentials are also parametrized by a unimodular metric, which groups the effective interactions into equivalence classes, and is particularly useful in determining optimal model Hamiltonians of the anisotropic FQH fluids.

About the speaker

胡自翔, 2003年本科毕业于西安交通大学应用物理系, 2008年获得浙江大学物理学博士学位, 期间在美国佛罗里达国家强磁场实验室联合培养一年。2009-2010年韩国亚太理论物理研究中心博士后, 2010-2012年美国普林斯顿大学电子工程系博士后, 2013年起任重庆大学“百人”计划特聘研究员。长期从事分数量子霍尔效应等相关理论研究, 在 Phys. Rev. Lett, Phys. Rev. B等期刊发表论文30余篇。