

北京大学量子材料科学中心

International Center for Quantum Materials, PKU

中心系列讲座 ICQM Weekly Seminar Series "Emergent unconventional diffusion in open disordered systems"



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Institute for Advanced Study Tsinghua University

Time: 4:00pm, Nov. 30, 2011 (Wednesday) 时间: 2011年11月30日 (周三)下午4:00 Venue: Room 607, Conference Room A, Science Building 5 地点: 理科五号楼607会议室

Abstract

In contrast to Anderson localization in bulk systems, localization in open media is a longstanding issue of highly intellectual challenge. Recent experimental and theoretical studies have shown that the interplay between wave interferences and the wave energy leakage at the boundaries may lead to very rich localization physics. In the first part of this talk, I will present a brief review of Anderson localization. In the second part, I will introduce this subject and discuss an unconventional diffusive phenomenon—the local diffusion—in open media.

About the speaker

Dr. Tian received his Ph. D. from Fine Theoretical Physics Institute of University of Minnesota in 2005, and M. S. and B. S. from Fudan University in 2000 and 1998. After working as a graduate fellow at KITP of UCSB in 2005, he moved to University of Cologne in Germany working as a long-term "Wissenschaftlischer Mitarbeiter". He joined the faculty of Institute for Advanced Study of Tsinghua University in 2011. Dr. Tian's research interests are largely on the border of condensed matter physics and quantum nonlinear dynamics, with an emphasis on field theoretic approaches to quantum nonlinear dynamics in cold atomic gases; to fluctuation phenomena in disordered and chaotic systems; and to high-temperature superconductivity.

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