量子材料科学中心
International Center for Quantum Materials

Seminar

TIME EVOLUTION OF ENTANGLEMENT AND DISCORD

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- Time: 10:00am, May. 31, 2013(Friday)
- 时间：2013年5月31日（周五）上午10:00
- Venue: Conference Room 607, Science Building 5
- 地点： 理科5号楼607

Abstract

Entanglement and discord are important measures of quantum correlations, and both can serve as a resource for certain types of quantum information processing. These correlations are destroyed by external noise. The routes by which this destruction can take place depend on the topology of the hypersurfaces of zero entanglement or discord. In the case of 2 qubits we show that the hypersurface of zero discord is essentially a simply-connected 9-dimensional manifold with boundary. The classification of the possible time evolutions of the discord contrasts sharply with the possible evolutions of entanglement. There are 9 allowed categories for the joint evolution: 6 categories for a Markovian process and 3 categories for a non-Markovian process.

About the Speaker

Bob Joynt got his Ph. D. in Physics from Univ. of Maryland, USA in 1982. He was Postdoctoral Research Associate and Lecturer in Many-Body Theory, Cavendish Laboratory, Cambridge, England 1982-1984 and Visiting Research Scientist in Institute for Theoretical Physics, University of California, Santa Barbara, Feb.-June, 1989; March-May, 1996. From 1996 to 2002, he was the Associate Director in University of Wisconsin Materials Research Science and Engineering Center. From 1992 to present, he has been the Professor in Dept. of Physics, University of Wisconsin-Madison. He is the fellow of the American Physical Society and the Romnes Faculty Fellow, University of Wisconsin-Madison.