Jointly organized by the Department of Physics and HK Quantum Institute of Science & Technology

CTCP SEMINAR

Testing Multipartite Nonlocality and Network Nonlocality Sharing

Prof. Qing CHEN

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Tuesday, June 17, 2025, 10:00am

Room 522, 5/F, Chong Yuet Ming Physics Building,

The University of Hong Kong

Abstract:

After a brief introduction to quantum nonlocality, we propose a set of conditions on the joint probabilities as a test of genuine multipartite nonlocality, and it turns out that all entangled symmetric multipartite qubit states pass this test. In the following we generalize this test to a family of Hardy-type tests, which can detect different degrees of nonlocality ranging from standard to genuine multipartite nonlocality. At last, we explore network nonlocality sharing in an n-branch generalized star network scenario with m observers in each branch and k settings per observer.

Biography:

Dr. Qing Chen is a Professor in the Department of Physics at Yunnan University. He received his Ph.D. in Modern Physics from the University of Science and Technology of China (USTC) in 2006. Following his doctoral studies, he held a postdoctoral position at USTC's Hefei National Laboratory for Physical Science at Microscale and later served as a Research Fellow at the Centre for Quantum Technologies (CQT), National University of Singapore, for six years before joining Yunnan University. His research interests focus on quantum information theory and the foundations of quantum physics, particularly in areas such as quantum correlations.

ANYONE INTERESTED IS WELCOME TO ATTEND!

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