Center for Quantum Science and Engineering (CQSE)

Weekly Seminar
Dec. 3, 2010 (Friday)

TIME   Dec. 3, 14:30 ~ 15:30

TITLE   Information Causality and Noisy Computations
Could we retrieve the information out of the black hole by the help of resources with quantum entanglement?

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Abstract

We reformulate the information causality in a more general framework by adopting the results in signal propagation and computation in a noisy circuit. In our framework, the information causality leads to a broad class of generalized Tsirelson inequalities, and a no-go theorem for the reliable nonlocal computation of complicated functions. The former will put the information causality under the scrutiny experimentally, and the latter implies a negative result in reliably retrieving the information out of black hole by the nonlocal computation with physically realizable resources.