**General characterization of quantum temporal correlations**

Shin-Liang Chen

Department of Physics, National Chung Hsing University

Abstract: In this talk, we consider a scenario where an observer measures an initial quantum state and sends the post-measurement state to the other observer. We present a framework for characterizing correlations obtained in such a scenario. We show that there are some applications under this framework, such as computing the maximal value of a temporal Bell inequality, the maximal successful probability in a scenario of quantum random access code, minimum temporal steerability, and the minimum fidelity of the quantum state preparation.