Speaker: **Jheng-Dong Lin (National Cheng Kung University Taiwan)**

Title: **Interferometric engineering of open quantum systems: Dissipative freezing and collective decay**

Date: **Tuesday, August 15th, 11:00 am (s.t.)**

Place: **Seminar room 915**

Interferometric engineering of open quantum systems: Dissipative freezing and collective decay

Superposition of trajectories, which modify quantum evolutions by superposing paths through interferometry, has been utilized to enhance various quantum communication tasks. However, little is known about its impact from the viewpoint of open quantum systems. Thus, we examine this subject from the perspective of system-environment interactions.

We show that the superposition of multiple trajectories can result in quantum state freezing, suggesting a space-time dual to the quantum Zeno effect. Moreover, nontrivial Dicke-like super (sub) radiance can be triggered without utilizing multiatom correlations.