

中央大學物理學系

Department of Physics, National Central University



Welcome to Complex System and Biophysics Seminar

On Synchronization Analysis of Kuramoto Oscillators Incorporating Amplitude Dynamics

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Date: 2025/09/11 (Thursday)

Venue: S4-625

Time: 12:00-13:00

Abstract: Synchronization has been observed and applied in various disciplines, including circadian rhythms, firefly flashes, and biological oscillators. To demonstrate such phenomena, the Kuramoto model has been proposed and investigated in diverse applications. In this talk, I shall briefly give an introduction and a framework of synchronization analysis of the Kuramoto model. Then I shall introduce the Kuramoto model involving the amplitude dynamics and present the main results. If time permits, I will also show the numerical simulations.