NCTS
National Center for Theoretical Sciences

Complex Systems Arising from Evolution Biology

Time **10:00-11:00, June 18, 24, 2026**
14:00-15:00, June 22, 2026

Venue Room 509, Cosmology Building, NTU

Speaker

Wei-Kuo Chen University of Minnesota

Organizers

Wai Kit Lam National Taiwan University
Yuan-Chung Sheu National Yang Ming Chiao Tung University

Introduction & Purposes

The primary goal of this lecture series is to introduce several emerging topics in evolutionary biology. In particular, we will focus on the NK model, introduced by Kauffman, Levin, and Weinberger, which is a random fitness function defined on the genomes of certain species with N genetic loci, each interacting with K others. This model has broad applicability in the study of evolution and natural selection, as it captures the inherent ruggedness of fitness landscapes.

Outline & Descriptions

Throughout the series, we will highlight recent developments, outline the underlying mathematical approaches, and present open problems that are especially well suited for graduate students and junior researchers seeking to broaden their research directions.

Prerequisites

Participants are expected to be familiar with material from at least a first-semester graduate course in probability.

Contact: Murphy Yu (murphyyu@ncts.tw)