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OKINAWA INSTITUTE OF SCIENCE AND TECHNOLOGY
沖縄科学技術大学院大学

THEORETICAL SCIENCES VISITING PROGRAM

TSVP TALK

Understanding Ecological Dynamics with Incomplete Information

2025

WED.

Apr. 02

15:00–16:00

HYBRID L5D23, ZOOM



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A central quest in ecological research is to understand the ecological dynamics maintaining biodiversity. However, when making strong and robust assessments of ecological dynamics, a fundamental challenge is that we very rarely possess complete information about the entire ecological system. To address this challenge, my talk will focus on three major questions. First, given that an ecological community only assembles once, how can we understand if the order of species arrivals influence community stability? Second, given that we can only measure a subset of species, how can we quantify the stability of the whole ecological community from measures of the subset? Third, given that an ecological system harbors many interactions, how can we detect which interactions are evolving on ecological timescales? In sum, my talk shows how carefully designed theory allows rigorous extrapolation and prediction from limited data.



University of California, Los Angeles

Chuliang Song

Chuliang Song is a quantitative ecologist and is currently an assistant professor at Department of Ecology and Evolutionary Biology, UCLA. His work aims to develop rigorous theory through interdisciplinary tools, devise monitoring-applicable metrics, and validate these approaches with empirical data from a broad range of ecosystems.

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