



國立陽明交通大學  
NATIONAL YANG MING CHIAO TUNG UNIVERSITY

**NCTS**  
National Center for Theoretical Sciences

# NYCU-NCTS summer undergraduate school

Time

2026.7.20~30

Venue

Lecture Room B, 4<sup>th</sup> Floor,  
The 3<sup>rd</sup> General Building, NTHU  
**Science Building 1, NYCU**

## Analytical and Computational Study of Traveling Waves and Their Stability

### Introduction & Purposes

This program introduces undergraduate researchers to analytical and computational methods for studying traveling wave solutions of evolutionary partial differential equations and their stability. A central theme is the distinction between absolute and convective behavior of perturbations, both for homogeneous states and for traveling wave solutions viewed in a comoving frame. The project combines complex analysis (via the Fokas method), numerical simulation, and spectral analysis, guiding students from foundational concepts to focused research projects.

### Contact

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### Outline & Descriptions

The program will run from July 20 to July 30, 2026. During this period, students will participate in lectures and research projects under the supervision of Profs. Hsin-Yuan Huang, Te-Sheng Lin, and Chang-Hong Wu from National Yang Ming Chiao Tung University, together with three graduate student mentors. Students are encouraged to have the relevant prerequisite knowledge.



Lectures  
Details



Registration

Deadline: June 10 24:00