

# Taiwan Mathematics School 2024 Fall

新學期  
學分課程  
上線預告！

## From Differential Geometry to $tt^*$ Geometry-(1)

從微分幾何到  $tt^*$  幾何-上

Course Number: NCTS 5055 (三校聯盟之學生於課程網選課適用)

Course ID: V41 U3011

Credit: 2



Time	<b>2024.9.5- 12.19</b> Every Thursday, 10:20-12:10
Venue	Room 505, Cosmology Building, NTU
Speaker	<b>Martin Guest</b> Waseda University
Organizer	<b>Nan-Kuo Ho</b> National Tsing Hua University

### Course Background & Purposes

[More information](#)

The purpose of this course is to introduce students to several important topics in geometry, topology, and integrable systems theory. The goal is to reach some important mathematical problems motivated by the physics of conformal field theory. At the same time the course will involve some very classical mathematics, such as special functions and the Stokes Phenomenon. Most of all, the course will demonstrate how different areas of mathematics can interact and lead to interesting problems.

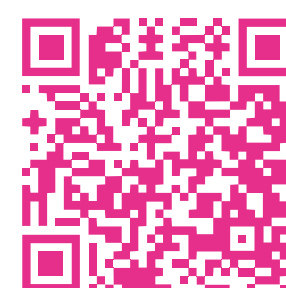
## Normal Approximation and Related Topics

常態逼近及其相關主題

Course Number: NCTS 5056 (三校聯盟之學生於課程網選課適用)

Course ID: V41 U4110

Credit: 2



Time	<b>2024.9.2 - 12.13</b> Every Monday, 09:10-11:00
Venue	Room 505, Cosmology Building, NTU
Speaker	<b>Gi-Ren Liu</b> National Cheng Kung University
Organizer	<b>Chun-Hsiung Hsia</b> National Taiwan University

### Course Outline & Descriptions

[More information](#)

We will guide the students in understanding stochastic analysis tools used to determine the convergence speed of the distributions of normalized partial sums/integrals of correlated random variables/fields. This includes exploring the spectral representation of random processes, the Stein method, the non-Stein method, and fundamental formulas in stochastic calculus. Once students have grasped these basics, we will compare the convergence speeds obtained through the Stein and non-Stein methods. We expect that students will apply this acquired knowledge to investigate corresponding convergence rate problems in various research fields.