Taiwan 2024 Spring Mathematics School

NCTS
National Center for Theoretical Sciences

新學期學分課程上線預告！！

Differential Forms in Algebraic Topology

代數拓撲中的微分形式

More information

Time
Every Tuesday and Thursday,
10:20-11:10, 11:20-11:45,
February 20 - May 30, 2024

Venue
Room 515, Cosmology Building, NTU

Speaker
Loring Tu 杜武亮 (Tufts University)

Organizers
Jungkai Chen   National Taiwan University
Yng-Ing Lee   National Taiwan University & NCTS

Course Background & Purposes
This course presents a simplified approach to advanced topics in algebraic topology, at the expense of ignoring torsion phenomena.

It teaches constructions and techniques such as de Rham cohomology, presheaves, Čech cohomology, and spectral sequences that are useful in a variety of fields including algebraic topology, algebraic geometry, and differential geometry.

Continuum Mechanics

連體力學

More information

Time
Every Wednesday, 15:30-17:00
Every Thursday, 15:30-17:00
February 21 - May 30, 2024

Venue
R440, Astronomy-Mathematics Building, NTU

Speaker
I-Liang Chern 陳宜良
IAMS, NTU

Organizers
Yng-Ing Lee 李瑩英
National Taiwan University

Course Background & Purposes
Continuum Mechanics studies motions of continuum materials. In this course, I will cover fluids, elasticity, and plasticity. It is designed for graduate students to have a global picture of continuum mechanics from the perspectives of classical field theory and differential geometry. I will take three approaches : Newton, Lagrange, and Hamilton, both in Lagrangian and Eulerian coordinate frames of references. Thus, variational principles of fluid mechanics and solid mechanics, Hamiltonian Fluid Mechanics, Hamiltonian Elasticity will be studied.