NCTS
National Center for Theoretical Sciences

Introduction to Knot Theory

and 3-manifold Topology

2024.6.17~7.26

Time | Every Monday, Wednesday and Friday 14:00-16:00

Venue | Room 509, Cosmology Building, NTU

Speaker
C. Michael Tsau
曹志誠
Saint Louis University

Organizer
Mao-Pei Tsui
崔茂培
National Taiwan University

Background & Purposes

Laying the foundation for the study of knots and 3-manifolds, and introducing new knowledge on current research on these areas.

Prerequisites

Topology and algebraic topology including some knowledge of homology, homotopy and presentation of group.

Outline & Descriptions

Introduction to knot theory:

(1) Fundamentals of knots and links
(2) Seifert surfaces and Alexander polynomial
(3) Jones polynomial
(4) Dehn surgery

Introduction to 3-manifolds:

(1) Dehn's lemma and loop theorem, sphere theorem, and their applications
(2) Heegaard splittings and connected sum decomposition
(3) Seifert fibered manifold

Contact

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Registration