同济大学 数学科学学院

School of Mathematical Sciences, Tongji University

2025 Hodge 模与 D 模暑期学校 日程手册

主办单位：同济大学数学科学学院

2025 年 8 月 3 日-8 日　　上海

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同济大学 数学科学学院
School of Mathematical Sciences, Tongji University

活动安排
Essential Information

报到时间：2025 年 8 月 3 日
Registration Time: August 3, 2025

报到地点：丽芮酒店
Registration Location: Radisson RED Hotel Shanghai Wujiaochang

授课时间：2025 年 8 月 4 日-8 日
Instructional Period: August 4-8, 2025

授课地点：同济大学北教学楼 329 教室
Instructional Venue: Room 329, North Teaching Building, Tongji University

用餐地点：学苑饮食广场一楼快餐部
Dining Venue: Fast Food Section, First Floor, Xueyuan Dining Plaza

交通安排：同济大学（四平路 1239 号）：地铁 10 号线同济大学站 5 号口
丽芮酒店（四平路 1251 号）：地铁 10 号线同济大学站 5 号口北 310 米
Transportation:
Tongji University (No.1239 Siping Road): Metro Line 10, Tongji University Station, Exit 5
Radisson RED Hotel (No.1251 Siping Road): Metro Line 10, Tongji University Station, Exit 5, 310 meters north

活动组织：金方舟、李灵光、林胤榜、张希平、张子立、朱子文
Organizers: Fangzhou Jin, Lingguang Li, Yinbang Lin, Xiping Zhang, Zili Zhang, Ziwen Zhu

联系方式：lilg@tongji.edu.cn
Contact: lilg@tongji.edu.cn

课程概要
Course Overview

■ 胡昊宇，南京大学（Haoyu Hu, Nanjing University)

授课主题（Topic)：Introduction to D-modules

课程摘要(Abstract)： The series of lectures is divided into two parts. In the first part, we discuss the fundamental notions of algebraic D-modules theory, including six functors and characteristic varieties. In the second part, we focus on the Riemann-Hilbert correspondence for regular meromorphic connections.

■ Laurentiu Maxim，University of Wisconsin–Madison

授课主题（Topic)：Singularities via mixed Hodge modules

课程摘要（Abstract)：I will start by giving a brief introduction to the theory of mixed Hodge modules. I will then proceed to show how this theory can be used to investigate singularities of complex algebraic varieties, especially of hypersurfaces.

■ 秦翊宸，柏林洪堡大学（Yichen Qin，Humboldt-Universität zu Berlin)

授课主题（Topic)：Mixed Hodge modules

课程摘要（Abstract)： The aim of this lecture series is to introduce Morihiko Saito's theory of mixed Hodge modules. We will first recall some background on variations of mixed Hodge structures, D-modules, and perverse sheaves. We will then define the category of mixed Hodge modules and discuss some important results, such as the decomposition theorem and stability under the 6-functor formalism.

■ 许大昕，晨兴数学中心（Daxin Xu, Morningside Center of Mathematics)

授课主题（Topic)：Introduction to arithmetic D-modules

课程摘要（Abstract)： The rigid cohomology is a Weil cohomology for varieties over field of positive characteristic. The theory of arithmetic D-module is the 6-functor formalism for the rigid cohomology. This theory is built on the works of Berthelot, Caro, Abe and others. In this course, I will explain some constructions and results in this theory.

授课日程
Teaching Schedule

	星期日 Sun 08.03	星期一 Mon 08.04	星期二 Tue 08.05	星期三 Wed 08.06	星期四 Thu 08.07	星期五 Fri 08.08
8:30-10:00	报到注册 Registration	胡昊宇 1 Haoyu Hu 1	胡昊宇 2 Haoyu Hu 2	胡昊宇 3 Haoyu Hu 3	胡昊宇 4 Haoyu Hu 4	自由讨论 Free Discussion
10:30-12:00		许大昕 1 Daxin Xu 1	许大昕 2 Daxin Xu 2	许大昕 3 Daxin Xu 3	许大昕 4 Daxin Xu 4	
14:00-15:30		秦翊宸 1 Yichen Qin 1	Laurentiu Maxim 2	秦翊宸 3 Yichen Qin 3	Laurentiu Maxim 4	
16:00-17:30		Laurentiu Maxim 1	秦翊宸 2 Yichen Qin 2	Laurentiu Maxim 3	秦翊宸 4 Yichen Qin 4	
18:30				晚宴 Banquet		

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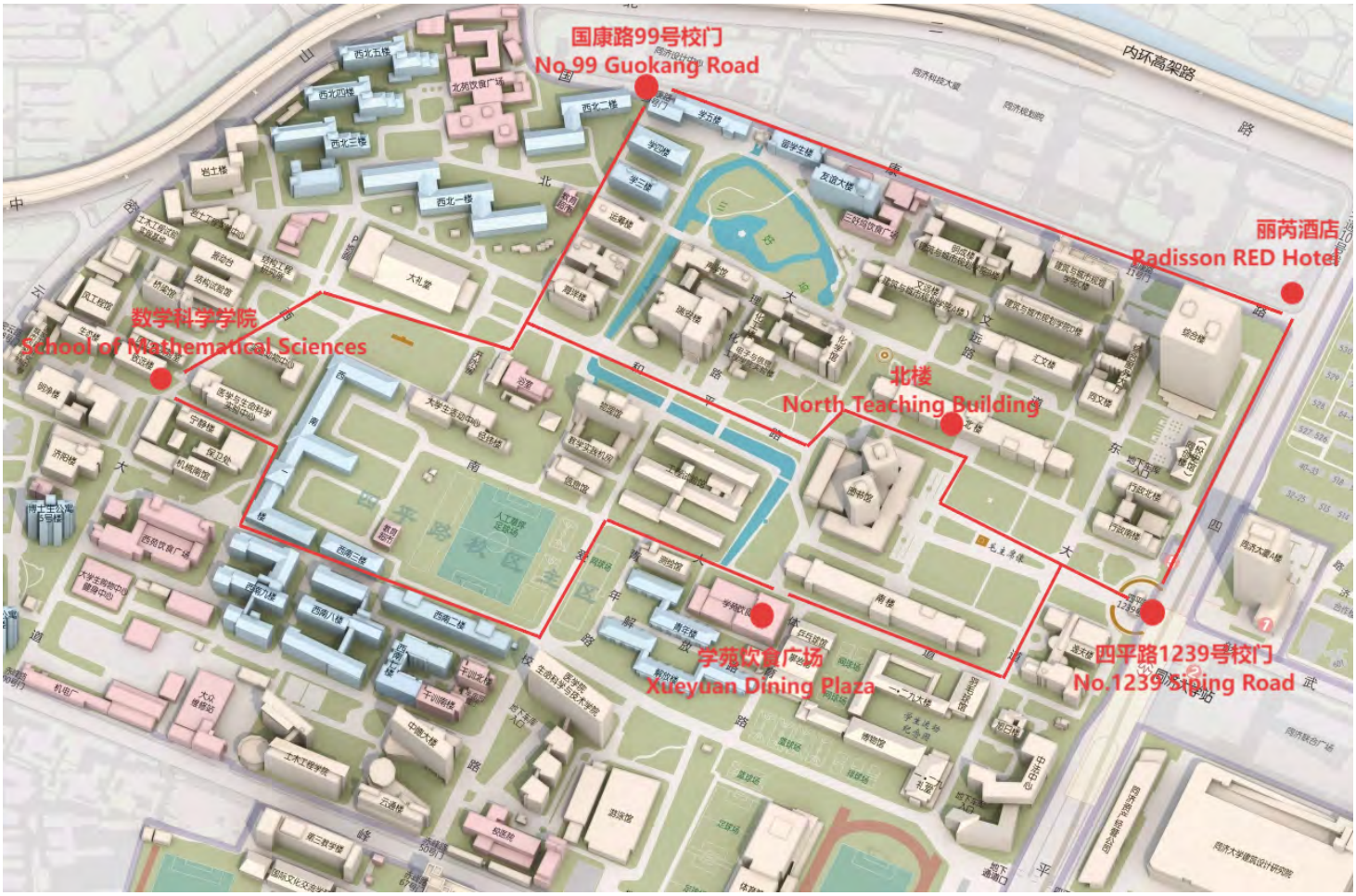

备忘录
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