哈尔滨工业大学谱理论研讨会日程表

　　为了促进哈尔滨地区数论方向的建设与持续发展，并加强与国内数论学者的交流与合作，哈尔滨工业大学数学学院邀请了国内多位专家，就数论中所涉及的谱理论进行学术研讨。欢迎感兴趣的师生积极参与！

会议时间

2023 年 5 月 11 日至 5 月 13 日; 5 月 10 日报到

会议地点

哈布斯堡酒店会议室三楼罗马 A 厅

会议日程

5 月 11 日	5 月 12 日	5 月 13 日
9:00am-12:00pm 赵永强 Artin's conjecture: history and current status	**9:00am-12:00pm 赵以庚** Étale cohomology of points and curves	**9:00am-12:00pm 刘东文** Jacquet-Langlands correspondence for GL(2)
自由讨论	自由讨论	自由讨论
14:00pm-17:00pm 解兵 Special values of spectral zeta functions	**14:00pm-17:00pm 方江学** Introduction of ℓ-adic Fourier transforms	**14:00pm-17:00pm 杜托平** Green functions of Heegner divisors
17:00pm-18:00pm 张加澍 p-adic zeros of diagonal forms	**17:00pm-18:00pm 李育飞** Vanishing cycles and Deligne-Milnor Conjecture	**17:00pm-18:00pm 周阳** Rankin-Cohen brackets and identities among eigenforms

注: 5 月 14 日是自由讨论时间

报告摘要

♣ **杜托平** 华北电力大学 (北京), *Green functions of Heegner divisors*

摘要: In this talk, I will recall several definitions of Green functions of Heegner divisors and give relations of these different types. Then we express the Gross-Zagier formula in Ono-Bruinier type.

♣ **方江学** 首都师范大学, *Introduction of ℓ-adic Fourier transforms*

摘要: ℓ-adic Fourier transforms was introduced by Deligne. In this talk, I will introduce the stationary phase principle for ℓ-adic Fourier transforms. As an application, I will explain Laumon's simplified proof on Weil conjectures.

♡ **李育飞** 哈尔滨工业大学, *Vanishing cycles and Deligne-Milnor Conjecture*

摘要: In this talk, I will introduce the notion of vanishing cycles and Deligne-Milnor Conjecture, explain their origins, and mention a few applications if time permits.

♣ **刘东文** 浙江大学, *Jacquet-Langlands correspondence for GL(2)*

摘要: We explain the local and global Jacquet-Langlands correspondence for GL(2) with examples, and sketch the proof by Deligne-Kazhdan-Vigneras using simple trace formula.

♣ **解兵** 山东大学 (威海), *Special values of spectral zeta functions*

摘要: We present a trace formula method for calculating spectral zeta functions of differential operators. This approach involves some combinatorial problems that are interesting on their own. We will focus mainly on self-adjoint operators of the first and second order. The talk is based on the joint work with Y. Zhao and Y. Zhao.

♡ **张加澍** 西湖大学, *p-adic zeros of diagonal forms*

摘要: Let F be a diagonal form of degree d in n variables over a p-adic field. If $n > d^2$, then F has a nontrivial zero in a p-adic field. This is a classical result of Davenport and Lewis. In this talk, we will present a slightly stronger result with a short proof.

♣ **赵以庚** 西湖大学, *Étale cohomology of points and curves*

摘要: For certain interesting sheaves on points and curves, we calculate étale cohomology groups and show their relationship to classical number theory questions.

♣ **赵永强** 西湖大学, *Artin's conjecture: history and current status*

摘要: In the 1930s, Artin conjectured that every degree-d form over p-adic fields with more than d^2 variables must have a nontrivial zero. Although it has a history of nearly a hundred years, people still don't know much about it. In this talk, we will give an overview of the history of this conjecture and try to summarize the main results known today and the main techniques used to attack it.

♡ **周阳** 哈尔滨工业大学, *Rankin-Cohen brackets and identities among eigenforms*

摘要: In this talk, under the assumption that the dimension of Hilbert cusp forms is larger than 1, we prove that the Rankin-Cohen bracket of two Hilbert eigenforms is no longer an eigenform by the Rankin-Selberg method.