

$$\zeta(s_1, \dots, s_k) = \sum_{n_1 > \dots > n_k \geq 1} \frac{1}{n_1^{s_1} \dots n_k^{s_k}}$$

$$L(s, \chi) = \sum_{n \geq 1} \chi(n) n^{-s}, \quad \zeta(s) = \prod_p (1 - p^{-s})^{-1}$$

The 5th Workshop

第五届多重 zeta 值及 相关领域研讨会

The 5th Workshop on Multiple Zeta Values
and Related Fields

时间 / Date

2026年7月27日-31日

27 July-31 July, 2026

地点 / Venue

湖南省长沙市

Changsha, Hunan, China

MZV identities

$$\zeta(2, 1) = \zeta(3)$$

$$\zeta(a)\zeta(b) = \zeta(a, b) + \zeta(b, a) + \zeta(a+b)$$

$$\zeta(s) = \frac{1}{\Gamma(s)} \int_0^\infty \frac{t^{s-1}}{e^t - 1} dt$$

$$\sum_{\substack{s_1 \geq 2, s_i \geq 1 \\ s_1 + \dots + s_k = n}} \zeta(s_1, \dots, s_k) = \zeta(n)$$

主办单位

中南大学

协办单位

南昌航空大学 · 厦门大学 · 同济大学 · 华东师范大学 · 浙江理工大学 · 安徽师范大学

第五届多重 zeta 值及相关领域研讨会

The 5th Workshop on Multiple Zeta Values and Related fields

2026 年 7 月 27 日-31 日, 27July-31 July, 2026

为促进多重 zeta 值及相关领域的学术交流, “第五届多重 zeta 值及相关领域研讨会”将于 2026 年 7 月 27 日至 31 日在湖南省长沙市举行。本次研讨会由中南大学主办, 由南昌航空大学、厦门大学、同济大学、华东师范大学、浙江理工大学、安徽师范大学协办。本次研讨会旨在邀请国内外对多重 zeta 值与 L-函数及相关领域感兴趣的学者汇聚一堂, 通过主题报告的形式, 对多重 zeta 值与 L-函数及相关领域的前沿方法及理论、最新发展及未来趋势进行广泛而深入的交流, 共同探讨并促进多重 zeta 值和 L-函数研究领域的进一步发展。

To promote academic exchanges in the field of multiple zeta values and related areas, the "5th Workshop on Multiple Zeta Values and Related Fields" will be held in Changsha, Hunan Province from July 27 to 31, 2026. This conference is organized by Central South University and co-organized by Nanchang Hangkong University, Xiamen University, Tongji University, East China Normal University, Zhejiang Sci-Tech University, and Anhui Normal University. The conference aims to bring together scholars from around the world who are interested in multiple zeta values, L-functions, and related fields. Through keynote presentations, participants will engage in extensive and in-depth discussions on the cutting-edge methods and theories, the latest developments, and future trends in the field of multiple zeta values and L-functions. The goal is to jointly explore and further advance the research in these areas.

组织单位/Organizing Institutions:

主办单位: 中南大学

Host Institution: Central South University

协办单位: 南昌航空大学、厦门大学、同济大学、华东师范大学、浙江理工大学、安徽师范大学

Co-organizers: Nanchang Hangkong University, Xiamen University, Tongji University, East China Normal University, Zhejiang Sci-Tech University, Anhui Normal University

研讨会组委会/Organizing Committee:

程家豪（南昌航空大学）	Jiahao Cheng, Nanchang Hangkong University
赖力（厦门大学）	Li Lai, Xiamen University
李江涛（中南大学）	Jiangtao Li, Central South University
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徐 策（安徽师范大学）	Ce Xu, Anhui Normal University
赵健强（美国毕夏普学校）	Jianqiang Zhao, Bishop's School (USA)

过去会议/Past Conferences:

第四届多重 zeta 值及相关领域国际研讨会 (2025)，同济大学	The 4th International Workshop on Multiple Zeta Values and Related Fields (2025), Tongji University
第三届多重 zeta 值与 L 函数相关领域研讨会(2024)，安徽师范大学	The 3rd Workshop on Multiple Zeta Values and L-functions(2024), Anhui Normal University
第二届多重 zeta 值及相关领域国际研讨会(2023)，浙江理工大学	The 2nd International Workshop on Multiple Zeta Values and Related Fields, Zhejiang Sci-Tech University
第一届多重 zeta 值及相关领域国际研讨会(2022)，线上	The 1st International Workshop on Multiple Zeta Values and Related Fields, Online

相关会议/Related Conferences:

多重 zeta 值、L 函数及相关领域研讨会(2024),昆明，天元数学国际交流中心。
Multiple zeta values, L-functions and related topics (2024), Kunming, Tianyuan Mathematics Research Center.

报告人/ Speakers

(按照姓氏字母序排序/listed alphabetically by last name)

曹阳, 山东大学, Yang Cao, Shandong University	柴劲松, 安徽工程大学, Jingsong Chai, Anhui Polytechnic University
Steven Charlton, Universität zu Köln, Bonn	陈绍示, 中国科学院, Shaoshi Chen, Chinese Academy of Sciences
范谷瑜, 名古屋大学, Ku-Yu Fan, Nagoya University	古庄英和, 名古屋大学, Hidekazu Furusho, Nagoya University
郭铤, 美国罗格斯大学, Li Guo, Rutgers University	洪绍方, 四川大学, Shaofang Hong, Sichuan University
黄炳荣, 山东大学, Bingrong Huang, Shandong University	金子昌信, 九州大学, Masanobu Kaneko, Kyushu University
小松尚夫, 河南省科学院, Takao Komatsu, Henan Academy of Sciences	刘华宁, 西北大学, Huaning Liu, Northwest University
吕广世, 山东大学, Guangshi Lv, Shandong University	齐治, 浙江大学, Zhi Qi, Zhejiang University
芮鸿源, 四川大学, Hongyuan Rui, Sichuan University	孙荐博, 九州大学, Jianbo Sun, Kyushu University
孙智伟, 南京大学, Zhiwei Sun, Nanjing University	王好武, 武汉大学, Haowu Wang, Wuhan University
王天泽, 河南省科学院, Tianze Wang, Henan Academy of Sciences	王英男, 深圳大学, Yingnan Wang, Shenzhen University
吴小胜, 合肥工业大学, Xiaosheng Wu, Hefei University of Technology	杨鹭语, 中南大学, Siyu Yang, Central South University
易少云, 厦门大学, Shaoyun Yi, Xiamen University	张德瑜, 山东师范大学, Deyu Zhang, Shandong Normal University
赵健强, 美国毕夏普学校, Jianqiang Zhao, Bishop's School (USA)	

会议日程

共 25 个报告 | 每个报告 40 分钟 | 开幕式 20 分钟 | 上午茶歇 20 分钟 | 下午茶歇 30 分钟 | 含午餐、晚餐
第二、三天上午 9:00 开始 | 每天下午会议 14:00 开始 | 第二天上午 4 个报告、下午 5 个报告

第一天（日期：2026 年 7 月 28 日） | 开幕式 + 8 个报告

时间	内容/报告题目	报告人	主持人
08:30-08:50	开幕式	致辞嘉宾	李忠华
08:50-09:30	Two symmetrization maps and a refinement of the sum formula	Masanobu Kaneko	张斌
09:30-10:10	Unsolved Conjectural Series for Powers of Pi and Values of L-Functions	孙智伟	
10:10-10:30	上午茶歇		
10:30-11:10	Moments of Hecke eigenforms and L-functions	黄炳荣	谌昭
11:10-11:50	Singular automorphic products and BKM Lie algebras	王好武	
11:50-14:00	午餐/一楼早餐厅		
14:00-14:40	Power moments of automorphic L –functions and its applications	张德瑜	赖力
14:40-15:20	On moments of twisted L-functions	吴小胜	
15:20-15:50	下午茶歇		
15:50-16:30	Creative telescoping and zeta values	陈绍示	李忠华
16:30-17:10	Multiple t values of maximal height (online)	Steven Charlton	
18:00-19:30	晚餐/四楼宴会厅		

第二天（日期：2026 年 7 月 29 日） | 9 个报告（上午 4 个，下午 5 个）

时间	内容/报告题目	报告人	主持人
09:00-09:40	Exponential sums with the Dirichlet coefficients of automorphic L-functions	吕广世	董自康
09:40-10:20	On the exceptional set of the generalized Ramanujan conjecture for GL(m)	王英男	
10:20-10:40	上午茶歇		
10:40-11:20	A construction of p-adic analogues of hypergeometric functions via p-adic multiple polylogarithms	Hidekazu Furusho	罗马
11:20-12:00	Explicit bounds of generalized incomplete Gauss sums and applications in order-optimal sequence design	刘华宁	
12:00-14:00	午餐/一楼早餐厅		
14:00-14:40	Effective Finite Euler Sums	赵健强	祝辉林
14:40-15:20	Strong multiplicity one for paramodular forms and its applications	易少云	
15:20-15:50	下午茶歇		
15:50-16:30	Secondary Terms in the Moments of Special Maass L-values	齐治	赵健强
16:30-17:10	Total-Color Parity for Multiple Mixed Values	芮鸿源	
17:10-17:50	Arithmetic sums and products of infinite multiple zeta-star values	杨鹭语	
18:00-19:30	晚餐/四楼宴会厅		

第三天（日期：2026 年 7 月 30 日） | 8 个报告（上午 4 个，下午 4 个）

时间	内容/报告题目	报告人	主持人
09:00-09:40	Enriched and Extended Shuffle Algebras from Multiple Zeta Values	郭铨	王伟平
09:40-10:20	Cohomological obstruction to rational points on symmetric powers	曹阳	
10:20-10:40	上午茶歇		
10:40-11:20	A resultant coefficient formula for finite q-multiple zeta values at roots of unity	小松尚夫	李汝森
11:20-12:00	Double shuffle relations for p-adic multiple zeta values of integer indices	范谷瑜	
12:00-14:00	午餐/一楼早餐厅		
14:00-14:40	Another proof of Zagier’s formula for multiple zeta values	洪绍方	程家豪
14:40-15:20	A Probabilistic Viewpoint on Multiple Zeta-Star Approximation	孙荐博	
15:20-15:50	下午茶歇		
15:50-16:30	Classification and Representation of Ternary Quadratic Forms: The Extremal Cases	王天泽	曹炜
16:30-17:10	Recent progress on regularity of Bessel distributions	柴劲松	
18:00-19:30	晚餐/四楼宴会厅		

会议地点/Conference Location

美年 21 度国际酒店（中南大学阳光地铁站店），长沙市岳麓区南二环二段岳麓街道 545 号

Hotel:

Meinian 21 ° International Hotel

Hotel Address:

(Sunshine Subway Station Branch of Central South University), No. 545 Yuelu Street, Nan Er Huan Road, Yuelu District, Changsha City

交通信息：地铁 3 号线阳光站 1 号口可达。美年 21 度国际酒店距离阳光战 1 号口 200 米左右。

By Metro: Take Line 3 to Yangguang Station (Exits 1). Meinian 21 ° International Hotel is about 200m from the Yangguang Station (Exits 1).

Cohomological obstruction to rational points on symmetric powers

曹阳 山东大学

(joint work with Lin Zhou) For a general quasi-projective smooth variety over a number field, the best cohomological obstruction for local-global principles is much stronger than the classical Brauer-Manin obstruction. In this talk, we study the cohomological obstructions on higher-degree symmetric powers of such varieties, and compare them with the cohomological obstruction to zero cycles.

Recent progress on regularity of Bessel distributions

柴劲松 安徽工程大学

We will discuss Bessel functions in various settings, including classical, finite, p -adic Bessel functions. We will also discuss recent progress on regularity of Bessel distributions. This is based on joint work with Cai Li and Liu Yadi.

Multiple t values of maximal height

Steven Charlton Universität zu Köln

Multiple t values are an analogue of multiple zeta values formed by summing over odd denominators. They can directly be expressed via alternating multiple zeta values, but using motivic methods Murakami proved the surprising fact that any multiple t value of maximal height (i.e. all entries ≥ 2) is a rational-linear combination of multiple zeta values, no alternation required. In this talk we give an explicit formula (in the manner of Zhao's generalised 2-1 formula), which directly expresses such a multiple t value of maximal height via multiple zeta values. We will also mention some applications to evaluations of multiple zeta values. This is joint work with Michael Hoffman and Nobuo Sato.

Creative telescoping and zeta values

陈绍示 中国科学院数学与系统科学研究院

Creative telescoping was first used by Zagier to find the linear recurrence for Apéry's sum and later was developed by Zeilberger in the 1990s as a systematical and algorithmic method for proving combinatorial identities. This talk will present some new developments related to creative telescoping and its applications to zeta values.

Double shuffle relations for p -adic multiple zeta values of integer indices

Ku-Yu Fan Nagoya University

In this talk, I will discuss double shuffle relations for p -adic multiple zeta values at integer indices. The starting point is to extend the usual admissibility condition for indices of multiple zeta values from positive indices to integer indices, allowing zero and negative components under a suitable convergence-type condition. I will explain how the shuffle and stuffle products remain compatible with this extended notion of admissibility. This compatibility gives double shuffle relations for admissible integer indices. I will then show how the same framework leads to a definition of p -adic multiple zeta values at admissible integer indices, and prove that these values satisfy the double shuffle relations.

A construction of p –adic analogues of hypergeometric functions via p –adic multiple polylogarithms

Hidekazu Furusho Nagoya University

We construct a class of p -adic functions that may be regarded as analogues of Gauss's hypergeometric function, defined via p -adic multiple polylogarithms. Our construction is fundamentally different from Dwork's theory and is instead motivated by the relationship between the hypergeometric differential equation and the Knizhnik–Zamolodchikov (KZ) equation, as reflected in the Ohno-Zagier framework.

We develop a residue-wise analytic prolongation of the resulting function by exploiting its connection with p –adic multiple polylogarithms, and establish a rigorous analytic framework for its continuation. As an application, we analyze the local behavior near 1 and prove a p –adic analogue of Gauss's hypergeometric theorem.

Enriched and Extended Shuffle Algebras from Multiple Zeta Values

Li Guo Rutgers University

The algebra of multiple zeta values (MZVs) is encoded as a stuffle(quasi-shuffle) algebra and a shuffle algebra. The MZV stuffle algebra has a natural Hopf algebra structure which has important applications to MZVs. Recently the MZV shuffle algebra is equipped with a Hopf algebra structure. The needed coproduct is defined by a recursion through a family of weight-increasing linear operators, and can be recovered from a differential locality Hopf algebra on Chen fractions. On the other hand, the MZV shuffle algebra naturally extends to a larger shuffle algebra that corresponds to MZVs with arbitrary arguments, and another Hopf algebra structure is given to the subalgebra for negative arguments. Moreover, the two Hopf algebras are naturally related by a duality. This talk will give a survey of these results, obtained in joint works with Wenchuan Hu, Hongyu Xiang and Bin Zhang.

Another proof of Zagier's formula for multiple zeta values

洪绍方 四川大学数学学院

Let $l \geq 1$ be an integer. For any multiple index $\mathbf{s} = (s_1, s_2, \dots, s_l) \in \mathbb{Z}_{\geq 1}^l$ with $s_l > 1$, the multiple zeta value (MZV for short) is defined by

$$\zeta(s_1, s_2, \dots, s_l) := \sum_{1 \leq k_1 < k_2 < \dots < k_l} \frac{1}{k_1^{s_1} k_2^{s_2} \dots k_l^{s_l}}.$$

We denote by $\{a_1, \dots, a_k\}^d$ the sequence formed by repeating the sequence $\{a_1, \dots, a_k\}$ exactly d times. Let $H(r, s) = \zeta(\{2\}^r, 3, \{2\}^s)$. Zagier's formula for the multiple zeta values $H(r, s)$ was an important and key ingredient in the proof of Hoffman's conjecture. In this talk, with the help of the Lei-Yu-Hong expression for $H(r, s)$ and Lupu's identity about rational zeta series involving Riemann zeta values $\zeta(2n)$ and by establishing some identities about binomial coefficients and a result about Kronecker symbol and arithmetic functions, we present another proof of Zagier's formula stating that for any nonnegative integers r and s ,

$$H(r, s) = 2 \sum_{k=1}^{r+s+1} (-1)^k \left[\binom{2k}{2r+2} - \left(1 - \frac{1}{2^{2k}}\right) \binom{2k}{2s+1} \right] \zeta(2k+1) \zeta(\{2\}^{r+s+1-k}).$$

Moments of Hecke eigenforms and L-functions

黄炳荣 山东大学

In this talk, we study the value distribution of Hecke eigenforms in the large weight limit. We start by recalling the quantum unique ergodicity (QUE) theorem and its application to the equidistribution of zeros of Hecke eigenforms. We then turn to their joint value distribution. In particular, we establish asymptotic formulas for certain low-degree mixed moments. Our approach is based on the analytic theory of L-functions.

Two symmetrization maps and a refinement of the sum formula.

Masanobu Kaneko Kyushu University

In the course of seeking a conjectural description of the algebra of symmetric multiple zeta values, we have discovered a refinement of the classical sum formula, along with several interesting phenomena. This is work in progress jointly with Nobuo Sato.

A resultant coefficient formula for finite q -multiple zeta values at roots of unity

Takao Komatsu(小松尚夫) 东京科学大学; 河南省科学院

One of the finite q -multiple zeta functions at roots of unity is

$$\mathcal{Z}_n(\zeta_n; m, s) = \sum_{1 \leq i_1 < \dots < i_m \leq n-1} \frac{1}{(1 - \zeta_n^{i_1})^s \dots (1 - \zeta_n^{i_m})^s}.$$

This talk gives a direct resultant version of the product method and applies it to all positive integer exponents s . The result is a closed all-depth coefficient formula for the generating polynomial

$$\mathcal{Z}_{n,s}(X) = \sum_{m=0}^{n-1} \mathcal{Z}_n(\zeta_n; m, s) X^m.$$

A general product/root-product mechanism is given in a recently published paper; the contribution here is to package it as a resultant identity, extract coefficients directly from the substitution $z^s = -X$, and recast the general coefficient as a twisted-circulant determinant. This determinant formula applies for all $s \geq 1$ and specializes to the cases $s = 2, 3, 4$. The $s = 2$ and $s = 3$ cases are recovered as compact binomial formulas. For $s = 4$, the general product factors into two quadratic pairs, giving a compact one-sum formula that recovers the two depth values and supplies the general coefficient for every $0 \leq m \leq n - 1$.

Explicit bounds of generalized incomplete Gauss sums and applications in order-optimal sequence design

刘华宁 西北大学

This work is motivated by the long-standing open problem of designing order-optimal aperiodic polyphase sequence sets with respect to the celebrated Welch bound. Attempts were made by Mow over 30 years ago, but a comprehensive understanding of this problem is still lacking. Our first key contribution is the derivation of a fully explicit upper bound for generalized incomplete quadratic Gauss sums, which is obtained by recursively applying Paris' asymptotic expansion and then controlling the accumulated error via the fast convergence property of the Fibonacci zeta function. Building upon this result, our second key contribution consists of four systematic constructions of order-optimal sequence sets with low aperiodic correlation and/or ambiguity properties via carefully selected Chu and Alltop sequences. For the first time in the literature, we show that the full Alltop sequence set is order-optimal with respect to its aperiodic correlation sidelobes. Besides, we introduce a novel subset of Alltop sequences possessing both order-optimal aperiodic correlation and ambiguity properties over the entire time-shift window, whose achievable Doppler-width scaling is shown to be asymptotically optimal within the Alltop-sequence framework. This is a joint work with Zilong Liu.

Exponential sums with the Dirichlet coefficients of automorphic L-functions

吕广世 山东大学

In this talk, we shall introduce our series of work concerning cancellation in exponential sums with the Dirichlet coefficients of automorphic L-functions. In particular, we obtain power-saving on the non-linear additive twisted sum of GL(4) forms. Previously, GL(2) and GL(3) cases have been investigated extensively. This is joint work with S. Luo.

Secondary Terms in the Moments of Special Maass L –values

齐治 浙江大学

In this talk, I'll show that there are secondary terms in the mean values of Maass special L –values. This curious phenomenon is rare in the moment conjectures and is previously known only for the cubic moment of quadratic Dirichlet central L –values.

Total-Color Parity for Multiple Mixed Values

芮鸿源 四川大学

In this talk, I will present a finite-contour approach to regularized parity identities for multiple mixed values. The method combines residue computations, cutoff regularization, and the M-stuffle/shuffle comparison in the Xu-Zhao framework. The resulting formulas separate the two total-color sectors corresponding to the cotangent and cosecant kernels, and lead to principal-depth parity reductions modulo lower-depth terms and products.

A Probabilistic Viewpoint on Multiple Zeta-Star Approximation

Jianbo Sun Kyushu University

Multiple zeta-star values attached to indices of infinite length have recently been studied by Jiangtao Li and, independently, by Hirose--Murahara--Onozuka. Subsequent work of Jiangtao Li, including joint work with Siyu Yang, has explored Diophantine approximation, arithmetic sums and products, and related properties of multiple zeta-star values. These developments suggest a new connection between finite-index multiple zeta-star values, fractal geometry, and metric Diophantine approximation.

In this talk, I will first recall the symbolic framework behind this connection and explain the approximation problems that arise from it. A central theme is a Khintchine-type zero-one phenomenon. I will discuss some progress on these questions from a probabilistic viewpoint, focusing on how the zeta-star interval structure can be compared with a simpler probabilistic model.

Unsolved Conjectural Series for Powers of π and Values of L -Functions

孙智伟 南京大学

In this talk, we introduce the speaker's various conjectural series for powers of π and values of Dirichlet's L -functions, which still remain open in this AI time. Some of them involve the generalized central trinomial coefficient $T_k(b, c)$ which denotes the coefficient of x^k in the expansion of $(x^2 + bx + c)^k$, and some other series involve higher-order harmonic numbers or derivatives. For example, we conjecture that

$$\sum_{k=0}^{\infty} \frac{16k+3}{(-2022)^k} \binom{2k}{k} T_k(19, -20) T_{2k}(9, -5) = \frac{43\sqrt{101}}{75\pi}$$

And

$$\sum_{k=0}^{\infty} \frac{\binom{2k}{k}^2 \binom{4k}{2k}}{(-12288)^k} \left((28k+3) \left(36H_{4k}^{(2)} - 9H_{2k}^{(2)} - H_k^{(2)} \right) + \frac{12}{4k+1} \right) = \frac{16\pi}{3\sqrt{3}}$$

where $H_n^{(2)} := \sum_{k=1}^n \frac{1}{k^2}$.

Singular automorphic products and BKM Lie algebras

王好武 武汉大学

In 1992, Borcherds proved the monstrous moonshine conjecture by constructing a specific BKM algebra and identifying its denominator function with an automorphic product of singular weight. In this talk, I will present a classification of singular automorphic products and elucidate their relationship to BKM Lie algebras and vertex algebras. To this end, we prove that every singular automorphic product on certain lattices gives rise to a finite-dimensional semi-simple Lie superalgebra structure, and we obtain a complete list of 85 such structures. This talk is based on joint work with K. Sun and B. Williams.

Classification and Representation of Ternary Quadratic Forms: The Extremal Cases

王天泽 河南省科学院数学研究所

This talk concerns with the problem of classification and representation of primitive positive definite ternary quadratic forms for all extremal cases in Lehman's theorem, i.e. cases of all the exponents in the prime factorizations of level and discriminant taking each of their allowable minimum or maximum values. We novelly generalize the notion of modified Hurwitz class numbers, and use it to establish explicit formulas relative to representation numbers for each genus from our classification. By summing some weighted representation numbers, we obtain class number formulas for genera. As applications, we get 255 one-class genera with 112 of them being reported for the first time, and give explicit formulas for the representation numbers of the 255 ternary quadratic forms. This is a joint work with Yifan Luo and Haigang Zhou.

On the exceptional set of the generalized Ramanujan conjecture for $GL(m)$

王英男 深圳大学

For any prime p and Hecke-Maass form ϕ on $GL(m)$, $\alpha_{\phi,1}(p), \dots, \alpha_{\phi,m}(p)$ denote the corresponding Satake parameters of ϕ at p . The generalized Ramanujan conjecture asserts that $|\alpha_{\phi,i}(p)| = 1, i = 1, \dots, m$. In this talk we will survey the recent results and developments centered on this problem. This talk is based on a joint work with Chen Yong-Gao, Lau Yuk-Kam and Ng Ming Ho.

On moments of twisted L-functions

吴小胜 合肥工业大学

In this talk, we will introduce our recent works on establishing power-saving asymptotics for moments of L-functions, twisted with Dirichlet characters to an arbitrary large modulus q , some of which are joint works with Gao, Kerr, Milićević, Qin, Shparlinski, Tang, Xi, and Zhao.

Arithmetic sums and products of infinite multiple zeta-star values

杨鹭语 中南大学

In 1974, Hall proved that every real number can be expressed as the sum of two real numbers whose continued fraction expansions have partial quotients bounded by 4. Firstly we will review some further developments on this topic. After that, by using theory of multiple zeta-star values, we show that every real number greater than 4 can be expressed as the sum or the product of two real numbers which can be realized as infinite multiple zeta-star values with all indices bounded by 2. Lastly, we propose some conjectures with the algebraic points in some Cantor sets which are constructed from infinite multiple zeta-star values of restricted indices. This is joint work with Professor Jiangtao Li.

Strong multiplicity one for paramodular forms and its applications

易少云 厦门大学

In this talk, we will mainly present several refined strong multiplicity one results for paramodular cusp forms by using the associated spinor and standard L -functions with the combination of the methods from both of automorphic and Galois-theoretic side. As an application, we will give a criterion for determining eigenforms by twisted central values of the spinor L -functions. This talk is based on a joint work with Xiuyan Wang, Zhining Wei and Pan Yan.

Power moments of automorphic L -functions and its applications

张德瑜 山东师范大学

Power moments of L -functions on the critical line play a significant role in analytic number theory. In this talk, we will introduce the upper bounds and lower bounds for power moments of automorphic L -functions. Also the zero density estimates of automorphic L -functions will be discussed as its applications.

Effective Finite Euler Sums

Jianqiang Zhao Bishop's School (USA)

Euler sums (also called alternating multiple zeta values) have played important roles in many branches of mathematics and theoretical physics. In recent years, many variants of the Euler sums have been investigated including the finite version which is defined by taking congruences modulo each prime p of the Euler sum series truncated at p . An important conjecture says that the space generated by the finite Euler sums of weight w is isomorphic to the space generated by Euler sums of weight w modulo products of $\zeta(2)$. Under this conjecture, we call the finite object corresponding to an Euler sum an effective finite Euler sum. In this talk, I will describe such objects in depth two and a few other results related to this conjecture.

$$\zeta(s_1, \dots, s_k) = \sum_{n_1 > \dots > n_k \geq 1} \frac{1}{n_1^{s_1} \dots n_k^{s_k}}$$

$$L(s, \chi) = \sum_{n \geq 1} \chi(n) n^{-s}, \quad \zeta(s) = \prod_p (1 - p^{-s})^{-1}$$

会议简介

About the Workshop

为促进多重 zeta 值及相关领域的学术交流，“第五届多重 zeta 值及相关领域国际研讨会”将于 2026 年 7 月 27 日至 31 日在湖南省长沙市举行。

本次研讨会旨在邀请国内外对多重 zeta 值与 L-函数及相关领域感兴趣的学者汇聚一堂，通过主题报告的形式，对多重 zeta 值与 L-函数及相关领域的前沿方法及理论、最新发展及未来趋势进行广泛而深入的交流，共同探讨并促进多重 zeta 值和 L-函数研究领域的进一步发展。

The workshop brings together scholars interested in multiple zeta values, L-functions, and related areas. Through invited lectures and academic exchange, participants will discuss frontier methods, recent developments, and future directions in the field.

$$\zeta(s_1, \dots, s_k) = \sum_{n_1 > \dots > n_k \geq 1} \frac{1}{n_1^{s_1} \dots n_k^{s_k}}$$

$$\sum_{\substack{s_1 \geq 2, s_i \geq 1 \\ s_1 + \dots + s_k = n}} \zeta(s_1, \dots, s_k) = \zeta(n)$$

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$$L(s, \chi) = \sum_{n \geq 1} \chi(n) n^{-s}, \quad \zeta(s) = \prod_p (1 - p^{-s})^{-1}$$

$$\zeta(2, 1) = \zeta(3)$$

$$\zeta(a)\zeta(b) = \zeta(a, b) + \zeta(b, a) + \zeta(a + b)$$