



SCMS Conference

NUMBER THEORY CONFERENCE

Speaker: Haocheng Fan 范浩程

Peking University

Title: Coherent cohomological dimension of Siegel modular varieties and the modularity of formal Siegel modular forms

Time: 2026-4-10 13:30-14:30

Location: Room 102, SCMS

Abstract:

In this talk, we provide an upper bound of the coherent cohomological dimension of the Siegel modular variety. As a corollary, we show that the boundary of the compactified Siegel modular variety satisfies the Grothendieck-Lefschetz condition. This implies, in particular, that every formal Siegel modular forms of genus $g \geq 2$ and cogenus 1 is classical.

Speaker: Jiahong Yu 余佳弘

Morningside Center for Mathematics

Title: Finitely presented log-regular rings over rank 1 valuation rings

Time: 2026-4-10 14:50-15:50

Location: Room 102, SCMS

Abstract:

The theory of log-regular rings, introduced by Kazuya Kato, has become a cornerstone of logarithmic geometry and p -adic Hodge theory. By combining the property of fs-monoids and the commutative algebra of regular local rings, Kato's framework provides a notion of "smoothness" for schemes with singularities, such as semistable reduction models. In this talk, we present an extension of Kato's log-regularity to the setting of finitely presented algebras over a general rank 1 valuation ring \mathcal{O} . In addition, we establish the essential properties of this class of rings, specifically proving their normality, Hartogs' lemma, and the rigidity (uniqueness) of the log structure.

Speaker: Heer Zhao 赵和耳

Institute for Advanced Study in Mathematics of HIT

Title: Monodromies associated to (log) p -divisible groups

Time: 2026-4-10 16:10-17:10

Location: Room 102, SCMS

Abstract:

Let R be a Henselian DVR with residue field k of char $p > 0$ and fraction field K , and let S be the standard log trait associated to R . In a joint work with Bertapelle and Wang, we established that log p -divisible groups over S correspond to p -divisible groups with semi-stable reduction over K , and also to semi-stable Galois Z_p -representations with Hodge-Tate weights in $\{0, 1\}$ (assuming k is perfect and K is a finite extension of $W(k)[1/p]$). In this talk, we discuss mainly the compatibility of monodromies along the correspondences from the joint work.

Host: Yupeng Wang

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