

2024年度浙大数学中心学术年会

时 间: 2025年1月15日
地 点: 数学中心407
腾讯会议: 333-114-740
密 码: 399691

1月15日 上午

时 间: 09:00—09:40

报告人: 朱盛茂 (浙江师范大学)

题 目: Recent progresses of the Volume Conjecture

摘 要: In this talk, I will introduce the volume conjecture which connects two very different branches of mathematics, quantum topology and hyperbolic geometry. Then I will give an asymptotic expansions for the colored Jones polynomial of twist knots. As a consequence, we prove the volume conjecture for twist knot K_p with $p \geq 6$. This talk is based on the following two articles joint with Qingtao Chen: On the asymptotic expansions of various quantum invariants I, arXiv:2307.12963, On the asymptotic expansions of various quantum invariants II, arXiv:2307.13670.

时 间: 09:40—10:20

报告人: 雷力 (重庆师范大学)

题 目: Minimal submanifolds in spheres of codimension 2

摘 要: The famous Chern conjecture on minimal submanifolds states that for n -dimensional compact minimal submanifolds in the unit sphere with constant scalar curvature, the set of all possible values of the scalar curvatures is discrete. During the past four decades, there have been many important progress on Chern Conjecture. In this talk, we will review these results and discuss the gap phenomena for the scalar curvatures of Minimal submanifolds in spheres of codimension 2.

时 间: 10:40—11:20

报告人: 李娟 (浙江大学)

题 目: Codimension estimates for high codimension mean curvature flow in Riemannian manifolds

摘 要: We prove that compact solutions to the mean curvature flow in N^{n+d} , which initially satisfy the pinching condition $|A|^2 < a_n|H|^2 - b$, lead to the inequality $|\hat{A}|^2 \leq C|H|^{2-2\eta}$. Additionally, we demonstrate an important application of the codimension estimate: a convexity estimate.

1月15日 下午

时 间: 14:00—14:40

报告人: 黄轩宇 (浙江大学)

题 目: Large genus asymptotics for super ψ -intersection numbers

摘 要: In this talk, we will introduce a normalized super ψ -intersection numbers and then construct a random walk model to estimate its asymptotics. This strategy follows from Aggarwal (Invent. Math. 2021). We will also introduce some numeric properties and related conjectures.

时 间: 14:40—15:20

报告人: 熊亮懿 (浙江大学)

题 目: Shtuka with Bruhat-Tits building level structure

摘 要: B-T building usually can give a level structure on shtukas. I will quickly introduce shtukas and building, and try to "interpret" the Dennis-Stein symbol in level structure.

时 间: 15:40—16:20

报告人: 智艳辉 (浙江大学)

题 目: Rational polynomials of tautological intersection numbers with Theta class

摘 要: Adam Afandi discovered normal tautological intersection numbers are an integer-valued polynomials, and also correspond evaluations of Ehrhart polynomials of partial polytopal complexes. In this talk, we will show that the tautological intersection numbers with Theta class are also rational polynomials.