

2025年度浙大数学中心学术年会

时 间: 2026年1月22日
地 点: 数学中心407
腾讯会议: 846-535-773
密 码: 6768

1月22日上午

时 间: 09:20—10:00

报告人: 胡正宇 (重庆理工大学)

题 目: Minimal model theory for non-NQC generalized pairs

摘要: In this talk I will discuss my recent progress on minimal model theory for non-NQC generalized pairs. I will start with minimal model theory for usual pairs and related classical results, for example, an existence theorem from [Birkar-Hu14]. Next I will focus on the difference between the theory for non-NQC g-pairs and usual pairs/NQC g-pairs. Finally I will introduce a finiteness theorem and some related applications.

时 间: 10:00—10:40

报告人: 陆升 (浙江大学)

题 目: Bochner–Kodaira Formulas with Quadratic Curvature Terms: Weighted Extensions and Future Directions

摘要: We review the Weitzenböck–Bochner–Kodaira formulas with quadratic curvature terms introduced by Wang and Yang on compact Kähler manifolds. Using a weighted (Witten-type) $\bar{\partial}$ -Laplacian, we extend their framework to a weighted setting, obtaining a natural generalization of the main Bochner–Kodaira formula where the curvature operator is augmented by the $(1,1)$ -Hessian of the weight function. Possible applications and future directions will be briefly discussed.

时 间: 11:00—11:40

报告人: 纪正超 (中国计量大学)

题 目: Some Progress on the Dirichlet Eigenvalues of the Poly-Laplacian

摘要: In this talk, we will present several new results on Dirichlet eigenvalue problems. First, we establish a series of lower bound estimates for the higher-order eigenvalues of the poly-Laplacian operator on bounded Euclidean domains. Secondly, we derive the Kovářík–Vugalter–Weid type eigenvalue inequalities for the biharmonic operator acting on two-dimensional polygons. Finally, we report some new research results pertaining to the Pólya conjecture.

1月22日下午

时 间: 14:00—14:40

报告人: 智艳辉 (浙江大学)

题 目: From the BGW Tau-Function to the Hodge Tau-Function with the Θ Class

摘要: Liu and Guo established an explicit formula relating the Kontsevich-Witten tau-function and the Hodge tau-function via differential operators belonging to the $\widehat{GL}(\infty)$ group. In this talk, we present a generalization of their result. We derive a similar explicit differential-operator formula connecting the BGW tau-function $\exp(F_{\text{BGW}}(q))$ and the Hodge tau-function with Θ class $\exp(F_H^\Theta(u, q))$.

时 间: 14:40—15:20

报告人: 卢曜 (南昌大学)

题 目: Some rigidity theorems for Riemannian manifolds under lower bound conditions on the curvature operator of the second kind

摘要: I will give a brief survey of the most recent results that relate to the curvature operator and the curvature operator of the second kind. I will discuss some new rigidity theorems about Einstein manifolds and the curvature operator of the second kind. Furthermore, I will discuss some new findings about the curvature operator of the second kind on manifolds with harmonic curvature and harmonic Weyl curvature.

时 间: 15:40—16:20

报告人: 王斯怡 (浙江大学)

题 目: Rigidity of submanifolds in spheres

摘要: In this paper, we generalize the well-known Gauchman theorem for closed minimal submanifolds in a unit sphere, and give a geometrical classification for complete submanifolds with parallel mean curvature via an extrinsic geometrical quantity $\tau(x)$ defined by the second fundamental form. Inspired by the rigidity theorem, we prove a topological rigidity theorem for complete submanifolds in \mathbb{S}^{n+p} . Moreover, we obtain a structure pinching theorem for complete submanifolds in \mathbb{S}^{n+p} .

时 间: 16:20—17:00

报告人: 何呈超 (浙江大学)

题 目: Chern's conjecture in \mathbb{S}^5 and self-shrinker in \mathbb{R}^4

摘要: In this talk, I will report some results on the Chern's conjecture of minimal hypersurfaces with constant scalar curvature and self-shrinker. We will show that any closed minimal hypersurface M^4 in the 5-dimensional unit sphere \mathbb{S}^5 with constant scalar curvature and constant 3-th mean curvature must be isoparametric. And we completely classify 3-dimensional complete self-shrinkers with constant squared norm of the second fundamental form S and constant Gauss curvature K in the Euclidean space \mathbb{R}^4 . This talk is based on the joint works with Prof. Hongwei Xu and Prof. Entao Zhao.