

Jinmin Wang

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Research Interests.

K -theory, index theory and noncommutative geometry

Education.

2015–2020	Ph.D. of Mathematics, Fudan University
2011–2015	Bachelor of Mathematics, Fudan University

Positions.

2024–current	Assistant Professor, Institute of Mathematics, Chinese Academy of Sciences
2021–2024	Visiting Assistant Professor, Texas A&M University
2020–2021	Research Assistant, Fudan University

Publications.

- (with Z. Xie, B. Zhu, and X. Zhu) Positive Scalar Curvature Meets Ricci Limit Spaces, to appear in *Manuscripta Mathematica*
- (with Z. Xie) Scalar curvature rigidity of degenerate warped product spaces, to appear in *Transactions of the AMS*
- (with X. Chen, Z. Xie, and G. Yu) Delocalized eta invariants, cyclic cohomology and higher rho invariants, *Annals of K-Theory* 8-4 (2023), 531–608. DOI 10.2140/akt.2023.8.531
- (with Z. Xie and G. Yu) l^1 -higher index, l^1 -higher rho invariant and cyclic cohomology, *Cyclic Cohomology at 40: achievements and future prospects* (2021), 535-579.
- (with Z. Xie and G. Yu) Decay of scalar curvature on uniformly contractible manifolds with finite asymptotic dimension, *Communications on Pure and Applied Mathematics*, 77 (2024), no. 1, 372–440.

- (with Z. Xie and G. Yu) A proof of Gromov's cube inequality on scalar curvature, to appear in *Journal of Differential Geometry*.
- (with Z. Xie and G. Yu) Approximations of delocalized eta invariants by their finite analogues, *L'Enseignement mathématique*.
- (with H. Liu) On localized signature and higher rho invariant of fibered manifolds. *J. Noncommut. Geom.* 15 (2021), no. 3, pp. 919–949.

Preprints.

- (with Q. Ma, G. Yu and B. Zhu) Bounding the A-hat genus using scalar curvature lower bounds and isoperimetric constants, arXiv:2410.08866
- (with B. Zhu and Z. Wang) Scalar-mean rigidity theorem for compact manifolds with boundary, arXiv:2409.14503
- (with B. Zhu) Sharp bottom spectrum and scalar curvature rigidity, arXiv:2408.08245
- (with Z. Xie) Scalar curvature rigidity of spheres with subsets removed and L^∞ metrics, arXiv:2407.21312
- (with S. Cecchini, Z. Xie and B. Zhu) Scalar curvature rigidity of the four-dimensional sphere, arXiv:2402.12633.
- (with Z. Xie, G. Yu and B. Zhu) Filling Radius, Quantitative K -theory and Positive Scalar Curvature, arXiv:2311.15347.
- (with Z. Xie) Dihedral rigidity for submanifolds of warped product manifolds, arXiv:2303.13492.
- (with Z. Xie) Rigidity of strictly convex domains in Euclidean spaces, arXiv:2207.05731.
- (with Z. Xie) On Gromov's flat corner domination conjecture and Stoker's conjecture, arXiv:2203.09511.
- (with Z. Xie and G. Yu) On Gromov's dihedral extremality and rigidity conjectures, arXiv:2112.01510.

Invited Conference and Seminar Talks.

2024.

- Workshop on Non-Commutative Geometry and Higher Index Theory, University of Puerto Rico (April)
- SUMIRFAS, Texas A&M University (July)
- Texas Geometry and Topology Conference, Texas A&M University (November)

2023.

- Analysis seminar, University at Buffalo (November)
- Noncommutative Geometry Festival 2023, Washington University in St. Louis (June)
- Brazos Analysis Seminar, Texas A&M University (April)
- Global Noncommutative Geometry Seminar, America (March, online)
- Joint mathematics meeting, AMS Special Session on Riemannian Manifolds with Lower Scalar Curvature Bounds, Boston (January)

2022.

- Wabash mini workshop, University of Indiana (November)
- K-theory of operator algebras and its applications to geometry and topology, University of Puerto Rico (August)
- Young Mathematicians in Noncommutative Geometry and Analysis, Texas A&M University (August)
- Recent Advances on Scalar Curvature Problems, Simons Center, Stony Brook (June)
- Great Plains Operator Theory Symposium, Washington University in St. Louis (May)
- Spring 2022 Workshop on NCG and Geometric Analysis (April, online)
- Not Only Scalar Curvature Seminar (April, online)

2021.

- Global Noncommutative Geometry Seminar, Europe (December, online)

2020.

- Workshop on Noncommutative Geometry and Quantization, Sichuan University (November)

2019.

- National Conference on Operator Theory and Operator Algebra, Zhejiang University, Hangzhou (November)
- Special Week on Operator Algebras 2019, East China Normal University, Shanghai (June)
- Noncommutative Geometry Festival 2019, Washington University in St. Louis (April)

Teaching Experience.

2023 fall	Math 251, Calculus III
2023 spring	Math 323, Linear Algebra (for mathematics and science majors)
2022 fall	Math 251, Calculus III
2022 spring	Math 304, Linear Algebra (for engineering majors)
2021 fall	Math 251, Calculus III