

# 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.

2021–current | Visiting Assistant Professor, Texas A&M University

2020–2021 | Research Assistant, Fudan University

## Publications.

- (with X. Chen, Z. Xie, and G. Yu), Delocalized eta invariants, cyclic cohomology and higher rho invariants, to appear in *Annals of K-theory*
- (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*, published online.
- (with Z. Xie and G. Yu) Approximations of delocalized eta invariants by their finite analogues, to appear in *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 Z. Xie) Scalar curvature rigidity of degenerate warped product spaces, arXiv:2306.05413.
- (with Z. Xie) Dihedral rigidity for submanifolds of warped product manifolds, arXiv:2303.13492.
- (with Z. Xie, B. Zhu, and X. Zhu) Positive Scalar Curvature Meets Ricci Limit Spaces, arXiv:2212.10416.
- (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.
- (with Z. Xie and G. Yu) A proof of Gromov's cube inequality on scalar curvature, arXiv:2105.12054.

**Invited Conference and Seminar Talks.***2023.*

- 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