

# Minghao Miao

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## Research Interests

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Complex Geometry, Algebraic Geometry. Currently, I am applying K-stability theory to questions about Kähler-Ricci Flow and Kähler-Ricci soliton on Fano varieties.

## Education

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**Nanjing University** September 2021 – Present  
*Ph.D. Candidate in Mathematics, Department of Mathematics*  
Thesis Advisor: Professor Gang Tian  
*Nanjing, Jiangsu, China*

**Nanjing University** September 2017 – July 2021  
*B.S. in Mathematics, Kuang Yaming Honors School*  
*Nanjing, Jiangsu, China*

## Experience

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**Beijing International Center for Mathematical Research (BICMR)** September, 2021 – Present  
*Visitor*  
*Beijing, China*

**Rutgers University - New Burnswick** May, 2025 – October, 2025  
*Visiting Scholar*  
*Piscataway, NJ, USA*

**Duke University** August, 2019 – December, 2019  
*Visiting International Student Program*  
*Durham, NC, USA*

## Publications and Preprints

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**On the volume of K-semistable Fano manifolds**

*Joint work with Chi Li, arXiv:2506.17420*

**Optimal Degenerations of K-unstable Fano threefolds**

*Joint work with Linsheng Wang, arXiv:2401.13999*

**Kähler-Ricci solitons on Fano threefolds with non-trivial moduli**

*Joint work with Linsheng Wang, Math. Ann. 392 (2025), no. 3, 4483–4523.*

**A Note On Kähler-Ricci Flow on Fano Threefolds**

*Joint work with Gang Tian, Peking Math. J. 8 (2025), no. 1, 191–199.*

## Research Talks

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*The Volume of K-Semistable Fano Manifolds*, Mathematics Colloquium, Rutgers University-Newark, 09/2025.

*Optimal Degenerations of K-unstable Fano Threefolds*, Tianyuan Mathematical Center in Southeast China, Xiamen University, 04/2025.

*Optimal Degenerations of K-unstable Fano Threefolds*, Algebraic Geometry Seminar, East China Normal University, 11/2024.

*Optimal Degenerations of K-unstable Fano Threefolds*, Geometry Seminar, Tsinghua University, 03/2024.

*Optimal Degenerations of K-unstable Fano Threefolds*, Complex Analysis and Geometry Seminar, Rutgers University-New Brunswick, 02/2024.

*Kähler-Ricci soliton and weighted Abban-Zhuang Estimate*, Geometric Analysis Seminar, Westlake University, 12/2023.

*Kähler-Ricci soliton and weighted Abban-Zhuang Estimate*, Recent Progress on Analytic Minimal Model Program, Tianyuan Mathematics Research Center, 10/2023.

*Kähler-Ricci Flow on Fano Threefolds*, National Workshop on Geometric Analysis, Xinjiang Normal University, 06/2023.

*Kähler-Ricci Flow on Fano Threefolds*, Geometric Analysis Seminar, Westlake University, 12/2022.

#### *Teaching Experience*

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**Teaching Assistant: Calculus I**

*Nanjing University*

*Fall 2025*

**Teaching Assistant: Calculus I**

*Nanjing University*

*Fall 2024*

#### *Reference Professor*

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- Supervisor: Prof. **Gang Tian**, email: [gtian@math.pku.edu.cn](mailto:gtian@math.pku.edu.cn)