

Bingyi Chen

Yau Mathematical Sciences Center
Tsinghua University, 100084 Beijing, China
Email: bychen@mail.tsinghua.edu.cn

RESEARCH INTERESTS

Algebraic geometry, birational geometry, singularity theory. In particular, boundedness results in birational geometry, the moduli theory of varieties of general type and of non-negative Kodaira dimension, applications of the theory of mixed Hodge modules.

EXPERIENCE

Tsinghua University

Sep. 2021 -

- Postdoc
- Mentor: Caucher Birkar

Tsinghua University

Aug. 2016 - Jul. 2021

- Ph.D. Candidate in Pure Mathematics
- Advisor: Stephen Shing-Toung Yau

Northwestern University

Oct. 2019 - Mar. 2020

- Visiting student at Department of Mathematics
- Mentor: Mihnea Popa

Tsinghua University

Sep. 2012 - Jun. 2016

- B.S. in Mathematics

PUBLICATIONS

11. Explicit bound for singularities on toric fibrations, preprint 2023, arXiv:2311.00985.
10. Vanishing theorems for generalized pairs (with Jihao Liu and Lingyao Xie), preprint 2023, arXiv:2305.12337.
9. Explicit bound for singularities on the base of a Fano type fibration of relative dimension one, preprint 2022, arXiv:2210.08469.
8. Upper bound of discrepancies of divisors computing minimal log discrepancies on surfaces, preprint 2020, arXiv:2009.03613.
7. Vanishing for Hodge ideals of \mathbb{Q} -divisors, *Int. Math. Res. Notices* **2023** (2023), no.1, 185-209.
6. Bergman functions and the equivalence problem of singular domains (with Stephen Yau), to appear in *Commun. Anal. Geom.*, 2021.
5. Variation of complex structures and variation of Lie algebras II: new Lie algebras arising from singularities (with Stephen Yau, Naveed Hussain and Huaqing Zuo), *J. Diff. Geom.* **115** (2020), no. 3, 437-473.
4. The nonexistence of negative weight derivations on positive dimensional isolated singularities: Generalized Wahl conjecture (with Hao Chen, Stephen Yau and Huaqing Zuo), *J. Diff. Geom.* **115** (2020), no. 2, 195-224.

3. 4d $\mathcal{N} = 2$ SCFT and singularity theory part IV: Isolated rational Gorenstein non-complete intersection singularities with at least one-dimensional deformation and nontrivial T^2 (with Shing-Tung Yau, Stephen Yau and Huaqing Zuo), *Math. Res. Lett.* **28** (2021), no. 1, 1-23.
2. 4d $\mathcal{N} = 2$ SCFT and singularity theory Part III: Rigid singularity (with Dan Xie, Shing-Tung Yau, Stephen Yau and Huaqing Zuo), *Adv. Theor. Math. Phys.* **22** (2018), no. 8, 1885-1905.
1. 4d $\mathcal{N} = 2$ SCFT and singularity theory Part II: complete intersection (with Dan Xie, Shing-Tung Yau, Stephen Yau and Huaqing Zuo), *Adv. Theor. Math. Phys.* **21** (2017), no. 1, 121-145.

HONORS & AWARDS

- Gold Medal of Doctor Thesis for ICCM Best Thesis Award	2022
- China National Scholarship	2020
- Excellent Postgraduate Award, Yau Mathematical Sciences Center	2018
- China National Scholarship	2018
- Silver Award for ICCM Best Paper Award	2017
- Gold Medal of Bachelor Thesis for ICCM Best Thesis Award	2017