Jia Jia

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Research fields

Algebraic Geometry, Birational Geometry

Education

2014 - 2018   BSc (Honours) - Zhejiang University, School of Mathematical Sciences
                  and Chu Kochen Honors College, Thesis advisor: Fei Yu

2018 - 2023   PhD - National University of Singapore, Department of Mathematics
                  Supervisor: De-Qi Zhang

Employment

2022 - 2023   *Student Researcher* - National University of Singapore, Singapore
                  Department of Mathematics
                  Supervisor: De-Qi Zhang

June 2023 -   *Postdoctoral Research Fellow* - Tsinghua University, People's Republic of China
                  Yau Mathematical Sciences Center
                  Mentor: Caucher Birkar

Honours, Awards & Grants

July 2023   China Postdoctoral Science Foundation (special program)

June 2023   Shuimu Tsinghua Scholar Program, Tsinghua University

Oct 2022   PhD Conference Award, Faculty of Science, National University of Singapore,

2018–2022   President's Graduate Scholarship, National University of Singapore

Nov 2017   National Scholarship, Ministry of Education of the People's Republic of China

Publications

Accepted articles

1. Equivariant Kähler model for Fujiki's class (with S. Meng), Journal of Geometric Analysis, accepted, arXiv:2108.11595

2. Smooth projective surfaces with pseudo-effective tangent bundles, Journal of the Mathematical Society of Japan, Advance Publication 1-28 (June, 2024) (with Y. Lee and G. Zhong) arXiv:2302.10077

3. Wild automorphisms of compact complex spaces of lower dimensions Proceedings of the American Mathematical Society, Volume 151, Number 12, 5117–5137 (2023) (with L. Wang) link

4. Automorphisms groups of compact complex surfaces: T-Jordan property, Tits alternative and solvability, Journal of Geometric Analysis, **33**, Article number: 219 (2023), link

5. Surjective endomorphisms of projective surfaces: the existence of infinitely many dense orbits, Mathematische Zeitschrift **303**, Article number: 39 (2023) (with J. Xie and D.-Q. Zhang) link

6. Endomorphisms of quasi-projective varieties – towards Zariski dense orbit and Kawaguchi-Silverman conjectures, Mathematical Research Letters (to appear) (with T. Shibata, J. Xie and D.-Q. Zhang) [arXiv: 2104.05339](arXiv)

7. Amplified endomorphisms of Fano fourfolds, manuscripta mathematica (2022) (with G. Zhong) link

8. Potential density of projective varieties having an int-amplified endomorphism, New York J. Math. **28** (2022) 433-444. (with T. Shibata and D.-Q. Zhang) [pdf](pdf)

Preprints

1. Sheaf stable pairs, Quot-schemes, and birational geometry (with C. Birkar and A. Sheshmani) [arxiv: 2406.00230](arxiv)

2. Moishezon manifolds with no nef and big classes (with S00230. Meng) [arXiv:2208.12013](arXiv)

Seminar Talks

- Surjective Endomorphisms of Projective Surfaces, Algebraic Dynamics Seminar, Korea Institute for Advanced Study, 15 July 2020

- Surjective Endomorphisms of Projective Surfaces, Topology and Geometry Seminar, National University of Singapore, 21 Oct. 2020

- Surjective Endomorphisms of Affine and Projective Surfaces, Seminar of Algebraic Geometry in East Asia, 3 Sept. 2021

- Potential density of projective varieties, Topology and Geometry Seminar, National University of Singapore, 12 Jan. 2022

- Automorphisms Groups of Compact Complex Surfaces, Workshop: Recent Development in Algebraic Geometry, National University of Singapore, 30 Aug. 2022

- Smooth projective surfaces with pseudo-effective tangent bundles, Conference on Algebraic Geometry and Number Theory, East China Normal University, Shanghai, 23 Sept. 2023

- Positivity of the Tangent Bundle of Smooth Projective Surfaces, Algebraic Geometry Seminar, Tsinghua University, 24 Nov. 2023

- Wild automorphisms of compact complex spaces, BIMSA-YMSC Geometry and Dynamics Seminar, 6 Dec. 2023

- Equivariant Kähler model for Fujiki's class $\mathcal{C}$, Workshop on Algebraic Geometry, Tsinghua Sanya International Mathematics Forum (TSIMF), Sanya, 23 Dec. 2023

- Sheaf Stable Pairs and Birational Geometry, Geometry and Moduli, Zhejiang University, 4 July 2024

Conference

Co-organized with others

- [Recent Development in Algebraic Geometry](link), Jointly organised by Jia Jia, Wing-Keung To and De-Qi Zhang, Tuesday 30 Aug 2022

Attended

- Conference on Complex Analysis, Complex Geometry and Dynamics (in memory of Nessim Sibony), Laboratoire de Mathématiques d'Orsay, Université Paris-Saclay, France, 5 – 9 Dec 2022

- ICBS Satellite Conference on Algebraic and Arithmetic Geometry, Tsinghua University and BIMSA, Beijing, 12 – 14 July 2023

- International Congress of Basic Science, Beijing, 17 – 28 July 2023

- Recent Developments in Algebraic Geometry, Arithmetic and Dynamics Part 2, IMS, National University of Singapore, Singapore, 14 – 25 August 2023

- Conference on Algebraic Geometry and Number Theory, East China Normal University, Shanghai, 22 – 23 September 2023

- Workshop on algebraic geometry, Tsinghua Sanya International Mathematics Forum, Hainan, 22 – 26 December 2023

- Geometry and Moduli, Zhejiang University, Hangzhou, 1 – 5 July 2024

Teaching Experience

- Fall 2019, Basic Applied Mathematics for Sciences (Tutor)

- Spring 2020, Multivariable Calculus (Tutor)

- Fall 2020, Basic Discrete Mathematics (Tutor)

Skills

Languages	Programming	Software
Chinese - mother tone	Lua	git - source version control
English - fluent	Python	Neovim
	Swift/SwiftUI	TeX

References

Caucher Birkar (Mentor at YMSC)
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De-Qi Zhang (supervisor)
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