

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, *Journal of Geometric Analysis*, **34**, Article number 349 (2024), (with S. Meng), [link](#)
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](#)
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](#)

Preprints

1. Sheaf stable pairs, Quot-schemes, and birational geometry (with C. Birkar and A. Sheshmani) [arxiv:2406.00230](#)
2. Moishezon manifolds with no nef and big classes (with S00230. Meng) [arXiv:2208.12013](#)

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](#), 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

Chinese - mother tone
English - fluent

Programming

Lua
Python
Swift/SwiftUI

Software

git - source version control
Neovim
T_EX

References

[Caucher Birkar](#) (Mentor at YMSC)
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[Keiji Oguiso](#)
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[De-Qi Zhang](#) (supervisor)
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