

# Jia Jia

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## Research fields

Algebraic Geometry, Birational Geometry

## Education

**2014 - 2018** BSc (Honours) - [Zhejiang University](#), Hangzhou  
[School of Mathematical Sciences](#), and [Chu Kochen Honors College](#)  
Thesis advisor: [Fei Yu](#)  
**2018 - 2023** PhD - [National University of Singapore](#), 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. Smooth projective surfaces with pseudo-effective tangent bundles, Journal of the Mathematical Society of Japan (to appear) (with Y. Lee and G. Zhong)  
[arXiv:2302.10077](https://arxiv.org/abs/2302.10077)

2. 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](#)
3. Automorphisms groups of compact complex surfaces: T-Jordan property, Tits alternative and solvability, The Journal of Geometric Analysis, **33**, Article number: 219 (2023), [link](#)
4. 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](#)
5. 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](#)
6. Amplified endomorphisms of Fano fourfolds, manuscripta mathematica (2022) (with G. Zhong) [link](#)
7. 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](#)
3. Equivariant Kähler model for Fujiki's class (with S. Meng) [arXiv:2108.11595](#)

## Seminar Talks

- Surjective Endomorphisms of Projective Surfaces, Algebraic Dynamics Seminar, Korea Institute for Advanced Study, 15 July 2020
- Surjective Endomorphisms of Projective Surfaces, Topology & 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 & 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 August 2022

## 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 Dec 2022 – 9 Dec 2022,

## 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<sub>E</sub>X

## References

[Caucher Birkar](#) (Mentor at YMSC)  
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[Keiji Ogiso](#)  
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