Fei Ye

Associate Professor in Mathematics

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Education

2006 - 2011	**Ph.D. in Mathematics** *University of Illinois at Chicago*	Chicago, USA
2002 - 2010	**Ph.D. in Mathematics** *East China Normal University*	Shanghai, China
1998 - 2002	**B.S. in Mathematics and Mathematics Education** *Guangzhou University*	Guangzhou, China

Academic Experience

2022 - Present	**Associate Professor** *Queensborough Community College of CUNY*	Dept. of Math. and Comp. Sci. New York, USA
2015 - 2022	**Assistant Professor** *Queensborough Community College of CUNY*	Dept. of Math. and Comp. Sci. New York, USA
2012 - 2015	**IMR Postdoc Fellow** *The University of Hong Kong*	Department of Mathematics Hong Kong
2012 - 2015	**ENI Postdoc Fellow** *Bar-Ilan University*	Emmy Noether Research Institute for Mathematics Israel

Research Interests

Algebraic Geometry, Complex Geometry, Commutative Algebra

Papers

Accepted/Published

1. A Computational Perspective of Higher Jacobian Matrices. (with Tabitha Ramirez and Hao Shen), Involve, a Journal of Mathematics (Accepted), May, 2024.

2. Left-invariant Hermitian connections on Lie groups with almost Hermitian structures. (with David Pham), Glasnik Matematicki Series III, To appear, 2024.

3. Symplectic Lie groups and Double Geometry. (with David Pham) Acta Mathematica Universitatis Comenianae, 91(2), 161-190, 2022

4. On Fujita's Freeness Conjecture in Dimension 5. (with Zhixian Zhu), Advances in Mathematics, Vol.371 1-56, 2020.

5. Sakai's theorem for $\mathbb{Q}$-divisors on surfaces and applications. (with Tong Zhang and Zhixian Zhu), Asian Journal of Mathematics, Vol. 22 (4), 761-786, 2018

6. Global Generation of Adjoint Line Bundles on Projective 5-folds (with Zhixian Zhu), Manuscripta Mathematica, Vol. 153 (3-4), 545-562, 2017.

7. On Lower Bounds of Slopes of Totally Ramified Triple Cover Fibrations, (with Pan Liu and Jun Lu), Asian Journal of Mathematics, Vol. 21 (5), 981 – 994, 2017.

8. Combinatorial symmetry of line arrangements and applications (with Meirav Amram, Moshe Cohen, Hao Sun, Mina Teicher, Anna Zarkh), Topology and Its Applications, Vol. 193, 226-247, 2015.

9. Several Splitting Criteria for Vector Bundles and Reflexive Sheaves (with Stephen S.T. Yau), Pacific Journal of Mathematics, Vol.266 (2), 449-456, 2013.

10. Classification of Moduli Spaces of Arrangements of 10 Projective Lines with a Quadruple point (with Meirav Amram and Mina Teicher), Advances in Applied Mathematics Vol. 51, 392-418, 2013.

11. Classification of Moduli Spaces of Arrangements of 9 Projective Lines, Pacific Journal of Mathematics, Vol.265 (1), 243-256, 2013.

12. A Note on The Topology of The Complements of Fiber-type Line Arrangements in $\mathbb{CP}^2$ (with Sheng-Li Tan and Stephen S.T. Yau), Pacific Journal of Mathematics, Vol. 251 (1), 207-218, 2011.

13. Diffeomorphic Types of Complements of Nice Arrangements in $\mathbb{CP}^l$ (with Stephen S.T. Yau), Science in China, Series A: Mathematics, Vol. 52 (12), 2774-2791, 2009.

Preprints

1. Left Invariant Complex Structures on Double Lie Groups. (with David Pham), 2020.

2. Moduli Spaces of Ten-line Arrangements with Double and Triple Points (with Meirav Amram, Moshe Cohen and Mina Teicher), arXiv:1306.6105, 2013.

Selected Presentations

Academic

1. Lectures on Hodge Theory and Complex Algebraic Geometry, Study Group on Hodge Theory and Complex Algebraic Geometr, CUNY Graduate Center, New York City, Fall 2017 - Spring 2019.

2. Introduction to D-modules, Commutative Algebra and Algebraic Geometry seminar, CUNY Graduate Center, New York City, March 15, 2019.

3. A Very Brief Introduction to the Hodge Conjecture, mini-workshop at LaGuardia Community College, October 24, 2018.

4. Higher Syzygies on Abelian Threefolds, Workshop on Complex Geometry, University of Hong Kong, Hong Kong, July 20, 2018

5. Application of Multiplier Ideals to Geometry and Algebra of Adjoint Line Bundles, Dynamic System and Algebraic Geometry Workshop, Zhejiang University, Hangzhou, China, January 1, 2018

6. Multiplier Ideals and Applications to Adjoint Line Bundles, Commutative Algebra & Algebraic Geometry Seminar, CUNY Graduate Center, New York City, October 20, 2017.

7. A characterization of big Q-divisors on surfaces and its applications, Commutative Algebra & Algebraic Geometry Seminar, CUNY Graduate Center, New York City, March 3, 2017.

8. Fujita's Freeness Conjecture on 5-folds, Workshop on Complex Geometry, University of Hong Kong, Hong Kong, July 23, 2015.

Educational

1. Introduced Bookdown for Ebook Creation, Brownbag Seminar organized by the College eLearning Committee of QCC, November 27, 2019.

2. Rmarkdown and Other Productivity Tools for Math Teachers, Math and CS Departmental Colloquium at QCC, October 23, 2019.

3. How to Use LaTeX, a Professional Development Workshop at QCC, Fall 2017.

Grant Awards

2024	PSC-CUNY Research Award Cycle 55
2020	PSC-CUNY Research Award Cycle 52, coPI (with David Pham)
2019	PSC-CUNY Research Award Cycle 50
2018	PSC-CUNY Research Award Cycle 49
2018	Recruitment and Mentoring in Mathematics Program (NSF), Senior Personnel
2017	PSC-CUNY Research Award Cycle 48
2016	PSC-CUNY Research Award Cycle 47
2015	HKU Small Project Fund

Academic Services

Seminars and Workshops

Fall 2020 - Present	**Commutative Algebra and Algebraic Geometry** *CUNY Graduate Center* co-organized with Professors Hans Schoutens and Laura Ghezzi
Fall 2021	**Symplectic Geometry Study Group** *CUNY Graduate Center* co-organized with Professors Bart Van Steirteghem and David Pham
2020	**Study Group on Symplectic and Kähler Manifolds** *CUNY Graduate Center* co-organized with Professors Bart Van Steirteghem and David Pham
Fall 2017 - Spring 2019	**Study Group on Hodge Theory and Complex Algebraic Geometry** *CUNY Graduate Center* co-organized with Professor Bart Van Steirteghem
Fall 2020 - Present	**Department Colloquium** *QCC-CUNY Mathematics and Computer Science*

	co-organized with Colleagues
Fall 2018 - Spring 2019	**Department Colloquium** *QCC-CUNY Mathematics and Computer Science* co-organized with Colleagues
July 20-22, 2015	**Workshop on Complex Geometry** *University of Hong Kong* co-organized with Professor Ngaiming Mok
January 22, 2015	**Mini Workshop on Algebraic Geometry** *University of Hong Kong* co-organized with Professor Ngaiming Mok
2011-2012	**Emmy Noether Seminar / Geometry Seminar** *Bar-Ilan University* co-organized with Dr. Moshe Cohen and Professor Mina Teicher
Spring 2012	**Emmy Noether Institute Graduate Seminar** *Bar-Ilan University* co-organized with Dr. Moshe Cohen, Professor Mina Teacher and Ms.Anna Zarkh

Mathematical Reviewing

2012 - Present	Reviewer for Zentralblatt MATH
2011 - Present	Reviewer for Mathematical Reviews
2021	Reviewer for PSC-CUNY Research Grants
2018	Reviewer for CUNY Community College Research Grant
2017	Reviewer for CUNY Summer Collaborative Research Opportunity Grant

Mentorship

Summer 2023	RAMMP Summer Research Program Mentor
Spring 2020	UR (Undergraduate Research) Mentor
Fall 2019, Spring 2018	ASAP Mentor

Administrative Service

College Committees

2024 - Present	Assessement and Institute Effectiveness Committee
2021 - 2024	eLearnig committee
2018 - 2020	Course and Standing *Chaired in the academic year 2019-2020*

Department Committees

2023 - Present	Department P&B *Department Elected member*
2020 - Present	Internal Grant Steering

2019 - 2022	Curriculum *Department Elected member*
2018 - 2020	Webmaster
2017 - 2018	Technology and E-Resources *Secretary*
2017 - present	WebWork *Administrator*
2015 - 2018, 2020 - present	Professional Development (Department Colloquium) *Chaired in the academic year 2016 - 2017*

Teaching

Certificates

- ACUE Effective Teaching Practices (May, 2024)
- Applying the QM Rubric to Online Courses (Summer 2022)
- ACUE Effective Online Teaching Practices (Fall 2021)
- ACUE Promoting Active Learning Online (Spring 2021)

Selected OER Creations

- A concise workbook on college algebra (https://academicworks.cuny.edu/qb_oers/45/)
- Notes on Maple for Calculus I and II (https://maple4calc.yfei.page/)
- Selected Exercises in Calculus I and II (https://ex4calc.yfei.page/)
- More can be found on my teaching website: https://fyteach.github.io

Courses Taught

- Linear Algebra, Differential Equations, Calculus I and II, Recalculus, **QCC-CUNY**
- Statistics, College Algebra, **QCC-CUNY**
- Algorithmic Problem-Solving with C++, **QCC-CUNY**
- Analysis II: Calculus on Manifolds, **University of Hong Kong**
- Complex Manifolds, **University of Hong Kong**
- Algebraic Surfaces, **University of Hong Kong**