

# Jun-Yong Park

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## CONTACT INFORMATION

School of Mathematics and Statistics  
The University of Sydney  
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## RESEARCH INTERESTS

Arithmetic theory of algebraic varieties, moduli spaces with connections to number theory.  
Geometry of rational points on stacks and counting families of varieties over function fields.

## ACADEMIC POSITIONS

### The University of Sydney, New South Wales, Australia

Lecturer, 2024 Fall - Present

### The University of Melbourne, Victoria, Australia

Research Fellow, 2022 Fall - 2024 Spring

### Max Planck Institute for Mathematics, Bonn, Germany

Postdoctoral Fellow, 2021 Fall - 2022 Spring

### IBS Center for Geometry and Physics, Pohang, South Korea

Senior Research Fellow / Military Service, 2018 Fall - 2021 Spring

## EDUCATION

### University of Minnesota, Twin Cities

Ph.D. in Mathematics, 2012 Fall - 2018 Spring  
Advisor: Craig Westerland

M.Sc. in Mathematics, 2016 Spring

B.Sc. in Mathematics, 2008 Fall - 2011 Fall

### Pennsylvania State University

Mathematics Advanced Study Semester, 2009 Fall

### Independent University of Moscow

Mathematics in Moscow, 2010 Spring

### Brown University

Visiting student hosted by Thomas Goodwillie, 2018 Spring

## SUBMITTED ARTICLES

1. *Counting isomorphism classes of elliptic curves over  $\mathbb{F}_q(t)$*   
arXiv:2507.06754.
2. *100% of elliptic curves with a marked point have positive rank*  
arXiv:2504.01965. (with Tristan Phillips)
3. *Height moduli on cyclotomic stacks and counting elliptic curves over function fields*  
arXiv:2210.04450. (with Dori Bejleri and Matthew Satriano)
4. *Étale cohomological stability of the moduli space of stable elliptic surfaces*  
arXiv:2207.02496. (with Oishee Banerjee and Johannes Schmitt)

## PUBLISHED ARTICLES

5. *Arithmetic geometry of the moduli stack of Weierstrass fibrations over  $\mathbb{P}^1$*   
Mathematische Zeitschrift, **310**, No. 4 : #84 (2025) (with Johannes Schmitt)

6. *Enumerating odd-degree hyperelliptic curves and abelian surfaces over  $\mathbb{P}^1$*   
Mathematische Zeitschrift, **304**, No. 1 : #5 (2023) (with Changho Han)
7. *Motive of the moduli stack of rational curves on a weighted projective stack*  
Research in the Mathematical Sciences, **8**, No. 1 : #1 (2021) (with Hunter Spink)  
Special issue of PIMS 2019 Workshop on Arithmetic Topology
8. *Arithmetic of the moduli of semistable elliptic surfaces*  
Mathematische Annalen, **375**, No. 3-4 : 1745-1760 (2019) (with Changho Han)
9. *Unique fiber sum decomposability of genus 2 Lefschetz fibrations*  
Topology and its Applications, **222** : 29-52 (2017)
10. *Lantern substitution and new symplectic 4-manifolds with  $b_2^+ = 3$*   
Mathematical Research Letters, **21**, No. 1 : 1-17 (2014) (with Anar Akhmedov)

POSTGRADUATE SUPERVISION	Oscar Rochanakij, <i>Motivic classes of the moduli space of maps from <math>\mathbb{P}^1</math> to Grassmannian varieties</i> , Master of Science, University of Melbourne, jointly supervised with Yaping Yang and Arun Ram; Nominated for the 2024 Best MSc Thesis Prize.
INSTRUCTOR	<p>Math 3061: <i>Geometry &amp; Topology</i> (University of Sydney Fall 2025)</p> <p>Math 1062/1023: <i>Multivariable Calculus and Modelling</i> (University of Sydney Spring 2025)</p> <p>Topics in NT: <i>Totality of rational points on moduli stacks - Counting families of varieties</i> (Korea Institute for Advanced Study (KIAS) Winter School on Number Theory January 2025)</p> <p>Math 1004: <i>Discrete Mathematics</i> (University of Sydney Fall 2024)</p> <p>Topics in AG: <i>Elliptic Surfaces - Classical to Moduli</i> (University of Melbourne Spring 2023)</p>
CO-ORGANIZATION SERVICES	<p>Moduli Retreat: Point Counts of Moduli Stacks via Motives and Cohomology, December 2025</p> <p>Spaces, Functions and Numbers Seminar, The University of Sydney, 2025 Spring - Present</p> <p>Pure Mathematics Seminar, The University of Melbourne, 2023 Spring - 2024 Spring</p> <p>Pohang Mathematics Workshop, Maison Glad Jeju Island, South Korea, December 5–8, 2019</p>
CONFERENCE TALKS	<p>Summer Research Institute in Algebraic Geometry, Colorado State University, July 2025</p> <p>Teichmüller Theory and Flat Structures, MATRIX, Melboune, March 2025</p> <p>Fourth W. Killing and K. Weierstrass Colloquium, University of Gdańsk, Poland, July 2022</p> <p>Invariants in Algebraic Geometry, Institut de Mathématiques de Bourgogne, Dijon, May 2022</p> <p>Inaugural France-Korea Conference in Algebraic Geometry, Number Theory and Partial Differential Equations, Institut de Mathématiques de Bordeaux, November 2019</p>
SEMINAR TALKS	<p>Pure Mathematics Seminar, The University of Melbourne, May 2024</p> <p>Harvard / MIT Algebraic Geometry Seminar, Harvard University, April 2023</p> <p>Geometry &amp; Topology Seminar, University of Waterloo, April 2023</p> <p>Topology Seminar, University of Southern California, April 2023</p> <p>Algebra and Topology Seminar, Australian National University, November 2022</p> <p>Number Theory Seminar, Seoul National University, September 2022</p> <p>Algebra, Geometry &amp; Physics, Humboldt-Universität zu Berlin, April 2022</p> <p>Number Theory Lunch Seminar, Max Planck Institute for Mathematics, September 2021</p> <p>Algebraic Geometry Seminar, Korea Institute for Advanced Study, July 2021</p> <p>Harvard / MIT Algebraic Geometry Seminar, MIT, April 2018</p> <p>Algebra and Algebraic Geometry Seminars, Brown University, April 2017</p>