

Jun-Yong Park

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. *Height moduli on cyclotomic stacks and counting elliptic curves over function fields*
arXiv:2210.04450. (with Dori Bejleri and Matthew Satriano)
2. *Étale cohomological stability of the moduli space of stable elliptic surfaces*
arXiv:2207.02496. (with Oishee Banerjee and Johannes Schmitt)
3. *Arithmetic geometry of the moduli stack of Weierstrass fibrations over \mathbb{P}^1*
arXiv:2107.12231. (with Johannes Schmitt)

PUBLISHED ARTICLES

4. *Enumerating odd-degree hyperelliptic curves and abelian surfaces over \mathbb{P}^1*
Mathematische Zeitschrift, **304**, No. 1 : #5 (2023) (with Changho Han)
5. *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
6. *Arithmetic of the moduli of semistable elliptic surfaces*
Mathematische Annalen, **375**, No. 3-4 : 1745-1760 (2019) (with Changho Han)

7. *Unique fiber sum decomposability of genus 2 Lefschetz fibrations*
Topology and its Applications, **222** : 29-52 (2017)
8. *Lantern substitution and new symplectic 4-manifolds with $b_2^+ = 3$*
Mathematical Research Letters, **21**, No. 1 : 1-17 (2014) (with Anar Akhmedov)

AWARDS	<p>Andrew Sisson Support Package Award, The University of Melbourne, 2022</p> <p>Postdoctoral Researcher Fellowship, Max Planck Society, 2021 - 2022</p> <p>Senior Researcher Fellowship, Institute for Basic Science, 2018 - 2021</p>
POSTGRADUATE SUPERVISION	<p>Oscar Rochanakij, <i>Motivic classes of the moduli space of maps from \mathbb{P}^1 to Grassmannian varieties</i>, Master of Science, University of Melbourne, jointly supervised with Yaping Yang and Arun Ram; Currently nominated for the 2024 Best MSc Thesis Prize.</p>
INSTRUCTOR	<p>Topics in NT: <i>Totality of Rational Points on Moduli Stacks</i> (KIAS Winter School 2024)</p> <p>Topics in AG: <i>Elliptic Surfaces - Classical to Moduli</i> (University of Melbourne Spring 2023)</p> <p>Lecture Series: <i>Arithmetic of the moduli of fibered algebraic surfaces with heuristics for counting curves over global fields</i> (IBS Center for Geometry and Physics Fall 2018)</p> <p>Multivariable Calculus (University of Minnesota Summer 2014)</p>
CO-ORGANIZATION SERVICES	<p>Informal Friday Seminar, The University of Sydney, 2024 Fall - 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>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>KMS Annual Meeting – Trends in Arithmetic Geometry, Online, October 2021</p> <p>KMS Spring Meeting – Number Theory and Arithmetic, Online, July 2020</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 & Topology Seminar, University of Waterloo, April 2023</p> <p>Topology Seminar, University of Southern California, April 2023</p> <p>Number Theory and Algebraic Geometry Seminar, Simon Fraser University, January 2023</p> <p>Algebra and Topology Seminar, Australian National University, November 2022</p> <p>Arithmetic Algebraic Geometry Seminar, The University of Melbourne, November 2022</p> <p>Number Theory Seminar, Seoul National University, September 2022</p> <p>Algebra, Geometry & Physics, Humboldt-Universität zu Berlin, April 2022</p> <p>Topology Seminar, Max Planck Institute for Mathematics, November 2021</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>Algebraic Geometry Seminar, IBS Center for Geometry and Physics, August 2020</p> <p>Harvard / MIT Algebraic Geometry Seminar, MIT, April 2018</p> <p>Algebra and Algebraic Geometry Seminars, Brown University, April 2017</p>