

## Jun-Yong Park

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### CONTACT INFORMATION

Max-Planck-Institut für Mathematik  
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### RESEARCH INTERESTS

Arithmetic and Algebraic Geometry: motive/point count of moduli stack of fibrations, fibred algebraic surfaces and their moduli, enumerating curves and abelian varieties over global fields.

### ACADEMIC POSITIONS

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

Postdoctoral Fellow, 2021 Fall - Present

**IBS Center for Geometry and Physics, POSTECH, Pohang, South Korea**

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

### ARTICLES IN PREPARATION

*Arithmetic of the moduli of unstable elliptic surfaces*

*Appendix: Counting elliptic curves with prescribed structures*

### SUBMITTED ARTICLES

*Arithmetic geometry of the moduli stack of Weierstrass fibrations over  $\mathbb{P}^1$*

Submitted, arXiv:2107.12231. (with Johannes Schmitt)

*Enumerating hyperelliptic curves and abelian surfaces over  $\mathbb{P}^1$  with lower order terms*

Submitted, arXiv:2002.00563. (with Changho Han)

*Arithmetic topology of the moduli stacks of stable elliptic fibrations*

Submitted, arXiv:1812.11694.

### PUBLISHED ARTICLES

*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

*Arithmetic of the moduli of semistable elliptic surfaces*

Mathematische Annalen, **375**, No. 3-4 : 1745-1760 (2019) (with Changho Han),

*Unique fiber sum decomposability of genus 2 Lefschetz fibrations*  
Topology and its Applications, **222** : 29-52 (2017)

*Lantern substitution and new symplectic 4-manifolds with  $b_2^+ = 3$*   
Mathematical Research Letters, **21**, No. 1 : 1-17 (2014) (with Anar Akhmedov)

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|----------------------------------|---|
| AWARDS                           | Postdoctoral Research Fellowship, Institute for Basic Science, 2018 - 2021  |
| INSTRUCTOR                       | Multivariable Calculus (University of Minnesota Summer 2014)  |
| TEACHING<br>ASSISTANT            | Calculus I (University of Minnesota Fall 2012)<br>Calculus II (University of Minnesota Spring 2013)<br>Honors Vector Calculus (University of Minnesota Fall 2013)<br>Vector Analysis (University of Minnesota Spring 2014)<br>Linear Algebra and Differential Equations (University of Minnesota 2014 - 2015)<br>Multivariable Calculus (University of Minnesota 2015 - 2017)<br>Riemannian Geometry taught by Robert Gulliver (University of Minnesota Fall 2012)<br>Algebraic Topology taught by Alexander Voronov (University of Minnesota Fall 2016)  |
| WORKSHOP<br>CO-ORGANIZATION      | Pohang Mathematics Workshop, Maison Glad Jeju Island, South Korea, December 5–8, 2019   |
| CONFERENCE,<br>WORKSHOP<br>TALKS | KMS Spring Meeting in Number Theory and Arithmetic, Online, July 2020<br>Inaugural France-Korea Conference in Algebraic Geometry, Number Theory and Partial Differential Equations, Institut de Mathématiques de Bordeaux, November 2019<br>Workshop in Algebraic Geometry at Gunsan, Ritz–Plaza Hotel, South Korea, October 2018<br>Chicago Summer School in Topology and Geometry, University of Chicago, June 2018<br>AMS Graduate Conference in Geometry & Topology, Brown University, April 2018<br>Midwest Algebraic Geometry Graduate Conference, University of Illinois Chicago, April 2017<br>Conference in Algebra, Geometry, and Topology, Temple University, May 2016 |
| SEMINAR<br>TALKS                 | Number Theory Lunch Seminar, Max Planck Institute for Mathematics, September 2021<br>Algebraic Geometry Seminar, Korea Institute for Advanced Study, July 2021<br>Algebraic Geometry Seminar, IBS Center for Geometry and Physics, August 2020<br>Director’s Seminar, IBS Center for Geometry and Physics, May 2020<br>Harvard / MIT Algebraic Geometry Seminar, MIT, April 2018<br>Algebra and Algebraic Geometry Seminars, Brown University, April 2017<br>CGP Seminar, IBS Center for Geometry and Physics, January 2017<br>Topology Seminar, University of Massachusetts Amherst, October 2015  |
| LECTURE SERIES                   | Postdoctoral Lecture Series, “Arithmetic of the moduli of fibered algebraic surfaces with heuristics for counting curves over global fields” 3 lectures (IBS - CGP October 2018)  |
| POSTER<br>PRESENTATIONS          | ICERM Birational Geometry and Arithmetic, Brown University, May 2018<br>AGNES Algebraic Geometry Northeastern Series, Northeastern University, October 2017<br>5 <sup>th</sup> Heidelberg Laureate Forum, Heidelberg University, September 2017   |