Jun-Yong Park

CONTACT

Max-Planck-Institut für Mathematik

Information

Vivatsgasse 7

53111 Bonn, Deutschland

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RESEARCH INTERESTS

Arithmetic Algebraic Geometry: motive/cohomology of moduli of fibrations, fibred algebraic surfaces and their moduli stacks, enumerating curves and abelian varieties over global function 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 moduli of elliptic surfaces (with Dori Bejleri and Matthew Satriano)

Arithmetic topology of the moduli stack of Weierstrass fibrations over function fields (with Oishee Banerjee and Johannes Schmitt)

SUBMITTED ARTICLES

- 1. Arithmetic geometry of the moduli stack of Weierstrass fibrations over ℙ¹ arXiv:2107.12231. (with Johannes Schmitt)
- 2. Enumerating odd-degree hyperelliptic curves and abelian surfaces over P¹ arXiv:2002.00563. (with Changho Han)

Published Articles

- 3. 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
- 4. Arithmetic of the moduli of semistable elliptic surfaces
 Mathematische Annalen, **375**, No. 3-4: 1745-1760 (2019) (with Changho Han),

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

AWARDS Postdoctoral Research Fellowship, Institute for Basic Science, 2018 - 2021

INSTRUCTOR Multivariable Calculus (University of Minnesota Summer 2014)

TEACHING Calculus I (University of Minnesota Fall 2012)
ASSISTANT Calculus II (University of Minnesota Spring 2013)

Honors Vector Calculus (University of Minnesota Fall 2013) Vector Analysis (University of Minnesota Spring 2014)

Linear Algebra and Differential Equations (University of Minnesota 2014 - 2015)

Multivariable Calculus (University of Minnesota 2015 - 2017)

Riemannian Geometry taught by Robert Gulliver (University of Minnesota Fall 2012) Algebraic Topology taught by Alexander Voronov (University of Minnesota Fall 2016)

WORKSHOP CO-ORGANIZATION

Pohang Mathematics Workshop, Maison Glad Jeju Island, South Korea, December 5–8, 2019

Conference, Workshop Talks Pacific Rim Mathematical Association Congress, Vancouver, Canada, December 2022

Invariants in Algebraic Geometry, Institut de Mathématiques de Bourgogne, Dijon, May 2022

KMS Annual Meeting – Trends in Arithmetic Geometry, Online, October 2021 KMS Spring Meeting – Number Theory and Arithmetic, Online, July 2020

Inaugural France-Korea Conference in Algebraic Geometry, Number Theory and Partial Dif-

ferential Equations, Institut de Mathématiques de Bordeaux, November 2019

Chicago Summer School in Topology and Geometry, University of Chicago, June 2018 AMS Graduate Conference in Geometry & Topology, Brown University, April 2018

Midwest Algebraic Geometry Graduate Conference, University of Illinois Chicago, April 2017

Conference in Algebra, Geometry, and Topology, Temple University, May 2016

Seminar Talks

Algebra, Geometry & Physics, Humboldt-Universität zu Berlin, April 2022

Number Theory Lunch Seminar, Max Planck Institute for Mathematics, February 2022

Webinar in Number Theory, French-Korean IRL in Mathematics, February 2022

Number Theory Lunch Seminar, Max Planck Institute for Mathematics, September 2021

Algebraic Geometry Seminar, Korea Institute for Advanced Study, July 2021

Algebraic Geometry Seminar, IBS Center for Geometry and Physics, August 2020

Harvard / MIT Algebraic Geometry Seminar, MIT, April 2018

Algebra and Algebraic Geometry Seminars, Brown University, April 2017

CGP Seminar, IBS Center for Geometry and Physics, January 2017

LECTURE SERIES

Postdoctoral Lecture Series, "Arithmetic of the moduli of fibered algebraic surfaces with heuris-

tics for counting curves over global fields" 3 lectures (IBS - CGP October 2018)