SHENGXUAN LIU

Address: East Hall, 530 Church Street, Ann Arbor, MI 48109-1043, USA
Website: https://warwick.ac.uk/fac/sci/maths/people/staff/sliu/
Email: liusx@umich.edu   **Citizenship:** Chinese

WORKING EXPERIENCE

Max Planck Institut für Mathematik	May 2024 - Current
Visitor	Bonn, Nordrhein-Westfalen, Germany
University of Michigan	May 2024 - Current
Postdoctoral Assistant Professor	Ann Arbor, Michigan, US
Simons Laufer Mathematical Sciences Institute	Jan. 2024 - May 2024
Postdoc	Berkeley, California, US
Hausdorff Institute for Mathematics	Sep. 2023 - Dec. 2023
Researcher in Junior Trimester Program	Bonn, Nordrhein-Westfalen, Germany

EDUCATION

University of Warwick Sep. 2019 - Aug. 2023
PhD in Mathematics   Supervisor: Dr. Weiyi Zhang and Dr. Chunyi Li   Coventry, England, UK
Thesis: Stability condition on Calabi-Yau threefold of complete intersection of quadratic and quartic hypersurfaces

Université Paris-Saclay Sep. 2022 - Dec. 2022
Research Visit   Host: Prof. Emanuele Macrì   Paris, France

ETH Zürich Sep. 2017 - Sep. 2019
MSc in Mathematics   Thesis supervisor: Prof. Rahul Pandharipande   Zürich, Switzerland
Thesis: Gromov-Witten Theory, Quantum Cohomology, and Cohomological Field Theory

University of Hong Kong Sep. 2013 - Jun. 2017
BSc in Mathematics & Chemistry with First Class Honours   Hong Kong

King's College London Jan. 2017 - Jun. 2017
Exchange Student   London, England, UK

RESEARCH INTEREST

Algebraic geometry and complex geometry, in particular, derived category method with application in birational geometry and hyperkäler varieties

PUBLICATION AND PREPRINT

Stability condition on Calabi-Yau threefold of complete intersection of quadratic and quartic hypersurfaces, (S. Liu), Forum of Mathematics, Sigma, 10, E106. doi:10.1017/fms.2022.96

Kernels of Categorical Resolutions of Nodal Singularities, (W. Cattani, F. Giovenzana, S. Liu, P. Magni, L. Martinelli, L. Pertusi, J. Song), Rendiconti del Circolo Matematico di Palermo (Special issue in Fano varieties), Ser 72, 30773105 (2023)

A Note on Spherical Bundles on K3 Surfaces, (C. Li, S. Liu), arXiv preprint arXiv:2310.10842, accepted, to be published in Algebraic Geometry

TALK

Stronger Bogomolov-Gieseker inequality and Bridgeland stability conditions
Noncommutative Algebraic Geometry Colloqium, SLMath   20.Feb.2024
A note on spherical bundles on K3 surfaces
More Algebraic Geometry at the Hausdorff Institute, HIM Bonn   27.Oct.2023
Séminaire de géométrie algbrique, ENS Paris   19.Oct.2023
Kernels of Categorical Resolutions of Nodal Singularities
Categorical methods in moduli theory, University of Pennsylvania   8.Apr.2023
University of Luxembourg   9.Nov.2022
Stronger Bogomolov-Gieseker inequality and Bridgeland stability conditions
LMS meeting and 3M in Midlands, University of Birmingham   4.Apr.2022
Stability condition on Calabi-Yau threefold of complete intersection of quadratic and quartic hypersurfaces
Moduli Across the Pandemic, Online   20.Nov.2021
Hodge Seminar (Pretalk and talk), University of Edinburgh   13.Oct.2021
3CinG annual congress, University of Warwick   21.Sep.2021

TEACHING EXPERIENCE

Cohomology and Poincar duality (Teaching Assistant)
University of Warwick   2023 Spring
Commutative Algebra (Teaching Assistant)
University of Warwick   2020 Spring, 2021 Autumn
Riemann Surfaces (Teaching Assistant)
University of Warwick   2020 Spring
Supervisor
University of Warwick   2021 Spring
Mathematical Methods of Physics II (Teaching Assistant)
ETH Zürich   2019 Spring

COFERENCE CO-ORGANIZED

Local organizer for the GAeL XXX (https://sites.google.com/view/gaelxxx/home) in the University of Warwick.

SERVICE

Referee for Épijournal de Géométrie Algébrique, Mathematische Zeitschrift. Reviewer for zbMATH.

HONOURS AND AWARDS

Birkigt Scholarship Fonds   2018 - 2019
Dean's Honors List   2013 - 2016
Mr Armin and Mrs Lillian Kitchell Scholarships   2013 - 2017
Philip K. H. Wong Scholarships for Student Enrichment   2016 - 2017
Rayson Huang Scholarship in Chemistry   2014 - 2016

LANGUAGES

Chinese   Native
English   Advanced
French   Intermediate
German   Basic
Italian   Basic