

Fang Yang

Curriculum Vitae



Personal Information

Adresse Vivatsgasse 7, MPIM,
Bonn, 53111, Germany
E-mail f.yang@mpim-bonn.mpg.de
Birthday May 11, 1996

Education

2014-2019 **Bachelor of Science**, *Sun Yat-Sen University*
2019-2024 **Doctor of Philosophy**, *Tsinghua University*, Supervisor: Fan Xu
2024-now **Postdoc**, *Max-Planck Institute for Mathematics*, Bonn

Scholarships

2015-2019 Endeavor Scholarship (Awarded by Chinese Ministry of Education)
2018-2019 Outstanding graduate of Sun Yat-Sen University
2020-2023 Graduate Scholarship (Awarded by Tsinghua University)

Interests

Algebraic Representation Theory Calabi-Yau category and tilting theory, coherent sheaves on weighted projective lines, preprojective algebra and Hall algebra.
Geometric Representation Theory Categorification, semicanonical basis and Nakajima quiver variety, cohomological Hall algebra
Combinatorial Theory Quantum cluster algebra and Donaldson-Thomas invariants.

Publications

Journal of Algebra, Volume 622, 2023: Applications of spherical twist functors to Lie algebras associated to root categories of preprojective algebras
556-586
Int. Math. Res. Notices 2024 (2024): Motivic Cluster Multiplication Formulas in 2-Calabi-Yau Categories
13785-807

Preprints

arXiv: 2207.02837 Quantum cluster algebras associated to weighted projective lines.

Teaching

Fall 2019-2020 **Teaching Assistant in Abstract Algebra I**

Each semester in
2020-2022 **Teaching Assistant in Linear Algebra**

Presentations

Jun. 2023 **Representation Theory in Lyon**, Université Lyon 1 in Villeurbanne

Nov. 2023 **The 16th National Algebra Academic Conference**, Huaqiao University

Mar. 2024 **Workshop on bricks and endofinite representations**, Bielefeld University

Oct. 2025 **Collaborations in Algebra, Representation theory and Ethics**, ENS Lyon

Else

Research visits

2023.2-2023.6 **Visiting Ph.D. Student**, Université Paris-Saclay, under guidance of Professor Olivier Schiffmann

Conferences

Jul. 2023 **Geometric Representation Theory and Applications**, Tsinghua University

Jul. 2023 **International Congress of Basic Science**, Beijing City government

Nov. 2023 **Algebraic Representation Theory**, Beijing Normal University

Aug. 2024 **International Conference on Representations of Algebras (ICRA 21, 2024)**,
Shanghai Jiao Tong University

Mar. 2025 **Algebra Days in Caen 2025: Categorization and quantification in cluster theory and beyond**, University of Caen-Normandy

Apr. 2025 **Enveloping Algebras and Geometric Representation Theory**, Mathematisches Forschungsinstitut Oberwolfach

Jun. 2025 **Enumerative Geometry and Geometric Representation Theory**, Università di Pisa

Nov. 2025 **ARTA X: Advances in Representation Theory of Algebras**, University of Cologne

Seminars

Spring 2022 **Deriving DG categories**, Bernhard Keller,
Reference: Deriving DG categories, Bernhard Keller.

Fall 2022 **Cluster algebras and scattering diagrams**, Yutong Yu,
Reference: Wall-Crossing Structures in Cluster Algebras, Lang Mou.

Fall 2022 **Quiver varieties and Coulomb branches**, Dylan G Allegretti, Peng Shan,
Reference: K-theoretic Coulomb Branches of quiver Gauge theories and cluster varieties, Gus Schrader, Alexander Shapiro.

Fall 2023 **Integral homology of loop groups and affine Grassmannians**, *Boming Jia, Peng Shan,*
Reference: An introduction to affine Grassmannians and the geometric Satake equivalence, Xinwen Zhu.