

# Fang Yang

## Curriculum Vitae



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### Personal Information

Adresse Vivatsgasse 7, MPIM,  
Bonn, 53111, Germany  
E-mail [f.yang@mpim-bonn.mpg.de](mailto:f.yang@mpim-bonn.mpg.de)  
Birthday May 11, 1996

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### 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

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### 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)

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### 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.

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### Publications

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

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### Preprints

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

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### Teaching

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

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

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## Presentations

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

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

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## 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*

### 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.