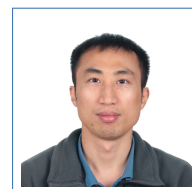


Tao Su

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Employment

- Sep.2022- **Visiting Postdoc**, *IMS, CUHK*, Hong Kong.
Sep.2023
- Jan.2021- **Postdoc**, *YMSC*, Beijing.
Jul.2022 supported by the International Postdoctoral Exchange Fellowship (Talent-Introduction)
- Sep.2018- **Postdoc**, *École Normale Supérieure*, Paris.
Aug.2020 supported by the ANR Microlocal Project

Education

- 2018 **PhD in math**, *UC Berkeley*.
Advisors: Vivek Shende, and Richard E. Borcherds
- 2012 **B.S. in math and physics**, *Tsinghua University*.
Fellowship in the Tsinghua Xuetang Talents Program

Academic visits

- Sep.01- *IHES*, Paris, France
Nov.25,2020
- Jul.28- *IBS-CGP*, South Korea
Aug.04,2019
- Jun.08- *CRM*, Montreal, Canada
Jun.30,2019
- Nov.25- *RIMS*, Kyoto, Japan
Dec.09,2018
- Oct.04- *Fourier Institute*, Grenoble, France
Oct.06,2018

Research interests

- Microlocal/Symplectic geometry, Algebraic geometry and Mathematical physics.
- Lately, I've been working on projects around: Legendrian knots and constructible sheaves, Hodge theory of character varieties and $P=W$, and mirror symmetry.

Publications and Preprints

- Cell decomposition, dual boundary complexes and motives of character varieties, arXiv:2307.16657. Submitted.
- Dual boundary complexes of Betti moduli spaces over the two sphere with one irregular singularity, arXiv:2109.01645. Submitted.

- Augmentations are sheaves for Legendrian graphs, with Byung Hee An, Youngjin Bae, Journal of Symplectic Geometry, 20 (2022), pp.259-416.
- Augmentations and ruling polynomials for Legendrian graphs, with Byung Hee An, Youngjin Bae, Algebraic & Geometric Topology, 22 (2022), pp.2079-2185.
- A Hodge-theoretic study of augmentation varieties associated to Legendrian knots/tangles, Ph.D thesis, ProQuest 2018.
- Ruling polynomials and augmentations for Legendrian tangles, arXiv:1707.04948.

Research talks

- Aug.2,2023 MIST workshop, IMS, CUHK, Hong Kong
- Jan.7,2023 MIST workshop, IMS, CUHK, Hong Kong
- May 25,2022 Zoom seminar, Zhejiang University.
- Apr.21,2022 Algebraic Geometry/Number theory seminar (zoom), Boston College.
- Dec.17,2021 Tsinghua Algebraic Geometry workshop, YMSC, Beijing.
- Dec.14,2021 Symplectic Geometry and Mathematical Physics seminar, BICMR, Beijing.
- Nov.29,2021 GeoTop seminar, YMSC, Beijing.
- Nov.10,2021 Geometry and Topology seminar, AMSS, Chinese Academy of Sciences, Beijing.
- Oct.13,2021 Geometry and Topology seminar, Chern Institute of Mathematics, Tianjin.
- Oct.12,2021 Geometry and Topology seminar, Chern Institute of Mathematics, Tianjin.
- Sep.24,2021 Geometric representation seminar, YMSC, Beijing.
- Mar.24,2021 Moscow-Beijing topology seminar, Zoom talk.
- Jul.31,2019 Director's seminar, IBS-CGP, South Korea.
- Jun.27,2019 Conference on Homological algebra, Microlocal analysis, and Symplectic geometry, CRM, Montreal.
- Jan.19,2019 Conference on Number theory, Algebra, Combinatorics, IAS of HIT, Haerbin, China.
- Nov.30,2018 Symplectic seminar, RIMS, Kyoto.
- Nov.9,2018 Symplectic seminar, ENS, Paris.
- Oct.5,2018 Topology seminar, Fourier Institute, Grenoble.
- May 24,2018 Student geometry/topology seminar, UC Davis.
- Mar.6,2018 EGN postdoc and student seminar, MSRI.
- Dec.5,2017 3-manifold Seminar, UC Berkeley.
- Jun.28,2017 AIM square meeting "Sheaf theory and Legendrian knots", San Jose.

Honors and Awards

- 2021 International Postdoctoral Exchange Fellowship, China Postdoc Science Foundation
- 2017 Graduate Division Summer Grant, UC Berkeley
- 2015 Graduate Division Summer Grant, UC Berkeley
- 2009-2012 Fellowship in the Tsinghua Xuetang Talents Program, Tsinghua University
- 2011 S.-T. Yau College Students Mathematics Contests:
 - (All-around Competition) Bronze medal
 - (Geometry and Topology) Bronze medal
 - (Algebra, Number Theory, and Combinatorics) Bronze medal
 - (Group competition) Silver medal

Services

Tutored Friend scholar for Qiuzhen college, Tsinghua university, Apr. 2021-Jun.2022.
Organized Derived Algebraic Geometry learning seminar, YMSC, Spring 2021.
Referee for Symmetry, Integrality and Geometry: Methods and Applications.

Teaching experience

Fall 2021 TA for Geometric Representation Theory II, Tsinghua university.
Spring 2018 TA for Math 113, Introduction to Abstract Algebra, UC Berkeley.
Fall 2017 GSI for Math 16B, Analytic Geometry and Calculus, UC Berkeley.
Fall 2016 GSI for Math 16B, Analytic Geometry and Calculus, UC Berkeley.
Spring 2016 GSI for Math 16B, Analytic Geometry and Calculus, UC Berkeley.
Fall 2015 GSI for Math 16B, Analytic Geometry and Calculus, UC Berkeley.
Spring 2015 GSI for Math 54, Linear Algebra and Differential Equations, UC Berkeley.
Fall 2014 GSI for Math 54, Linear Algebra and Differential Equations, UC Berkeley.
Spring 2014 GSI for Math 16B, Analytic Geometry and Calculus, UC Berkeley.
Fall 2013 GSI for Math 1B, Calculus, UC Berkeley.