

# Bingyu ZHANG 张秉宇

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## Positions

**University of Southern Denmark (SDU)**

**Odense, Denmark**

*Post-Doc at Centre for Quantum Mathematics*

*2022-Present*

Mentor: Vivek Shende (2022-2025), Jørgen Ellegaard Andersen (2025-2026)

## Education

**Université Grenoble Alpes**

**Grenoble, France**

*Ph.D. in Mathematics*

*2019-2022*

Thesis: Sheaf Techniques and Symplectic Geometry

Advisor: Damien Gayet, Stéphane Guillermou and Claude Viterbo

**Université Grenoble Alpes**

**Grenoble, France**

*M2R Mathematics and applications*

*2018-2019*

Advisor: Stéphane Guillermou

**Academy of Mathematics and Systems Science, CAS**

**Beijing, China**

*MS in Fundamental mathematics*

*2015-2018*

Advisor: Wei-dong RUAN (阮卫东)

**Hunan University**

**Changsha, Hunan, China**

*BS in Mathematics and applied mathematics*

*2011-2015*

Advisor: Jun LI (李军)

## Papers

### • Published papers

#### ○ Non-linear microlocal cut-off functors

Accepted by Rend. Sem. Mat. Univ. Padova. Published online first.

#### ○ Contact non-squeezing at large scale via generating functions

Joint with Maia Fraser and Sheila Sandon.

*Journal of Fixed Point Theory and Applications*, 27, 46 (2025)

#### ○ Capacities from the Chiu-Tamarkin Complex

*Journal of Symplectic Geometry*, 22(3) (2024), pp. 441-524.

### • Preprints

#### ○ Density of cotangent fibers in filtered Fukaya category

Joint with Claude Viterbo and Stéphane Guillermou. In preparation.

- $S^1$ -action on the Hochschild homology of the Tamarkin Category  
Joint with Wenyan Li. In preparation.
- A remark on Continuous K-theory and Fourier-Sato transform.  
Preprint: arXiv 2506.02329. Submitted.
- Almost mathematics, Persistence module, and Tamarkin category  
Joint with Tatsuki Kuwagaki. Preprint: arXiv 2503.15933. Submitted.
- On the Hochschild cohomology of Tamarkin categories  
Joint with Christopher Kuo and Vivek Shende. Preprint: arXiv 2312.11447. Submitted.
- Idempotence of microlocal kernels and  $S^1$ -equivariant Chiu-Tamarkin invariant  
Preprint: arXiv 2306.12316.

## Teaching

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Fall 2025: Riemannian Geometry.

University of Southern Denmark. **Instructor**

Fall 2025: Advanced Topics in Geometry and Topology: Higher category and microlocal theory of sheaves.

University of Southern Denmark. **Instructor**

Summer 2025: Introduction to Morse theory.

Yunnan Normal University. Advanced Workshop in Mathematics II, 2025. **Instructor**

Spring 2025: Advanced Topic in Quantum Mathematics: Toric Geometry and F-theory.

University of Southern Denmark. **Instructor**, joint with Muyang Liu.

Fall 2023: Advanced Topics in Geometry and Topology: Introduction to Mirror Symmetry.

University of Southern Denmark. **Instructor**

Spring 2018: TA on Linear Algebra-II.

University of Chinese Academy of Sciences. **Instructor: Prof. Ziming LI (李子明).**

Fall 2017: TA on Calculus-III A.

University of Chinese Academy of Sciences. **Instructor: Prof. Wei-dong RUAN (阮卫东).**

## Talks

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### • Conference talks

Oct. 2024: Uppsala-Odense Geometry Days, Uppsala

Sep. 2024: Workshop on Generalized complex structure and homological methods, University of Hamburg, Hamburg

Jul. 2023: Workshop on Geometric Representation Theory and Applications, YMSC/Tsinghua University, Beijing (Student presentation)

Mar. 2023: Pseudoholomorphic Curves in Hamiltonian Dynamics, Mathematical Institute Heidelberg

Feb. 2022: ANR COSY meeting, Paris (Online presentation)

Jan. 2022: Global Youth Forum 2022, IGP, University of Science and Technology of China, Hefei (Online)

Oct. 2021: UU-Nantes Workshop on Lagrangian cobordisms and Floer theory, Uppsala

### • Seminar talks

Sep. 2025: Séminaire de topologie, géométrie et algèbre, Laboratoire de Mathématiques Jean LERAY, Nantes

Jul. 2025: AMSS, Chinese Academy of Sciences, Beijing

Jul. 2025: BICMR, Peking university, Beijing

Jul. 2025: Department of Mathematics, Shanghai Jiao Tong University , Shanghai

Jul. 2025: Institute of Mathematical Sciences, ShanghaiTech University, Shanghai

Jul. 2025: School of mathematics, Zhejiang University, Hangzhou

Mar. 2025: QM Research Seminar, CQM, University of Southern Denmark, Odense

May. 2024: Everytopic Seminar, Brandeis University

Apr. 2024: Topology Seminar, University of Southern California

Mar. 2024: QM Research Seminar, CQM, University of Southern Denmark, Odense

Jan. 2024: Symplectix Seminar, Institut Henri Poincaré, Paris

Dec. 2023: Topology Seminar, IRMA, Strasbourg

Nov. 2023: Bonn Symplectic Geometry Seminar, MPIM, Bonn

Aug. 2023: Institute of Mathematical Sciences, ShanghaiTech University, Shanghai

Aug. 2023: AMSS, Chinese Academy of Sciences, Beijing

Mar. 2023: QM Research Seminar, CQM, University of Southern Denmark, Odense

Nov. 2022: QM Research Seminar, CQM, University of Southern Denmark, Odense

Oct. 2022: Institute of Mathematical Sciences, ShanghaiTech University, Shanghai

Sep. 2022: Western Hemisphere Virtual Symplectic Seminar (Online)

Sep. 2022: Séminaire compréhensible, Institut Fourier, Grenoble

Feb. 2022: Geometry Seminar, Department of mathematics, Tsinghua University, Beijing

Dec. 2021: Topology Seminar, IRMA, Strasbourg

Noc. 2021: Geometry and Topology Seminar, Toulouse

Nov. 2021: Symplectix Seminar, Institut Henri Poincaré, Paris

Oct. 2021: Topology Seminar, Institut Fourier, Grenoble

Apr. 2021: Symplectic Zoominar, CRM-Montréal, Princeton/IAS, Tel Aviv, and Paris (Online)

Aug. 2021: Virtual Kylerec Seminar (Online)

Nov. 2020: Séminaire compréhensible, Institut Fourier, Grenoble (Online)

## Activities (co-)Organized

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Spring 2024: QM Research Seminar, CQM, SDU. co-Organized.

Fall 2023: QM Research Seminar, CQM, SDU. co-Organized.

May 2020: Bingyu's Friends - Young Mathematicians Colloquium, Online.

Spring 2017: Student Seminar on K3 Surfaces, AMSS, CAS.

Fall 2016: Student Seminar on Homological algebra, Sheaves and Stacks, AMSS, CAS.

Spring 2016: Student Seminar on Gauge Theory, AMSS, CAS.

## Awards

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2018: IDEX M2 Scholarship of Université Grenoble Alpes.

2015: Excellent New Student Scholarship, AMSS, CAS.

2014: Shiing-Shen Chern (Geometry and Topology) Silver Award, S.T.Yau College Student Mathematics Contests.

## Skill

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**Cooking:** Intermediate

*I would like to be a chef if I don't want to do math anymore.*

**Programming Language:** Python, C++

**Software:** Mathematica, Matlab

**Language:** Chinese (native), English(fluent), French(A1)