Peixiang Tan

Education

University of California, Los Angeles — Los Angeles, United States
Bachelor of Science in Mathematics — *Jun. 2022*

University of Copenhagen — Copenhagen, Denmark
Master of Science in Mathematics — *Jul. 2024*

University of Amsterdam — Amsterdam, Netherlands
Exchange — *Fall. 2023*

Internship & Exeperience

UC Davis, School of Medicine — Supervisor: Lihong Qi
Davis, United States — *Summer 2020*

- Conducted data analysis on the radiotherapy outcomes of patients using SAS
- Learned and utilized the chi-square test, and examined whether the data results supported the related hypotheses

E-Fund Management — *Summer 2022*
Guangzhou, China

- In July 2022, participated in the E-Fund "2022 Elite Intern Training Camp" and received the "Outstanding Trainee" award
- Study the classical theory from Behavioral Finance through the book "Irrational Exuberance" and "A Random Walk Down Wall Street"
- Collect the data from China's stock market and apply the theories
- Make and present a summary report "On Behavioral Finance"

Research Project

UCLA
Quantum Group and Coboundary Category — *Summer 2022*

- We study the representation of quantized enveloping algebra of Kac-Moody Algebra $U_q(\mathfrak{g})$ when q is the root of unit or other complex number
- when $q \to \infty$, we study the crystal base of $U_q(\mathfrak{g})$ and the coboundary structure of the category of crystal base

University of Copenhagen — Supervisor: Benjamin Briggs
Quiver Representations and Coherent sheaves of $\mathbb{P}^1$ — *Apr.-Aug. 2023*

- This project is about quiver representation and its connection to the derived category of coherent sheaf via Tilting theory
- In particular, we study Beilison's thesis to show that there is a derived equivalence between coherent sheaf of $\mathbb{P}^1$ and representation of Kroneck quiver

University of Copenhagen — Supervisor: Benjamin Briggs & Henrik Holm
A Beginner's Guide on Support Theory via Tensor Triangulated Category — *Feb.-Jun. 2024*

- This is my master's thesis. In this thesis, we study the Balmer spectrum of tensor triangulated category and how to generalize the associated support of the Balmer spectrum to rigidly-compactly generated tensor triangulated category.
- We also applied the machinery we developed to classify the localizing subcategory of $\mathcal{D}^{\mathrm{per}}(R)$ when R is a noetherian ring

Seminar Talk

La conjecture de Weil, University of Amsterdam — *Nov. 2023*

Scholarship

Erasmus Grant, Received from European Union — *Sep. 2023*

Conference Attended

Cluster Algebras and Representation Theory, University of Copenhagen — *Nov. 2022*
Topological Hochschild Homology and Zeta Values, University of Copenhagen — *Jan. 2023*
Continuous K-Theory, University of Copenhagen — *Jun. 2024*
Rank Conjectures Across Algebra and Topology, University of Copenhagen — *Jun. 2024*

Courses & Skills

Probability Theory, C++, Java, Network Science and Graph theory, Automorphic Form, Functional Analysis, Real Analysis, Complex Analysis, Rational Point of Variety, Automorphic Form

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