

Hao Zhang

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EDUCATION

Tsinghua University

Ph.D., Mathematics | Advisor: Zhengwei Liu

Beijing, China

09/2021 - Present

Nanjing University

B.S., Mathematics

Nanjing, China

09/2017 - 07/2021

PUBLICATIONS

1. Bin Gui, **Hao Zhang** How are pseudo- q -traces related to (co)ends? arXiv:2508.04532.
2. Bin Gui, **Hao Zhang** Pseudotraces on Almost Unital and Finite-Dimensional Algebras. arXiv:2508.00431.
3. Bin Gui, **Hao Zhang** Analytic Conformal Blocks of C_2 -cofinite Vertex Operator Algebras III: The Sewing-Factorization Theorems. arXiv:2503.23995.
4. Bin Gui, **Hao Zhang** Analytic Conformal Blocks of C_2 -cofinite Vertex Operator Algebras II: Convergence of Sewing and Higher Genus Pseudo- q -traces. *Commun. Contemp. Math.*, to appear. arXiv:2411.07707.
5. Bin Gui, **Hao Zhang** Analytic Conformal Blocks of C_2 -cofinite Vertex Operator Algebras I: Propagation and Dual Fusion Products. arXiv:2305.10180.

TALKS

Rocky Mountain Representation Theory Seminar

The sewing-factorization theorem for C_2 -cofinite VOAs

Online

05/2025

Algebra Seminar

The sewing-factorization theorem and coends

Nanjing University, China

05/2025

Shenzhen Thematic Program "Representation Theory"

Conformal blocks and coends

SUSTech, China

04/2025

Mathematical Physics seminar

The sewing-factorization theorem and pseudotraces for C_2 -cofinite VOAs

Perimeter Institute, Canada

03/2025

Quantum groups, tensor categories and quantum field theory

Conformal blocks and coends

University of Oslo, Norway

01/2025

Algebra and Logic Seminar

The sewing-factorization theorem and pseudotraces for C_2 -cofinite VOAs

University of Denver, USA, online

11/2024

Vertex Algebras, Tensor Category and Related Topics

Conformal blocks and a Verlinde formula for self-dual C_2 -cofinite non-rational vertex operator algebras

SJTU, China

06/2024

Lie Group/Quantum Mathematics Seminar

Logarithmic conformal field theory: sewing and factorization

Rutgers University, USA

04/2024

Mathematical Aspects of Quantum Theory

Conformal blocks of C_2 -cofinite vertex operator algebras

TSIMF, China

01/2024

Quantum Mathematics Seminar

Conformal blocks of C_2 -cofinite vertex operator algebras

Tsinghua University, China

04/2023

HONORS AND AWARDS

1. Future Scholar Scholarship of Tsinghua University (2021-2026)
2. Comprehensive Scholarship of Tsinghua University (2022-2024)
3. Excellent Teaching Assistant of Tsinghua University (2021-2023)
4. Outstanding Graduates of Nanjing University (06/2021)
5. National Scholarship (11/2020)

TEACHING EXPERIENCES

Calculus, Linear algebra