Jakob Sloan

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m pushkinzi.github.io$

Education

2023-2024: University of Melbourne

MSc. in Mathematics; supervisor A\Prof. Nora Ganter.

Thesis: Introductory \mathcal{D} -modules, field theory and vertex algebras.

2020-2022: University of Melbourne

BSc. in Mathematics

Scholarships & Prizes

2023-2024: Academic Excellence Scholarship

(Awarded ×4 by Department of Mathematics and Statistics)

2022: Vacation Research Scholarship (Awarded by the University of Melbourne)

Research Projects 2023-2024: Master's Thesis 'Introductory D-modules, field theory and vertex algebras.'

Under A\Prof. Nora Ganter.

2022: Undergraduate research project 'On de Sitter and anti-de Sitter spacetimes.'

Under Dr. Volker Schlue.

Conference Talks & Seminars

Nov-2024: Student invitational speaker at MATRIX

Conference topic: Tensor Categories, Quantum Symmetries, and Mathematical Physics.

Talk: Pseudo-tensor categories, chiral algebras and vertex algebras.

Nov-2024: Co-Organiser of Gromov-Witten-theory reading group (with A. Ram & G. Zhao)

Talk: Enumerations in GW-theory & quantum cohomology.

Aug-2024: Pre-MATRIX tensor categories talks (under D. Ridout)

Talk: Braided tensor categories and the cobordism categories.

May-2024: Co-organiser for K3-surfaces reading group

Talks: The global Torelli theorem for K3 surfaces.

The local Torelli theorem for K3 surfaces.

Feb-2024: Student Pure Math Seminars (under N. Ganter)

Talks: Elliptic curves as Riemann surfaces and as groups.

Error correcting codes and projective geometry.

Mar-2023: Gauge theory reading groups (under T. Quella & J. Knapp)

Talk: Topological phases in gauge theory.

Teaching Experience

University of Melbourne

Linear algebra (2023-Ongoing)

Calculus II (2023)

Insitute for Enquiring Minds

Volunteer math tutoring (2024-Ongoing)

Referees

A\Prof. Nora Ganter A\Prof. Diarmuid Crowley

Dr. Gufang Zhao

dcrowley@unimelb.edu.au

gufangz@unimelb.edu.au

Russian

Languages

English (Mother Tongue)

nganter@unimelb.edu.au

French

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