Nicolas Bridges

Ph.D. Candidate, Purdue University
bridge18 at purdue.edu — math.purdue.edu/ bridge18

RESEARCH INTERESTS

Quantum topology, Hopf algebras, topological quantum field theory, fusion categories, low dimensional topology

EMPLOYMENT AND EDUCATION

Graduate Teaching Assistant   August 2021 — Present
Purdue University, West Lafayette, IN

Doctor of Philosophy in Mathematics   August 2021 — Present
Purdue University, West Lafayette, IN
Advisor: Shawn Xingshan Cui

Bachelor of Science in Pure Mathematics   August 2017 — May 2021
Magna Cum Laude
University of Arkansas, Fayetteville, AR
Advisor: Matthew Day
Thesis Title: *Non-Cyclic Finite Covers of $P(-2n, 4n-1, 4n+1)$ Pretzel Knots*

Bachelor of Science in Computational Physics   August 2017 — May 2021
University of Arkansas, Fayetteville, AR

TEACHING EXPERIENCE

Purdue University
Graduate TA

- Fall 2021: Recitation for MA 162 (Calculus 2)
    - Led two forty-student classes in supplemental instruction which included writing and grading quizzes
- Spring 2022: Recitation for MA 262 (Linear Algebra and Differential Equations)
    - Led two forty-student classes in supplemental instruction which included writing and grading quizzes
- Summer 2022: Instructor for MA 162 (Calculus 2)
    - Led a ten-student class in primary instruction which included preparing lectures and writing and grading quizzes
- Fall 2022: Instructor for MA 16010 (Applied Calculus 1)
    - Led two forty-student classes in primary instruction which included preparing lectures and writing and grading quizzes
- Fall 2023 & Spring 2024: Instructor for MA 137 (Math for Elementary School Teachers 1)
    - Led a twenty-student class in primary instruction which included preparing lectures, writing and grading quizzes, and preparing and grading exams

AWARDS

Purdue Excellence in Teaching Award   2023-2024
The Graduate School Excellence in Teaching Award is the highest honor presented by the University in recognition of graduate student teachers. Graduate students selected for this award must have demonstrated excellence in teaching and mentoring at the undergraduate and/or graduate level.

Purdue Teaching Academy Graduate Teaching Award   2024
This award honors graduate students with teaching responsibilities from across campus for their dedication to Purdue students and their outstanding teaching contributions. Recipients are selected by each academic department for their commitment to undergraduate education. Departments may select one recipient for every 50 graduate teaching assistants they support.

CONFERENCES

CMND Thematic Program in Topology and Field Theory International Conference (Attendee) June 10-14
Notre Dame, Indiana

CMND Thematic Program in Topology and Field Theory Grad Student/Post Doc Week (Poster) June 3-7
Notre Dame, Indiana
Title: *A Generalization of Two Invariants of Three-Manifolds from Involutory Hopf Algebras*

QuaSy-Con II (Speaker) May 24-26, 2024
Notre Dame, Indiana
Title: *A Generalization of Two Invariants of Three-Manifolds from Involutory Hopf Algebras*

Topological Quantum Computing, ICMS (Attendee) October 9-13, 2023
Edinburgh, Scotland

REFERENCES

Prof. Shawn Xingshan Cui
Associate Professor, Department of Mathematics, Purdue University, West Lafayette, IN
E-mail: cui177 at purdue.edu
Website: math.purdue.edu/ cui177

Prof. Eric Samperton
Assistant Professor, Department of Mathematics, Purdue University, West Lafayette, IN
E-mail: eric at purdue.edu
Website: math.purdue.edu/ esampert