Curriculum Vitae

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Personal Information

Name: Yumin Shen
Email: shen266@wisc.edu

Education

University of Wisconsin–Madison Madison, WI, USA — 2024 – Now
Master of Arts in Mathematics — (Expected June 2025)

The Ohio State University Columbus, OH, USA — 2022 – 2024
Bachelor of Science in Mathematics, *Summa Cum Laude*, May 2024

Shanghai University Shanghai, China — 2019 – 2022
Transferred out, majored in Telecommunication Engineering

Awards, Competitions, Honors, and Scholarships

2024 Grace Bareis Math Prize Scholarship — $300
Department of Mathematics, The Ohio State University

2024 Gordon Mathematics Competition — 1^{st} Place
Department of Mathematics, The Ohio State University

Undergraduate Research Scholarship — $1875
Department of Mathematics, The Ohio State University

2023 Grace Bareis Math Prize Scholarship — $200
Department of Mathematics, The Ohio State University

2023 Gordon Mathematics Competition — 2^{nd} Place
Department of Mathematics, The Ohio State University

13^{th} China Mathematics Competition for College Students — 1^{st} Prize
Chinese Math Society

13^{th} Shanghai Mathematics Competition for College Students — 1^{st} Prize
Shanghai Math Society

2021 Shanghai University Mathematics Competition — 2^{nd} Prize
Department of Mathematics, Shanghai University

2020 Shanghai University Physics Competition — 2^{nd} Prize
Department of Physics, Shanghai University

12^{th} China Mathematics Competition for College Students — 3^{rd} Prize
Chinese Math Society

12^{th} Shanghai Mathematics Competition for College Students — 3^{rd} Prize
Shanghai Math Society

2020 Shanghai University Mathematics Competition — 3^{rd} Prize
Department of Mathematics, Shanghai University

Academic Scholarship — ¥500
Shanghai University

[1] Last Modified: December 11, 2024

Employment

At University of Wisconsin-Madison

Fall 2024: Grader for Math 322: Applied Mathematical Analysis (Partial Differential Equations and Special Functions)
Instructor: Saverio Spagnolie

Researches and Workshops

Anosov magnetic flows on surfaces, Joint with James Marshall Reber
Organized by OSU Cycle Program at The Ohio State University arXiv: 2406.18735

Knots and Graphs
Organized by Dr. Sergei Chmutov at The Ohio State University Link to Webpage

Presentations and Posters

"Universal Cover of Non-Positively Curved Surface" Slides
Directed Reading Program SP24, The Ohio State University

Gave a presentation on Cartan-Hadamard Theorem and Hadamard-Lévy Theorem. Introduced enough background knowledge and emphasized on applications of covering space.

"Some Algebraic Structures of Links: from 0 to ε" Slides
Knots and Graphs 2023, The Ohio State University

Gave a presentation introducing braid group and its representation in Temperley-Lieb algebra, and get Jones polynomial in an algebraic way. Enough background knowledge was introduced.

"Alternating knots and Tait Conjecture" Slides
Knots and Graphs 2023, The Ohio State University

Gave a presentation on alternating knots and Tait conjecture as an application of Jones Polynomial.

"Fundamental Theorem of Riemannian Geometry" Poster
Cycle Conference 2023, The Ohio State University

Made a poster on smooth manifolds, tangent bundles, vector fields, Riemannian manifolds, affine connection, existence and uniqueness of the Levi-Civita connection, geodesics defined by Euler-Lagrange equation and geodesics defined by affine connection, and their local consistency under Levi-Civita connection.

"The Invariant Subspace Problem" Slides
Directed Reading Program SP23, The Ohio State University

Gave a presentation on Banach space, bounded linear operator, compact operator, Banach algebra, spectrum of a bounded linear operator, spectral radius formula, eigenvalue of a compact operator, and the Lomonosov invariant subspace theorem of compact operators.

"Measure, Integration and Dominated Convergence Theorem"
Directed Reading Program AU22, The Ohio State University

Gave a chalk talk on Lebesgue measure, integration, Dominated Convergence Theorem and some examples.

Languages

Chinese, English, Japanese

Other Skills

C, C++, Python, Matlab, Assembly Languages of AT89C51.