Yan Huang

322 Vincent Hall
206 Church St. SE
Minneapolis, MN 55455

Email: huan2728@umn.edu

Research Interests	Numerical Methods for Kinetic Equations, Gradient Flows, Optimal Transport, Scientific Machine Learning.

Education

University of Minnesota Twin Cities	Minneapolis, MN, USA
Ph.D. in Mathematics	Aug. 2023 -
Southern University of Science and Technology	Shenzhen, China
B.S. in Mathematics and Applied Mathematics	Aug. 2019 - Jun. 2023
Honors Program in Mathematics	

Preprints

[1] Y. Huang, L. Wang. JKO for Landau: a variational particle method for homogeneous Landau equation.

Publications

[1] Y. Huang, L. Wang. A score-based particle method for homogeneous Landau equation, Journal of Computational Physics, 2025, p.114053.

Presentations

Talk:
- SIAM Student Seminar of Mathematical Applications & Computations, UMN, Oct. 27, 2025.
- Research Seminar, SUSTech, Oct. 17, 2024.

Lightning Talk:
- Summer School in Optimal Transport and Applications, UCSB, Jul. 20-25, 2025.
- Statistical and Computational Challenges in Probabilistic Scientific Machine Learning, IMSI, Chicago, Jun. 9-13, 2025.

Poster:
- Statistical and Computational Challenges in Probabilistic Scientific Machine Learning, IMSI, Chicago, Jun. 9-13, 2025.
- Rivière-Fabes Symposium on Analysis and PDE, UMN, Apr. 25-27, 2025.
- Workshop on Kinetic Theory and Fluids, UW-Madison, Mar. 28-30, 2025.

Conference Attending

- Kinetic Theory: Novel Statistical, Stochastic and Analytical Methods, SLMath, Aug. 21-29, 2025.
- Micro-workshop: Data-driven approaches for physical models, UMN, May. 19, 2025.
- PDEs of Incompressible Fluid Flows, Computer Assisted Proofs and Neural Networks, UMN, Apr. 12, 2024.
- Computational Challenge and Optimization in Kinetic Plasma Physics, IMSI, Chicago, Feb. 19-22, 2024.
- New Trends in Kinetic and Optimal Transport, UMN, Oct. 25-27, 2023.

Services

Journal Reviewer
- Journal of Computational Physics.

Graduate Student Services
- Mentor for Directed Reading Program,   UMN, Fall 2024.

Teaching	**School of Mathematics, UMN**

- Teaching Assistant, MATH 1571H Honors Calculus I, Fall 2025.
- Teaching Assistant, MATH 1272 Calculus II, Spring 2024, Spring 2025.
- Teaching Assistant, MATH 1271 Calculus I, Fall 2023.
- Grader: MATH 5485 Introduction to Numerical Methods I, MATH 8441 Numerical Analysis and Scientific Computing, MATH 8401 Mathematical Modeling and Methods of Applied Mathematics, MATH 8651 Theory of Probability including Measure Theory.

Awards

- SUSTech Excellent Undergraduate Thesis.
- SUSTech Second Class of the Merit Student Scholarship, 2021 & 2022.
- First Class Award of the 13th National College Students Mathematics Competition.

Skills

Programming: Python, PyTorch, Matlab, Java.

Language: Chinese (native), English (professional).