CV of Kai-Hsiang Wang

CONTACT
INFORMATION

Technion
Faculty of Mathematics
Haifa 32000, Israel

E-mail: khwang2025@campus.technion.ac.il
Website: https://k-hwang.github.io/

RESEARCH
INTERESTS

Geometric analysis: geometric inequalities and calculus of variation on Riemannian manifolds; optimal transport, Ricci limit spaces, free boundary problems

Functional analysis: Approximation in RKHS

CURRENT
ACADEMIC
APPOINTMENTS

Post-Doctoral Researcher,
Faculty of Mathematics, Technion   Oct 2025 to present

PREVIOUS
ACADEMIC
APPOINTMENTS

Visting Scholar, NCTS   Jul 2025 to Sep 2025

EDUCATION

National Taiwan University (NTU)

B.Sc. in Mathematics   Jun 2019

Northwestern University

Ph.D. in Mathematics   Jun 2025

PUBLICATIONS

[1] Chung-Jun Tsai and Kai-Hsiang Wang. "An Isoperimetric-Type Inequality for Spacelike Submanifold in the Minkowski Space". In: *International Mathematics Research Notices* 2022.1 (May 2020), pp. 128–139. DOI: 10.1093/imrn/rnaa084.

[2] Kai-Hsiang Wang. "Optimal transport approach to Michael–Simon–Sobolev inequalities in manifolds with intermediate Ricci curvature lower bounds". In: *Annals of Global Analysis and Geometry* 65.1 (Feb. 2024), p. 7. DOI: 10.1007/s10455-023-09934-9.

[3] Dongwei Chen and Kai-Hsiang Wang. "On the Probabilistic Approximation in Reproducing Kernel Hilbert Spaces". In: *Complex Analysis and Operator Theory* 19 (July 2025), p. 137. DOI: https://doi.org/10.1007/s11785-025-01765-9.

[4] Erik Hupp, Aaron Naber, and Kai-Hsiang Wang. "Lower Ricci Curvature and Nonexistence of Manifold Structure". In: *Geometry & Topology* 29.1 (Jan. 2025), pp. 443–477. DOI: 10.2140/gt.2025.29.443.

Invited Talks	1. **Informal Geometric Analysis Seminar**, Northwestern University, Feb 2023 Title: Optimal Transport Approach to Michael–Simon–Sobolev Inequalities
	2. **Seminar on Differential Geometry**, NCTS, Oct 2023 Title: Collapsing Ricci Limit Spaces with No Manifold Structure
	3. **Seminar on Differential Geometry**, NCTS, Aug 2024 Title: Introduction to Optimal Transport with Application to Geometric Inequalities
	4. **Geometric Analysis Seminar**, University of Chicago, Feb 2025 Title: Generalized McCann's Theorem with Application to Michael-Simon Inequality
	5. **Geometry and Geometric Analysis Seminar**, Purdue University, Feb 2025 Title: Generalized McCann's Theorem with Application to Michael-Simon Inequality
	6. **Geometry Seminar**, Pennsylvania State University, Feb 2025 Title: Generalized McCann's Theorem with Application to Michael-Simon Inequality
	7. **Summer School on Differential Geometry**, NCTS, Jul 2025 Title: Introduction to optimal transport and isoperimetric problems
	8. **Colloquium Talk**, National Taiwan Normal University, Sep 2025 Title: Optimal Transport and Two Proofs of Isoperimetric Inequality
Contributed Talks	1. **PIMS- IFDS- NSF Summer School on Optimal Transport**, University of Washington, Jun 2022 Title: Optimal Transport Approach to Isoperimetric Inequality on Manifolds with Nonnegative Ricci Curvature
	2. **The 39th Southeastern Analysis Meeting (SEAM 39)**, Clemson University, Mar 2023 Title: An Optimal Transport Approach to Michael–Simon Inequalities
	3. **The 40th South Eastern Analysis Meeting (SEAM 40)**, University of Florida, March 2024 Title: Collapsing Ricci Limit Spaces with No Manifold Structure
	4. **The 41th South Eastern Analysis Meeting (SEAM 41)**, University of South Florida, March 2025 Title: Free Boundary Problem on Ricci Limit Space

TEACHING **Teaching Assistant**, Northwestern University

1. Single-Variable Differential Calculus (2 sessions) — Fall 2021
2. Multi-Variable Integral Calculus (2 sessions) — Winter 2022
3. Single-Variable Calculus with Pre-Calculus — Fall 2022
4. Elementary Differential Equations — Fall 2022
5. Series and Multiple Integrals — Winter 2023
6. MENU Linear Algebra/Multi-Variable Calculus — Winter 2023
7. Foundations of Higher Math — Spring 2023
8. MENU Linear Algebra/Multi-Variable Calculus — Spring 2023
9. Linear Algebra — Fall 2023
10. Analysis (Graduate Course) — Fall 2023
11. Single-Variable Integral Calculus (2 sessions) — Winter 2024
12. Multi-Variable Integral Calculus — Spring 2024
13. Series and Multiple Integrals — Spring 2024

Last updated: October 24, 2025