Yunfeng Zhang – Curriculum Vitae

CONTACT INFORMATION	Department of Mathematical Sciences University of Cincinnati Cincinnati, OH 45221-0025	phone: (513) 556-4088 email: zhang8y7@ucmail.uc.edu homepage: yunfengzhang108.github.io

RESEARCH INTERESTS

Harmonic analysis on Lie groups and homogeneous spaces, classical Fourier analysis, analytic number theory and dispersive equations; concentration of eigenfunctions of the Laplace–Beltrami operator

ACADEMIC APPOINTMENTS

Visiting Assistant Professor, University of Cincinnati	2024 –
TAL Assistant Professor, Peking University	2021 – 2024
Assistant Research Professor, University of Connecticut	2018 – 2021

EDUCATION

Ph.D. in Mathematics, UCLA	2012 – 2018
– Advisors: Rowan Killip and Monica Visan	
B.S. in Mathematics, Tsinghua University	2008 – 2012

HONORS AND AWARDS

UCLA Mathematics Graduate Research Presentation Prize	2018
Tsinghua University Outstanding Graduate Award	2012
Fellowship in the Talents Program of Tsinghua University	2009 – 2012

GRANTS

Co-I, National Key R&D Program of China (PI: Hanlong Fang) Title: Geometry and Analysis of Homogeneous Spaces Total value: 3,000,000 CNY	2022 – 2024
PI, Fundamental Research Funds for the Central Universities, Peking University Title: Analysis on Lie Groups Total value: 200,000 CNY	2021 – 2023

PREPRINTS

7. Global well-posedness of mKdV in modulation spaces
   (with Saikatul Haque, Rowan Killip and Monica Visan) Preprint.

6. Bounds of restriction of characters to submanifolds
   Preprint, submitted. arXiv:2402.03178

5. Harmonic analysis on the fourfold cover of the space of ordered triangles I: the invariant differentials
   (with Hanlong Fang and Xiaocheng Li) Preprint, submitted. arXiv:2301.00529

JOURNAL PUBLICATIONS

4. On Fourier restriction type problems on compact Lie groups
   Indiana University Mathematics Journal 72 (2023), No. 6, 2631-2699, 69 pp. arXiv:2005.11451

3. Schrödinger equations on compact globally symmetric spaces
   The Journal of Geometric Analysis 31 (2021), No. 11, 10778-10819, 42 pp. arXiv:2005.00429

2. Strichartz estimates for the Schrödinger equation on products of odd-dimensional spheres
   Nonlinear Analysis 199 (2020), 112052, 21 pp. arXiv:2301.02823

1. Strichartz estimates for the Schrödinger flow on compact Lie groups
   Analysis & PDE 13 (2020), No. 4, 1173-1219, 47 pp. arXiv:1703.07548

SURVEY PAPERS

1. Analysis on compact symmetric spaces: eigenfunctions and nonlinear Schrödinger equations
   In: Methusalem Lectures, Trends in Mathematics vol. 3 (2024), 235-240, Birkhäuser, Cham.

TALKS	AMS Sectional Meeting on Recent Trends in Harmonic Analysis and PDE, U. of Kansas	March 2025

TALKS

AMS Sectional Meeting on Recent Trends in Harmonic Analysis and PDE, U. of Kansas — March 2025

NZMS+AustMS+AMS Meeting on Harmonic Analysis and Hamiltonian PDE, U. of Auckland — Dec. 2024

"Semiclassical fun with SU(3)"
Prairie Analysis Seminar 2024, University of Kansas — October 2024

"Semiclassical fun with SU(3)"
Analysis Seminar, University of Cincinnati — September 2024

"Bounds of restriction of characters to submanifolds"
Analysis Seminar, Southern University of Science and Technology — June 2024

"The modified KdV in modulation spaces: conservation laws and equicontinuity of solutions"
Seminar, Beijing Institute of Technology — June 2024

"Bounds of restriction of characters to submanifolds"
Analysis Seminar, University of Wisconsin–Madison — May 2024

"Bounds of restriction of characters to submanifolds"
Seminar, Beijing Institute of Technology — January 2024

"Harmonic analysis on compact symmetric spaces"
Global Young Scholars Forum, Beijing Normal University — December 2023

"L^p norms of Laplacian eigenfunctions on compact symmetric spaces"
Young Scholars Forum, ShanghaiTech University — December 2023

"L^p norms of Laplacian eigenfunctions on compact symmetric spaces"
Young Mathematician Forum, Shanghai Jiao Tong University — December 2023

"Harmonic analysis on compact symmetric spaces"
Vision Forum for International Young Scholars, Beihang University — December 2023

"L^p norms of Laplacian eigenfunctions on compact symmetric spaces"
Global Forum for Young Mathematicians, SUSTech — November 2023

"L^p norms of Laplacian eigenfunctions on compact Lie groups"
Teli Forum for International Young Scholars, Beijing Institute of Technology — November 2023

"Discrete Fourier restriction and the Kloosterman circle method"
Colloquium, Huaibei Normal University — September 2023

"Fourier restriction type problems on compact Lie groups "
Seminar, Beijing Institute of Technology — September 2023

"Nonlinear Schrödinger equation on compact symmetric spaces"
Methusalem Junior Analysis & PDE Seminar, Ghent University — November 2021

"Fourier restriction bounds on compact symmetric spaces"
Conference on Harmonic Analysis and Symmetric Spaces, UW–Madison — October 2021

"Strichartz estimate for the Schrödinger equation on compact globally symmetric spaces"
Oberseminar Analysis, Bielefeld University — April 2021

"Schrödinger equations on compact globally symmetric spaces"
Weekly Seminar on Geometric and Functional Inequalities and Applications, UConn — February 2021

"Size of Laplacian eigenfunctions on compact symmetric spaces"
AMS Sectional Meeting on Geometric Inequalities and Nonlinear PDEs, UTEP — September 2020

"Strichartz estimates for the Schrödinger equation on compact symmetric spaces"
AMS Sectional Meeting on Analysis on Homogeneous Spaces, Tufts U. (Cancelled over Covid) — Mar. 2020

SERVICE

Referee for research journals including *Journal of Functional Analysis*, *Selecta Mathematica* and

Transactions of the American Mathematical Society

Co-organizer of the Analysis and Probability Seminar at the U. of Connecticut, Fall 2020 and Spring 2021

Reviewer for Mathematical Reviews and zbMATH Open

TEACHING EXPERIENCE	**As Instructor**

– Calculus I (two sections), University of Cincinnati	Spring 2025
– College Algebra (two sections), University of Cincinnati	Fall 2024
– Linear Algebra B ("B" stands for "for the Physical Sciences"), Peking University	Fall 2023
– Linear Algebra B, Peking University	Fall 2022
– Advanced Mathematics B (i.e. Calculus for the Physical Sciences), Peking University	Fall 2021
– Partial Differential Equations (two classes), University of Connecticut	Spring 2021
– Partial Differential Equations (two classes), University of Connecticut	Fall 2020
– Axiomatic Geometry (two classes), University of Connecticut	Spring 2020
– Introduction to Complex Variables (two classes), University of Connecticut	Fall 2019
– Partial Differential Equations (two classes), University of Connecticut	Spring 2019
– Honors Calculus II, University of Connecticut	Fall 2018
– Honors Multivariable Calculus, University of Connecticut	Fall 2018
– Calculus for Life Sciences Students II, UCLA	Summer 2017

As Teaching Assistant

– Probability Theory II, UCLA	Spring 2018, Spring 2017, Winter 2017, Winter 2016
– Algebra for Applications, UCLA	Winter 2018
– Analysis I, UCLA	Fall 2017, Winter 2016, Fall 2015
– Probability Theory I, UCLA	Winter 2017, Winter 2015
– Differential and Integral Calculus, UCLA	Fall 2016
– Linear & Nonlinear Systems of Differential Equations, UCLA	Fall 2015, Spring 2015, Winter 2014
– Mathematical Game Theory, UCLA	Summer 2015
– Partial Differential Equations, UCLA	Spring 2015
– Discrete Structures, UCLA	Winter 2015
– Precalculus, UCLA	Fall 2014, Fall 2012
– Calculus for Life Sciences Students I, UCLA	Fall 2014
– Linear Algebra I, UCLA	Summer 2014
– Differential Geometry II, UCLA	Spring 2014
– Ordinary Differential Equations, UCLA	Spring 2014, Winter 2014
– Integration and Infinite Series, UCLA	Fall 2013
– Complex Analysis for Applications, UCLA	Spring 2013
– Differential Equations, UCLA	Winter 2013

REFERENCE	Rowan Killip	killip@math.ucla.edu
	Simon Marshall	marshall@math.wisc.edu
	Terence Tao	tao@math.ucla.edu
	Monica Visan	visan@math.ucla.edu