Yunfeng Zhang - Curriculum Vitae

CONTACT INFORMATION	Department of Mathematical Sciences phone: (513) 556-4088 University of Cincinnati email: zhang8y7@ucmail.uc.edu Cincinnati, OH 45221-0025 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 - now
TAL Assistant Professor, Peking University	2021 - 2024
Assistant Research Professor, University of Connecticut	2018 - 2021

EDUCATION

Ph.D. in Mathematics, UCLA Advisors: Rowan Killip and Monica Visan	2012 - 2018
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-PI, 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

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

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

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

PUBLICATIONS

5. Analysis on compact symmetric spaces: eigenfunctions and nonlinear Schrödinger equations
   In: Ghent Methusalem Colloquium 2021, Trends in Mathematics (2024), Birkhäuser.

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

INVITED TALKS	AMS Sectional Meeting on Recent Trends in Harmonic Analysis and PDE	March 2024
	NZMS+AustMS+AMS Sectional Meeting on Harmonic Analysis and Hamiltonian PDEs	Dec. 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 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	September 2020
	"Strichartz estimates for the Schrödinger equation on compact symmetric spaces" AMS Sectional Meeting on Analysis on Homogeneous Spaces	March 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 University of Connecticut, Fall 2020 and Spring 2021	
	Reviewer for Mathematical Reviews and zbMATH Open	

TEACHING EXPERIENCE	As Instructor –	
	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
	Ambar Sengupta	ambar.sengupta@uconn.edu
	Terence Tao	tao@math.ucla.edu
	Monica Visan	visan@math.ucla.edu