

Lan-Hsuan Huang

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Department of Mathematics, University of Connecticut, Storrs, CT 06269, USA

Citizenship: Taiwan and USA

Research interests

General Relativity and Geometric Analysis

Academic Positions

University of Connecticut

2020–present	Professor
2016–2020	Associate Professor
2012–2016	Assistant Professor
2018–2019	Institute for Advanced Study, Princeton (on leave from UConn) von Neumann Fellow
2009–2012	Columbia University Ritt Assistant Professor

Education

2004–2009	Stanford University , PhD in Mathematics (Advisor: Richard Schoen)
2000–2004	National Taiwan University , BS in Mathematics

Honors and Awards

2025–2026	Simons Fellow in Mathematics
2024	Fellow of the AMS
2018–2019	Simons Fellow in Mathematics
2015–2022	NSF CAREER Award

Selected Invited Talks

2023	van Winter Memorial Lecture in Mathematical Physics, University of Kentucky
2023	International Congress of Basic Science (ICBS), Beijing
2021	International Congress of Mathematical Physics (ICMP), Geneva, Switzerland
Colloquium	UC Santa Cruz, Chinese University of Hong Kong, Brown, Rutgers-Newark, Dartmouth, Tennessee, Duke, Wisconsin-Madison, UNC Chapel Hill, University of Minnesota, University of Colorado

Editorial Board

2022–present	Associate Editor, Journal of Mathematical Physics
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External Grants

2025–2026	Simons Fellow in Mathematics, Simons Foundation (\$134,492)
2023–2026	DMS 2304966: Geometric Boundary Value Problems in General Relativity (PI, \$350,358)

2022-2023	DMS 2231711: Conference: NEWGA - Northeast Workshop in Geometric Analysis (PI, \$31,999)
2022-2025	Civil, Mechanical and Manufacturing Innovation (CMMI)-2130668 “Collaborative Research: Computational Design of Multi-functional Minimal-Surface Lattice Structures” (co-PI, \$281,459)
2020-2024	DMS-2005588 “Mass Rigidity and Curvature Problems in Mathematical Relativity” (PI, \$250,336)
2018-2019	Simons Fellow in Mathematics, Simons Foundation (\$122,378)
2015-2023	NSF CAREER Award (PI, \$400,648)
2013-2016	DMS-1308837 “Geometric Partial Differential Equations in General Relativity” (PI, \$282,249)
2010–2013	DMS-1005560 (DMS-1301645) “Geometric Problems in General Relativity” (PI, \$125,645)

Mentorship

PhD students	Eric Lian , current
	Yeorgia Kafkoulis , current
	Aidan Wood , current
	Paul Tee , current
	Hyun Chul Jang , PhD 2020, Placement: Harry Bateman Research Instructor at CalTech
Post-doctors	Daniel Martin , PhD 2018, tenure-track AP at University of Hartford
	Zhongshan An , tenure-track AP at University of Science and Technology of China
	Armando Cabrera Placement: post-doctor at University of Tübingen
	Alan Parry Placement: tenure-track AP at Utah Valley University

Selected Publications

- *Bartnik mass minimizing initial data sets and improvability of the dominant energy scalar* (with D. Lee), **Journal of Differential Geometry** 126, 2 (2024), pp. 741-800
- *Static vacuum extensions with prescribed Bartnik boundary data near a general static vacuum metric* (with Z. An), **Annals of PDE** 10, 6 (2024), 57pp
- *Existence of static vacuum extensions with prescribed Bartnik boundary data* (with Z. An), **Cambridge Journal of Mathematics** Vol. 10, No. 1 (2022), pp. 1-68.
- *Equality in the spacetime positive mass theorem* (with D. Lee), **Communications in Mathematical Physics** 376 (2020), no. 3, 2379–2407.
- *Spacetime positive mass theorem in dimensions less than eight* (with M. Eichmair, D. Lee, and R. Schoen), **Journal of European Mathematical Society**, 18 (2016), no. 1, 83–121
- *Hypersurfaces with nonnegative scalar curvature* (with D. Wu), **Journal of Differential Geometry** 95 (2013) 249–278.
- *Foliations by stable spheres with constant mean curvature for isolated systems with general asymptotics*, **Communications in Mathematical Physics** 300 (2010), no. 2, 331-373.

Selected Organization Services

Fall 2024	SLMath Semester-length Program “New Frontiers in Curvature”
Summer 2023	SLMath Summer Graduate School on “Topics in Geometric Flows and Minimal Surfaces”