Contact Information

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Education

2012–2017 **Ph.D. in Mathematics**, New York University, New York, U.S.
Adviser: Erwin Lutwak, Deane Yang, and Gaoyong Zhang
Thesis: Geometric measures, affine invariants,
and their characterizations

2007–2011 **B.S. in Mathematics**, Shanghai University, Shanghai, China

Research Interests

convex geometry, geometric analysis, partial differential equations

Employment

Summer 2021 –	Assistant Professor at Syracuse University
Fall 2018 – Spring 2021	C.L.E. Moore Instructor at Massachusetts Institute of Technology Mentor: David Jerison
Fall 2017 – Spring 2018	Assistant Professor (Contract Faculty) at St. John's University
Summer 2017	Research Associates & Adjunct Assistant Professor at New York University

Grant

- NSF Grant DMS-2002778, DMS-2132330 (sole PI), 06/2020 — 05/2024, $159,159.00

Publications and Preprints

1. (with N. Fang, D. Ye, and Z. Zhang) The dual Orlicz curvature measures for log-concave functions and their related Minkowski problems, *submitted.* arXiv:2309.12260

2. (with Y. Huang, J. Liu, and D. Xi) Dual curvature measures for log-concave functions, *J. Differential Geom.*, accepted. arXiv:2210.02359v2

3. (with S. Chen, S. Hu, and W. Liu) On the planar Gaussian-Minkowski problem, *Adv. Math.*, 435 Part A: 109351, 2023. https://doi.org/10.1016/j.aim.2023.109351

4. (with L. Guo and D. Xi) The L_p chord Minkowski problem in a critical interval. *Math, Ann.*, 2023. https://doi.org/10.1007/s00208-023-02721-8

5. (with D. Xi, D. Yang, and G. Zhang) The L_p chord Minkowski problem, *Advanced Nonlinear Studies*, 23: pp. 20220041, 2023.

6. (with D. Xi) General affine invariances related to Mahler volume, *International Mathematics Research Notices*, 2022: 14151-14180, 2022.

7. (with Y. Huang and D. Xi) The Minkowski problem in Gaussian probability space, *Adv. Math.*, 385: Paper No. 107769, 36 pp, 2021.

8. (with K. Böröczky, E. Lutwak, D. Yang, and G. Zhang) The Gauss image problem, *Communications on Pure and Applied Mathematics*, 73: 1406-1452, 2020.

9. (with K. Böröczky, E. Lutwak, D. Yang, and G. Zhang) The dual Minkowski problem for symmetric convex bodies, *Adv. Math.*, 356:106805, 2019.

10. The L_p Aleksandrov problem for origin-symmetric polytopes, *Proc. Amer. Math. Soc.*, 147 (10): 4477-4492, 2019.

11. (with C. Chen, and Y. Huang) Smooth solutions to the L_p-dual Minkowski problem, *Math. Ann.*, 373 (3-4):953-976, 2019.

12. (with Y. Huang) On the L_p dual Minkowski problem, *Adv. Math.*, 332: 57-84, 2018.

13. Existence of solutions to the even dual Minkowski problem. *J. Differential Geom.*, 110 (3): 543-572, 2018.

14. The dual Minkowski problem for negative indices. *Calc. Var. Partial Differential Equations*, 56 (2):18, 2017.

15. On L_p-affine surface area and curvature measures. *Int. Math. Res. Not. IMRN*, (5): 1387–1423, 2016.

Invited Talks

- 2023 Jun. INdAM Meeting "Convex Geometry - Analytic Aspects" at Cortona, Italy. The Minkowski problem in Gaussian probability space. (**main speaker**)
- 2023 Jun. Summer Meeting of Canadian Mathematical Society at Ottawa. The Minkowski problem in Gaussian probability space.
- 2023 May. Chinese Academy of Sciences (virtual). The Minkowski problem in Gaussian probability space.
- 2022 Dec. Shanghai University (virtual). Dual curvature measures for log-concave functions.
- 2022 Dec. Shanxi Normal University (virtual). Dual curvature measures for log-concave functions.
- 2022 Nov. Cornell University. Dual curvature measures for log-concave functions.
- 2022 Sep. ICERM. Dual curvature measures for log-concave functions.
- 2021 Sep. Syracuse University. Mass transport problem on the unit sphere via Gauss map.
- 2021 May Jilin Normal University (virtual). Mass transport problem on the unit sphere via Gauss map.
- 2021 Mar. Syracuse University (virtual, colloquium). Recovering the shapes of convex bodies.
- 2021 Feb. Florida International University (virtual, colloquium). Recovering the shapes of convex bodies.

- 2021 Feb. University of Georgia (virtual, colloquium). Recovering the shapes of convex bodies.
- 2021 Jan. UC San Diego (virtual). Mass transport problem on the unit sphere via Gauss map.
- 2021 Jan. UC Santa Cruz (virtual, colloquium). Recovering the shapes of convex bodies.
- 2020 Oct. AMS special session (virtual) , The Minkowski problem in Gaussian probability space.
- 2020 Aug. University of Connecticut (virtual), Reconstruction of convex bodies via Gauss map.
- 2019 Jun. International Congress of Chinese Mathematicians, 45-min talk, The dual Minkowski problem for o-symmetric convex bodies.
- 2019 Jun. Fudan University, The dual Minkowski problem for o-symmetric convex bodies.
- 2019 Jun. Tongji University, The dual Minkowski problem for o-symmetric convex bodies.
- 2019 Jun. Shanghai University, The dual Minkowski problem for o-symmetric convex bodies.
- 2019 Jun. Hunan University, lecture series: An Introduction to Minkowski-type problems in convex geometry.
- 2019 May. AIM workshop, The even dual Minkowski problem for integer indices.
- 2019 Jan. University of Connecticut, PDE and Differential Geometry Seminar: The Gauss image problem.
- 2018 Mar. AMS special session at Ohio State University, The Aleksandrov problem and its recent development.
- 2017 Dec. St. Johns University, Minkowski problems and Monge-Ampère type equations.

- 2017 Sept. CUNY Graduate Center, Geometric Analysis Seminar: Minkowski-type problems in convex geometry.
- 2017 Feb. Case Western Reserve University, Analysis & Probability Seminar: On the dual Minkowski problem.
- 2017 Feb. Kent State University, Measure Theory Seminar: The dual Minkowski problem and its solution.
- 2015 Sep. Oaxaca, Mexico (CMO workshop): On L_p-affine surface area and curvature measures.

Courses Taught (multiple times)

- at Syracuse University

  as Instructor: MAT296 Calculus II, MAT-412 Introduction to Real Analysis I, MAT-512 Introduction to Real Analysis II, MAT-602 Fundamentals of Analysis II

- at MIT

  as Recitation Leader: 18.01A/18.02A Calculus, 18.02 Calculus, 18.03 Differential Equation

  as Instructor: 18.100Q Communication Intensive Real Analysis

- at St. John's University

  as Instructor: Pharmacy Statistics, Business Calculus, Pharmacy Calculus

- at New York University

  as Instructor: Engineering Calculus II, Calculus III

  as Recitation Leader: graduate Linear Algebra, undergraduate and graduate Real Analysis