Douglas J Stryker

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Employment

NSF Postdoctoral Scholar, Stanford University	2025–2026
Hermann Weyl Instructor, ETH Zürich	2026–2029

Education

Princeton University, Mathematics, Ph.D.	2020–2025
Advisor: Fernando Codá Marques	
National Defense Science and Engineering Graduate Fellow (2020–2023)	
Massachusetts Institute of Technology, Mathematics, S.B.	2016–2020

Papers

- Jared Marx-Kuo, Lorenzo Sarnataro, and Douglas Stryker, *Index, Intersections, and Multiplicity of Min-Max Geodesics*, arXiv e-prints (2024), arXiv:2410.02580.

- Douglas Stryker, *Min-max construction of prescribed mean curvature hypersurfaces in noncompact manifolds*, arXiv e-prints (2024), arXiv:2409.07330.

- Otis Chodosh, Chao Li, Paul Minter, and Douglas Stryker, *Stable minimal hypersurfaces in $\mathbf{R}^5$*, to appear in Ann. of Math., arXiv e-prints (2024), arXiv:2401.01492.

- Douglas Stryker, *Localization of min-max minimal hypersurfaces*, arXiv e-prints (2023), arXiv:2310.08363.

- Lorenzo Sarnataro and Douglas Stryker, *Existence of closed embedded curves of constant curvature via min-max*, to appear in J. Reine Angew. Math., arXiv e-prints (2023), arXiv:2306.04840.

- L. Sarnataro and D. Stryker, *Optimal regularity for minimizers of the prescribed mean curvature functional over isotopies*, Camb. J. Math. **13** (2025), no. 3, 609–706.

- Otis Chodosh, Chao Li, and Douglas Stryker, *Volume growth of 3-manifolds with scalar curvature lower bounds*, Proc. Amer. Math. Soc. **151** (2023), no. 10, 4501–4511.

- Otis Chodosh, Chao Li, Douglas Stryker, *Complete stable minimal hypersurfaces in positively curved 4-manifolds*, J. Eur. Math. Soc. (2024), published online first.

Undergraduate Papers

- Pavel Etingof, Daniil Klyuev, Eric Rains, and Douglas Stryker, *Twisted traces and positive forms on quantized Kleinian singularities of type A*, SIGMA Symmetry Integrability Geom. Methods Appl. **17** (2021), Paper No. 029, 31.

- Pavel Etingof and Douglas Stryker, *Short star-products for filtered quantizations, I*, SIGMA Symmetry Integrability Geom. Methods Appl. **16** (2020), Paper No. 014, 28.

- Douglas Stryker and Ao Sun, *Codimension bounds and rigidity of ancient mean curvature flows by the tangent flow at $-\infty$*, Commun. Contemp. Math. **24** (2022), no. 1, Paper No. 2050088, 18.

- Douglas Stryker and Ao Sun, *Construction of High Codimension Ancient Mean Curvature Flows*, arXiv e-prints (2019), arXiv:1908.02688.

Talks

UC Berkeley Geometry Seminar	Oct 2025
Oberwolfach Partial Differential Equations Workshop	Jul 2025
Rutgers Gauge Theory, Low-Dimensional Topology, and Geometric Analysis Conference	May 2025
AMS Sectional Meeting, Hartford, CT	Apr 2025
University of Cambridge Geometric Analysis Seminar	Mar 2025
Lehigh University Geometry Seminar	Mar 2025
Penn State University Geometry, Algebra, Physics Seminar	Jan 2025
Stanford University Geometry Seminar	Nov 2024
BICMR Geometric Analysis Seminar (online)	Oct 2024
Cornell University Geometric Analysis Seminar	Sep 2024
Rutgers University Geometric Analysis Seminar	Sep 2024
CHANGE Conference, ETH Zürich	Jun 2024
University of Chicago Geometric Analysis Seminar	Mar 2024
CUNY Geometric Analysis Seminar	Mar 2024
NYU Courant Geometric Analysis and Topology Seminar	Feb 2024
Rutgers–Newark Mathematics and Computer Science Colloquium	Feb 2024
Joint Mathematics Meeting Contributed Paper Session	Jan 2024
University of Toronto Geometry and Topology Seminar	Sep 2023
Johns Hopkins University Analysis and PDE Seminar	Jan 2023
Columbia University Geometry and Analysis Seminar	Nov 2022
Rutgers University Geometric Analysis Seminar	Nov 2022
Chinese University of Hong Kong Geometric Analysis Seminar (online)	Oct 2022

Teaching

Communicating Mathematics (Princeton MAT152)	Summer 2024
Multivariable Calculus (Princeton MAT201)	Spring 2024
Advanced Vector Calculus (Princeton MAT203)	Fall 2023

Mentorship

Princeton Mathematics Directed Reading Program	2020–2023
MIT Math Learning Center	2018–2020

Organization

Princeton Mathematics Graduate Student Seminar	2021–2022
Princeton Mathematics First Year Seminar	2020–2021

Awards

Jon Bucsela Award, MIT Mathematics	2020
Hartley Rogers Jr. Prize, MIT Mathematics	2019
Anna Pogosyants Undergraduate Research Award, MIT EECS	2018