

Yangyang Li

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Research Interests

Differential Geometry, PDEs

Education

Sept 2017 - **Princeton University** — Mathematics — Ph.D.
Present *Thesis Advisor:* Professor Fernando Coda Marques

Feb 2017 - **École Normale Supérieure** — Mathematics — Visiting Program
June 2017 *Supervisor:* Professor Jacques Smulevici

Aug 2013 - **Tsinghua University** — Mathematical Sciences — Bachelor of Science
July 2017

Accepted Articles

Existence of Infinitely Many Minimal Hypersurfaces in Higher-dimensional Closed Manifolds with Generic Metrics, [arXiv:1901.08440](https://arxiv.org/abs/1901.08440), 2019 January,
Accepted by **Journal of Differential Geometry**

On the Existence of Minimal Hypersurfaces with Arbitrarily Large Area and Morse Index, [arXiv:2001.07689](https://arxiv.org/abs/2001.07689), 2020 January,
Accepted by **Geometry & Topology**

Preprints

An Improved Morse Index Bound of Min-Max Minimal Hypersurfaces, [arXiv:2007.14506](https://arxiv.org/abs/2007.14506), 2020 July

Generic Regularity of Minimal Hypersurfaces in Dimension 8 (joint with Zhihan Wang), [arXiv:2012.05401](https://arxiv.org/abs/2012.05401), 2020 October

Equivariant Manifolds with Positive Scalar Curvature (joint with Tsz-Kiu Aaron Chow), [arXiv:2109.12725](https://arxiv.org/abs/2109.12725), 2021 September

Academic Experiences

- Invited Talks

Geometric Analysis Session, CMS 75th+1 Anniversary Summer Meeting, 2021 June
Talk on *Generic regularity of minimal hypersurfaces in dimension 8*

Geometric Analysis Seminar, University of Chicago, 2021 May
Talk on *Generic regularity of minimal hypersurfaces in dimension 8*

Differential Geometry Seminar, UC San Diego, 2021 April
Talk on *Generic regularity of minimal hypersurfaces in dimension 8*

The 1st Geometric Analysis Festival, 2021 February
Talk on *Generic regularity of minimal hypersurfaces in dimension 8*

Analysis and Partial Differential Equations Seminar, John Hopkins University, 2020 November
Talk on *Generic regularity of minimal hypersurfaces in dimension 8*

AMS Special Session on Variational Aspects of Geometric Analysis, 2020 October
Talk on *Min-max minimal hypersurfaces in higher dimensions*

Geometry Seminar, Stanford University, 2020 October
Talk on *Existence of minimal hypersurfaces with arbitrarily large area and Morse index*

Differential Geometry Seminar, UC Santa Barbara, 2020 March
Talk on *Existence of minimal hypersurfaces with arbitrarily large area and Morse index*

■ **Contributed Talks**

Minicourse, Tsinghua University, 2019 July
5-day minicourse on *Almgren-Pitts min-max theory*. ([Minicourse notes](#))

Geometric Analysis Learning Seminar, Princeton University, 2019 March
Talk on *Minimal hypersurfaces for generic metrics and Yau's conjecture*

Graduate Student Seminar, Princeton University, 2017 October
Talk on *Positive mass theorem*

■ **Service**

Review for: Geometric and Functional Analysis, Transactions of the American Mathematical Society, Journal of Geometric Analysis.

Teaching

Spring 2021	MAT 355	Introduction to Differential Geometry, Assistant Instructor
Fall 2020	MAT 202	Linear Algebra, Preceptor
Spring 2020	MAT 330	Complex Analysis with Applications, Assistant Instructor
Fall 2019	MAT 335	Analysis II: Complex Analysis, Assistant Instructor
Summer 2019	Princeton University Summer School in Geometric Analysis,	Assistant Instructor
Spring 2019	MAT 218	Accelerated Honors Analysis II, Assistant Instructor
Fall 2018	MAT 215	Honors Analysis, Assistant Instructor

Honors and Awards

2016	S.T. Yau College Student Mathematics Contests, All-Around Gold Medal
2016	Tsinghua Top Grade Scholarship
2014-2016	Member of Tsinghua Xuetaang Mathematics Program
2014	China National Scholarship