

Curriculum Vitae

Qile Yan

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Employment

School of Mathematics, University of Minnesota – Twin Cities	U.S.
<i>Postdoctoral Associate</i>	September 2023 – present
<ul style="list-style-type: none">Mentor: Prof. Douglas N. Arnold	

Education

The Pennsylvania State University	U.S.
<i>Ph.D. in Mathematics</i>	August 2018 – August 2023
<ul style="list-style-type: none">Thesis supervisor: Prof. John Harlim	

The Chinese University of Hong Kong	Hong Kong
<i>M.Phil. in Mathematics</i>	August 2016 – July 2018
<ul style="list-style-type: none">Thesis supervisor: Prof. Jun Zou	

Tongji University	Shanghai, China
<i>B.Sc. in Applied Mathematics</i>	September 2012 - July 2016
<ul style="list-style-type: none">Thesis supervisor: Prof. Wei Wang	

Research Interests

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- Numerical Analysis, Numerical PDEs on Manifolds
 - Applied Mathematics, Anderson Localization

Preprints

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- Generalized Moving Least-Squares Methods for Solving Vector-valued PDEs on Unknown Manifolds, submitted, accepted by *SIAM Journal on Scientific Computing*. (with Rongji Li and Shixiao W. Jiang)

Publications

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- Solving forward and inverse PDE problems on unknown manifolds via physics-informed neural operators, *SIAM Journal on Scientific Computing*, 48(1):C136-C163. (2026)
(with Anran Jiao, John Harlim and Lu Lu)
 - Generalized finite difference method on unknown manifolds, *Journal of Computational Physics*, 502 (2024), 112812.
(with Shixiao W. Jiang, Rongji Li and John Harlim)
 - Spectral methods for solving elliptic PDEs on unknown manifolds, *Journal of Computational Physics*, 486 (2023), 112132.
(with Shixiao W. Jiang and John Harlim)
 - Kernel-based methods for solving time-dependent advection-diffusion equations on manifolds, *Journal of Scientific Computing*, 94 (2023).
(with Shixiao W. Jiang and John Harlim)

Teaching

University of Minnesota – Twin Cities,

Instructor

- MATH2243 Linear Algebra and Differential Equations Fall 2025
- MATH2243 Linear Algebra and Differential Equations Fall 2024
- MATH4242 Applied Linear Algebra Spring 2024
- MATH2243 Linear Algebra and Differential Equations Fall 2023

The Pennsylvania State University

Instructor

- MATH230 Multivariable Calculus and Vector Analysis Fall 2021
- MATH230 Multivariable Calculus and Vector Analysis Fall 2020

The Chinese University of Hong Kong

Tutor

- MATH1010 University Mathematics Fall 2017
- MATH2010 Advanced Calculus Summer 2017
- MATH1010 University Mathematics Fall 2016