

Curriculum Vitae

Qile Yan

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Employment

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| School of Mathematics, University of Minnesota – Twin Cities | U.S. |
| <i>Postdoctoral Associate</i> | September 2023 – present |

- Mentor: Prof. Douglas N. Arnold

Education

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| The Pennsylvania State University | U.S. |
| <i>Ph.D. in Mathematics</i> | August 2018 – August 2023 |

- Thesis supervisor: Prof. John Harlim

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| The Chinese University of Hong Kong | Hong Kong |
| <i>M.Phil. in Mathematics</i> | August 2016 – July 2018 |

- Thesis supervisor: Prof. Jun Zou

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| Tongji University | Shanghai, China |
| <i>B.Sc. in Applied Mathematics</i> | September 2012 - July 2016 |

- Thesis supervisor: Prof. Wei Wang

Research Interests

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

Preprints

- Generalized Moving Least-Squares for Solving Vector-valued PDEs on Unknown Manifolds, submitted.
(with Rongji Li and Shixiao W. Jiang)

Publications

- Solving forward and inverse PDE problems on unknown manifolds via physics-informed neural operators, accepted by *SIAM Journal on Scientific Computing*.
(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