

# Curriculum Vitae

## Qile Yan

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### Employment

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

### Education

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

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

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

### 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)
  - 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)

### Publications

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- 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

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### 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