

# Curriculum Vitae

## Qile Yan

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### Employment

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

- Mentor: Prof. Douglas N. Arnold

### Education

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

- Thesis supervisor: Prof. John Harlim

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

- Thesis supervisor: Prof. Jun Zou

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

- Thesis supervisor: Prof. Wei Wang

### Research Interests

- Numerical Analysis, Scientific Computing, Meshfree Methods on Point Clouds
- 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**

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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