

JIAYI ZHOU

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EDUCATION

California Institute of Technology

Pasadena, USA

Ph.D., Department of Computing and Mathematical Sciences

2026 -

- Advised by Anima Anandkumar
- Research Interests: Monte-Carlo Methods, Inverse Problems, Operator Learning

Peking University

Beijing, China

B.S., School of Mathematical Sciences

2022 - 2026

- Advised by Daniel Zhengyu Huang
- Research Interests: Scientific Machine Learning, Computational Fluid Dynamics

AWARDS

SURF Award, Caltech

2025

National First Prize, China Undergraduate Mathematical Contest in Modelling

2024

The Third Prize Scholarship, Peking University

2022-2024

Merit Student, Peking University

2022-2024

PUBLICATIONS

[4] Mingyu Han*, Daniel Zhengyu Huang*, Yuhan Wang*, Yanshu Zhang*, **Jiayi Zhou***. Geometric Generalization of Neural Operators from Kernel Integral Perspective. *Preprint*.

[3] **Jiayi Zhou**, Atharva Aalok, Valentin Duruisseaux, Xinyi Li, Juan Alonso, Anima Anandkumar. Robust Shape Optimization with Neural Shape Representations and Neural Operators. *In preparation*.

[2] **Jiayi Zhou**, Valentin Duruisseaux, Daniel Zhengyu Huang, Anima Anandkumar. Boundary Augmented Neural Operators for Better Generalization to Unseen Geometries. *NeurIPS AI for Science Workshop*, 2025.

[1] Chenyu Zeng*, Yanshu Zhang*, **Jiayi Zhou***, Yuhan Wang, Zilin Wang, Yuhao Liu, Lei Wu, Daniel Zhengyu Huang. Point Cloud Neural Operator for Parametric PDEs on Complex and Variable Geometries. *Computer Methods in Applied Mechanics and Engineering*, 2025.

* denotes equal contribution, in alphabetical order.

SERVICES

Reviewer of JMLR, ICML

Member, Office of International Relations in Peking University

2023-2024