

# SIZHUANG HE

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## RESEARCH INTEREST

Machine Learning and Computational Biology

## EDUCATION

### **Yale University**

*Ph.D. in Computer Science*

New Haven, CT

Aug. 2024 – Present

- Advisor: Dr. David van Dijk
- Research Focus: Machine Learning for Computational Biology

### **University of Michigan, Ann Arbor**

*Bachelor of Science in Honors Mathematics (Minor in Computer Science)*

Ann Arbor, MI

Sep. 2019 – May 2023

- Graduated with Highest Distinction
- GPA: 4.0 / 4.0

## PUBLICATIONS

### **Non-Markovian Discrete Diffusion with Causal Language Models**

*Y. Zhang\*, S. He\*, et al. (NeurIPS 2025)*

### **TANTE: Time-Adaptive Operator Learning via Neural Taylor Expansion**

*Z. Wu, S. Wang, S. Zhang, S. He, et al. (In Review)*

### **Intelligence at the Edge of Chaos**

*S. Zhang\*, A. Patel\*, S. Rizvi, N. Liu, S. He, et al. (ICLR 2025)*

### **COAST: Intelligent Time-Adaptive Neural Operators**

*Z. Wu, S. Zhang, S. He, et al. (AI4MATH Workshop at ICML 2025)*

### **Scaling Large Language Models for Next-Generation Single-Cell Analysis**

*S. Rizvi\*, D. Levine\*, A. Patel\*, S. Zhang\*, E. Wang\*, S. He, et al. (In Review)*

### **CaLMFlow: Flow Matching using Causal Language Models**

*S. He\*, D. Levine\*, et al. (arXiv)*

### **Operator Learning Meets Numerical Analysis: Improving Neural Networks through Iterative Methods**

*E. Zappala, D. Levine, S. He, et al. (arXiv)*

\* denotes equal contribution

## HONORS & AWARDS

- **Fan Family Fellowship**, Yale University (2025)
- **Outstanding Achievement in Mathematics Award**, University of Michigan, Ann Arbor (2023)
- **James B. Angell Scholar**, University of Michigan, Ann Arbor (2023)
- **University Honors**, University of Michigan, Ann Arbor (2022, 2023)

## SERVICES

### **Journal Reviewer**

- Transactions on Machine Learning Research

### **Conference Reviewer**

- International Conference on Learning Representations, 2026
- AI4MATH Workshop at International Conference on Machine Learning, 2025