

# 吴科科

☎ 188-0621-7075

✉ wukekever@sjtu.edu.cn

🏠 <https://wukekever.github.io>

## 🎓 教育经历

上海交通大学  
数学科学学院 博士

2021.09 – 2024.06  
上海

- 专业: 计算数学
- 研究方向: 深度学习方法求解多尺度动理学方程
- 导师: 马征

## ⚙️ 技能

1. 熟练使用有限差分法、有限元和谱方法等数值求解一般偏微分方程
  2. 使用 Git 进行版本管理
  3. 使用 Docker 和 anaconda 等配置深度学习环境, 并熟悉多种框架的深度学习方法求解偏微分方程
- 编程语言: Python, MATLAB, Julia
  - 机器学习框架: JAX, TensorFlow, PyTorch

## 📖 学术成果

### - 2023

- [7] Keke Wu et al., Asymptotic-Preserving Neural Network based on Even-odd Decomposition for Multi-scale Gray Radiative Transfer Equations.
- [6] Keke Wu, Xiong-bin Yan, Shi Jin, and Zheng Ma. Capturing the Diffusive Behavior of the Multi-scale Linear Transport Equations by Asymptotic-Preserving Convolutional DeepONets. arXiv preprint arXiv:2306.15891, 2023.
- [5] Shi Jin, Zheng Ma, and Keke Wu. Asymptotic-preserving neural networks for multiscale kinetic equations. arXiv preprint arXiv:2306.15381, 2023. (Corresponding author)
- [4] Shi Jin, Zheng Ma, and Keke Wu. Asymptotic-preserving neural networks for multiscale time-dependent linear transport equations. Journal of Scientific Computing, 94(3):57, 2023. (Corresponding author)

### - 2022

- [3] Keke Wu, Xiangru Jian, Rui Du, Jingrun Chen, and Xiang Zhou. Roughness Index for Loss Landscapes of Neural Network Models of Partial Differential Equations. arXiv preprint arXiv:2103.11069, 2021.
- [2] Liyao Lyu, Keke Wu, Rui Du, and Jingrun Chen. Enforcing Exact Boundary and Initial Conditions in the Deep Mixed Residual Method. CSIAM Transactions on Applied Mathematics, 2(4)(2021) 748-775. (Equal contribution)

### - 2021

- [1] Jingrun Chen, Rui Du, and Keke Wu. A Comparison Study of Deep Galerkin Method and Deep Ritz Method for Elliptic Problems with Different Boundary Conditions. Communications in Mathematical Research, 36(3)(2020) 354-376. (Corresponding author)

## 📄 报告

国际工业与应用数学大会 (ICIAM 2023)  
Waseda University Minisymposium

2023.08.20 – 2023.08.25  
东京

- Topic: Analysis and Numerics on Deep Learning Based Methods for Solving PDEs

## 📌 其他

- GitHub: <https://github.com/wukekever>
- ResearchGate: <https://www.researchgate.net/profile/Keke-Wu-8>
- Google Scholar: <https://scholar.google.com/citations?user=qVvgz3IAAAAJ>
- 语言: 英语 - CET6