QIAN ZHANG

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EDUCATION

Brown University
Ph.D. Candidate in Applied Mathematics — *2021.09 - Present*
Sc.M. in Applied Mathematics — *2021.09 - 2024.06*

Peking University (PKU)
Bachelor of Science, Theoretical and Applied Mechanics — *2016.09 - 2020.07*

WORK EXPERIENCE

2021.09-Present, Research Assistant, Brown University
2022.09-2023.06, Teaching Assistant, Brown University
2020.09-2021.06, Research Assistant, Peking University

PUBLICATION

Bradley H. Theilman, **Qian Zhang**, Adar Kahana, Eric C. Cyr, Nathaniel Trask, James B. Aimone, George Em Karniadakis. Spiking Physics-Informed Neural Networks on Loihi 2. 2024 Neuro Inspired Computational Elements Conference (NICE) (2024)

Qian Zhang, Chenxi Wu, Adar Kahana, Youngeun Kim, Yuhang Li, George Em Karniadakis, Priyadarshini Panda. Artificial to Spiking Neural Networks Conversion for Scientific Machine Learning. arXiv:2308.16372.

Qian Zhang, Adar Kahana, George Em Karniadakis, Panos Stinis. SMS: Spiking Marching Scheme for Efficient Long Time Integration of Differential Equations. arXiv:2211.09928.

Adar Kahana, **Qian Zhang**, Leonard Gleyzer, George Em Karniadakis. Spiking Neural Operators for Scientific Machine Learning. arXiv:2205.10130.

Qian Zhang, Konstantina Sampani, Mengjia Xu, Shengze Cai, Yixiang Deng, He Li, Jennifer K. Sun, George Em Karniadakis. AOSLO-net: A Deep Learning-Based Method for Automatic Segmentation of Retinal Microaneurysms From Adaptive Optics Scanning Laser Ophthalmoscopy Images. *Translational Vision Science & Technology* 11(8):7 (2022)

Xinyi Guan, **Qian Zhang**, Shaoqiang Tang. Numerical boundary treatment for shock propagation in the fractional KdV-Burgers equation. *Comput Mech* 69, 201–212 (2022).

Baiyili Liu, **Qian Zhang**, Shaoqiang Tang. Stable heat jet approach for temperature control of Fermi-Pasta-Ulam beta chain, *Theoretical and Applied Mechanics Letters* 11(1):100226 (2021)

Qian Zhang, Dan Qiao, and Shaoqiang Tang, Designing Artificial Boundary Conditions for Atom Chains by Machine Learning, *Mechanics in Engineering* 42(1) (2020)

AWARDS AND ACHIEVEMENTS

Award for Excellent Undergraduate Thesis, College of Engineering, PKU — 2020.06
Shuping Scholarship — 2019.12, 2018.12, 2017.12
Award for Academic Excellents, PKU — 2018.12
10th National Undergraduate Mathematics Competition, Second Prize — 2018.11
34th National (regional) Undergraduate Physics Competition, First Prize — 2017.12
28th Beijing Mathematics Competition, Second Prize — 2017.11

LANGUAGE

Chinese (Native), English (Fluent)

PROGRAMMING SKILLS

Python (JAX, PyTorch, Tensorflow, NumPy, pandas, scikit-learn, matplotlib, etc), Julia, MATLAB, C/C++, R (tidyverse)