

# Wei Fang's CV [\[Homepage\]](#)[\[GitHub\]](#) [\[Google Scholar\]](#)

## About

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## Education and Working Experience

2015.9-2019.6	Tsinghua University, Department of Automation, bachelor
2016.9-2019.6	Tsinghua University, School of Economics and Management, the second bachelor's degree
2019.9-2024.6	Peking University, School of Computer Science, Ph.D., advised by Professor <a href="#">Yonghong Tian</a>
2024.7-2025.2	Peking University, School of Electronic and Computer Engineering, Research Assistant Professor
2025.3-Now	Yale University, Electrical & Computer Engineering, Postdoc Association, mentored by Prof. <a href="#">Priya Panda</a>

## Publications

My research focuses on the deep learning algorithms of Spiking Neural Networks (SNNs), which is an inter-discipline of computational neuroscience, machine learning, deep learning, recurrent neural networks (RNNs), quantized neural networks, and neuromorphic computing. In general, deep SNNs can be regarded as special RNNs with activations quantized as 0 and 1. They have the advantages of high biologically plausible, event-driven, and sparse computation, and show extremely high power-efficiency in neuromorphic chips.

Citations: 2961, h-index: 15, i10-index: 15.

### First/Corresponding-author Publications

Papers	Publishers	Citations
<a href="#">Incorporating Learnable Membrane Time Constant to Enhance Learning of Spiking Neural Networks</a>	ICCV 2021	846
<a href="#">Deep Residual Learning in Spiking Neural Networks</a>	NeurIPS 2021	719
<a href="#">SpikingJelly: An Open-source Machine Learning Infrastructure Platform for Spike-based Intelligence</a>	Science Advances, 2023	365
<a href="#">Parallel Spiking Neurons with High Efficiency and Ability to Learn Long-term Dependencies</a>	NeurIPS 2023	64
<a href="#">Review of Surrogate Gradient Methods in Spiking Deep Learning</a> (In Chinese)	Chinese Journal of Computers 2025	
<a href="#">Differential Coding for Training-Free ANN-to-SNN Conversion</a>	ICML 2025	2
<a href="#">Multiplication-Free Parallelizable Spiking Neurons with Efficient Spatio-Temporal Dynamics</a>	NeurIPS 2025	1

### Other Publications

Papers	Publishers	Author Rank	Citations
<a href="#">Optimal ANN-SNN Conversion for High-accuracy and Ultra-low-latency Spiking Neural Networks</a>	ICLR 2022	2	317
<a href="#">Exploring Loss Functions for Time-based Training Strategy in Spiking Neural Networks</a>	NeurIPS 2023	2	32
<a href="#">Optimal ANN-SNN Conversion with Group Neurons</a>	ICASSP 2024	2	8
<a href="#">Pruning of Deep Spiking Neural Networks through Gradient Rewiring</a>	IJCAI 2021	3	87
<a href="#">State Transition of Dendritic Spines Improves Learning of Sparse Spiking Neural Networks</a>	ICML 2022	3	52

<a href="#">Training Spiking Neural Networks with Event-driven Backpropagation</a>	NeurIPS 2022	3	53
<a href="#">A Unified Framework for Soft Threshold Pruning</a>	ICLR 2023	3	30
<a href="#">Self-architectural Knowledge Distillation for Spiking Neural Networks</a>	Neural Networks	4	16
<a href="#">Spike-based Dynamic Computing with Asynchronous Sensing-Computing Neuromorphic Chip</a>	Nature Communications	8	99

## Academic Service

Journal Reviewer: IEEE Transactions on Cognitive and Developmental Systems, IEEE Transactions on Neural Networks and Learning Systems, IEEE Transactions on Pattern Analysis and Machine Intelligence, Neural Networks

Conference Reviewer: CVPR, ICCV, NeurIPS, ICLR

## Projects

[SpikingJelly: an open-source deep learning framework for Spiking Neural Networks \(SNNs\)](#)

- 1500+ stars, 250+ forks, 600+ issues/pull requests
- There are more than 210 [publications](#) using SpikingJelly, including ICCV 4, IJCAI 3, NeurIPS 9, CVPR 5, ICLR 4, AAAI 6, ICML 2, ECCV 3, TMLR 1, ACM MM 1, PR 1, Nature Communications 2, IEEE Transactions 14

[Python JPEG Encoder](#)

- This project starts from scratch to create a standardized JPEG file

[Tello GUI Controller](#)

- A GUI controller based on Qt5 for the DJI Tello UAV.

### Contributions to other open-source projects

- [Lava DL](#) (a library of deep learning tools for deep event-based networks under Intel's leadership): fix the bug of WgtScaleBatchNorm, block.AbstractInput
- [Awesome Model Quantization](#)(Collections about model quantization): fix the errors of paper URLs

## Awards

- Outstanding Students of the Year of National Engineering Laboratory for Video Technology, Peking University, in 2021
- Outstanding developers of the OpenIntelligence (OpenI) community in 2020, 2021, and 2022
- The first prize of the fourth China Software Open Source Innovation Competition
- Merit Student of Peking University in the academic year of 2021-2022
- College Scholarship (Schlumberger Scholarship) of School of Computer Science, Peking University in the academic year of 2021-2022
- Merit Student of Peking University in the academic year of 2022-2023
- College Scholarship (Ubiquant Scholarship) of School of Computer Science, Peking University in the academic year of 2022-2023
- “Shi Qingyun Academician's Excellent Thesis Award” in 2023 (only two papers will be selected from the students in School of Intelligence Science and Technology, School of Computer Science and School of Mathematical Sciences in Peking University)
- Annual Top 10 students of the National Engineering Laboratory for Video Technology (rank first)
- Outstanding Graduate of Peking University, 2024
- Outstanding Graduate of Beijing, 2024
- Outstanding Doctoral Dissertation Award, Peking University, 2024

Note: Data in this CV are as of 2025.09.18