

Yihan Lin

(+86)188-0130-2019

linyih20@mails.tsinghua.edu.cn



WeChat ID: ordinarabbit

Personal Page: [lyh983012.github.io](https://github.com/lyh983012)

Education Experience

9/2020~	Ph.D. Candidate	Tsinghua University
	Center for Brain-Inspired Computing Research	
	Department of Precision Instrument	
9/2016~	Undergraduate student (B.S. degree) GPA: 3.85/4	Tsinghua University
7/2020	Major in Instruments Science and Technology	
	Department of Precision Instrument Rank: 2/62	
9/2018~	Minor Degree in CS GPA: 3.91/4	Tsinghua University
7/2020	Department of Computer Science and Technology	

Research Interests

- Brain-inspired Vision Sensing-Perception System
Develop imaging, perception, and inference system based on brain-inspired complementary vision sensors and advanced optical system for low-latency high-performance embodied intelligence and scientific imaging.
- Brain-inspired Learning Theorem
Propose the visual primitive-based representation theorem inspired by the human visual system, guiding adaptive visual applications in open extreme environments.
Investigate efficient training of brain-inspired spike-based learning algorithms.
- Low-level Computer Vision Algorithms
Investigate artificial intelligence-based image signal processing and low-level visual algorithms for multimodal multi-pathway data fusion.

Publications

1. Yang Z†, Wang T†, **Lin Y†**, et al, and Luping Shi, A Vision Sensor Chip with Complementary Pathways for Open-world Sensing, *Nature*, 30 May, 2024. (IF: 64.8, Q1, **Cover paper**)
2. **Lin Y**, et al. Rethinking Pretraining as a Bridge From ANNs to SNNs." *IEEE Transactions on Neural Networks and Learning Systems*, Early Access, 2022. (IF: 10.4, Q1)
3. **Lin Y†**, Sun J†, et al., Spatiotemporal Input Control: Leveraging Temporal Variation in Network Dynamics, *IEEE/CAA Journal of Automatica Sinica*, vol. 9, no. 4, pp. 635-651, April 2022. (IF: 11.8, Q1)
4. He L†, Xu Y†, He W†, **Lin Y†**, et al., Network Model with Internal Complexity Bridges Artificial Intelligence and Neuroscience, *Nature Computational Science*, accepted in principle (IF: 11.3, Q1)
5. **Lin Y**, Ding W, Qiang S, et al. ES-ImageNet: A Million Event-Stream Classification Dataset for Spiking Neural Networks. *Frontiers in Neuroscience*, 2021: 1546. (IF: 4.3 Q2)
6. Wu Z, Zhang H, **Lin Y**. et al. LIAF-Net: Leaky Integrate and Analog Fire Network for Lightweight and Efficient Spatiotemporal Information Processing. 2021, *IEEE Transactions on Neural Networks and Learning Systems*, PP(99):1-14. (IF: 10.4, Q1)

Work Experience

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| 8/2021~now | Intern ISP engineer in Lynxi co., Beijing. |
| 7/2018~now | Research Assistant of CBICR in THU. |
| 6/2023~8/2023 | Intern computer vision algorithm engineer in Yealink Co., Xiamen. |
| 9/2020~2/2021 | Teaching Assistant for the class <i>Computer principle and Application</i> . |
| 7/2019~9/2019 | Research Assistant of IoF laboratory in NTU. |

Social Activities

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| 9/2019~6/2020 | Chairman of Student Association for science and technology of DPI,
Tsinghua University |
| 9/2018~6/2019 | Vice Chairman of Student Association for science and technology of DPI,
Tsinghua University. |

- 1/2018~2/2018 Team leader of 'Coal to Gas' research team in Wangdu, Hebei Province, P. R. China
- 9/2017~6/2018 Director of the office of Fujian Cultural Exchange Association of Tsinghua University.
- 1/2018~2/2018 Team leader of research team of targeted poverty alleviation in Ninghua, Fujian Province, P. R, China.

Honors & Awards

- 10/2023 Scholarship for Excellence in Social Activitiy, THU
- 10/2023 Comprehensive first-class scholarship for PhD studentss, THU
- 10/2022 Comprehensive first-class scholarship for PhD Candidates, THU
- 10/2021 Comprehensive second-class scholarship for PhD students, THU
- 6/2020 Scholarship for future scholars (**Top 3%**), THU
- 6/2020 Outstanding graduates of Beijing
- 6/2020 Outstanding graduates of Tsinghua University (**Top 2%**), THU
- 6/2020 Outstanding contribution award for graduates of Department of Precision Instrument, THU
- 10/2019 Scholarship for Excellent Student work , THU
- 10/2019 XCMG scholarship (**Top 1%**), THU
- 10/2019 Scholarship for Comprehensive Excellence , THU
- 12/2018 Second prize of HuaLuoGeng cup mathematical modeling contest of Tsinghua University
- 10/2018 Science and Technology Innovation Excellence Award, THU
- 10/2018 National scholarship (**Top 2%**)
- 07/2018 Second prize of the 34th national optoelectronic Design Competition
- 10/2017 Scholarship for Social practice Excellence , THU
- 10/2017 Scholarship for Volunteer public welfare Excellence , THU
- 10/2017 Scholarship for Comprehensive Excellence , THU

Certificates and Skills

- Language** English (CET4/CET6)
- Computer** Python and Deep Learning Frameworks (Pytorch, SpikingJelly, For data science), Software engineering(C++/Java/Python),CUDA development

