

# Shiyu Hu (胡世宇)

## Research Fellow, Nanyang Technological University, Singapore

1995.10.29

shiyu.hu@ntu.edu.sg

hushiyu1995

huuuuuusy

<https://huuuuuusy.github.io/>

 Google Scholar



## Work Experience

- 2024.08 - Now  **Research Fellow, School of Physical and Mathematical Sciences (SPMS), Nanyang Technological University (NTU)**  
• **Direction:** AI4Science, Computer Vision  
• **PI:** Assoc Prof. Kang Hao Cheong (IEEE Senior Member)
- 2018.03 - 2018.11  **Research Assistant, University of Hong Kong (HKU)**  
• **Direction:** High Performance Computing, Heterogeneous Computing  
• **PI:** Prof. Choli Wang
- 2016.08 - 2016.09  **Research Intern, Institute of Electronics, Chinese Academy of Sciences (CASIE)**

## Education Background

- 2019.09 - 2024.01  **Ph.D, Institute of Automation, Chinese Academy of Sciences (CASIA)**  
• **Major:** Computer Applied Technology  
• **Supervisor:** Prof. Kaiqi Huang (IAPR Fellow, IEEE Senior Member)  
• **Co-supervisor:** Prof. Xin Zhao (IEEE Senior Member)  
• **Thesis title:** *Research of Intelligence Evaluation Techniques for Single Object Tracking*  
• **Thesis committee:** Prof. Jianbin Jiao, Prof. Yuxin Peng (CAAI/CIE/CSIG Fellow), Prof. Yao Zhao (IEEE/IET Fellow), Prof. Yunhong Wang (IEEE/IAPR/CCF Fellow), Prof. Ming Tang  
• **Thesis defense grade:** Excellent
- 2017.09 - 2019.07  **M.Sc., Department of Computer Science, University of Hong Kong (HKU)**  
• **Major:** Computer Science  
• **Supervisor:** Prof. Choli Wang  
• **Thesis title:** *NightRunner: Deep Learning for Autonomous Driving Cars after Dark*  
• **Thesis defense grade:** A+
- 2013.09 - 2017.07  **B.E., Elite Class in School of Information and Electronics, Beijing Institute of Technology (BIT)**  
• **Major:** Information Engineering  
• **Diploma project supervisor:** Prof. Senlin Luo  
• **Thesis title:** *Text Sentiment Analysis Based on Deep Neural Network*  
• **Thesis defense grade:** Excellent
- 2015.07 - 2015.08  **Summer Semester, University of California, Berkeley (UCB)**  
• **Major:** New Media  
• **Course grade:** A

## Research Foundation & Interests

- Visual Intelligence   
Focuses on visual intelligence as the core channel to study how AI systems perceive, reason, and interpret in complex environments.
-  Builds interpretable and generalizable cognitive evaluation frameworks under the "Environment–Task–Executor" paradigm.
-  Explores unified quantitative models for robustness, generalization, and safety, promoting a paradigm shift from performance-driven to cognition-driven evaluation.

## Research Foundation & Interests (continued)

- Investigates human-referenced measurement principles of intelligence to support the development of human–AI integrated cognitive systems.
- Multimodal Cognition ■ Investigates the structural role of vision within multimodal cognition, exploring unified mechanisms for cross-modal fusion and spatiotemporal reasoning.
- Develops multiscale models from perception to semantics to reveal intrinsic connections among vision, language, and knowledge.
- Studies semantic diversity, causal associations, and narrative generation to build explainable and generalizable multimodal understanding frameworks.
- Advances visual understanding from static perception toward dynamic cognition, providing a structural foundation for next-generation multimodal intelligence.
- AI4Education ■ Positions educational environments as ideal domains for studying human–AI co-evolution and cognitive learning mechanisms.
- Focuses on intelligent agents with personality, cognition, and social adaptability, emphasizing cognitive tracking, personalized feedback, and adaptive learning.
- Explores multi-agent collaboration and reflective learning mechanisms, enabling human–AI interaction with understanding, empathy, and shared growth.
- Promotes the transformation of educational AI from an assistive tool to a cognitive partner, fostering educational equity, innovation, and sustainable learning.
- AI4Science ■ Explores the cognitive modeling pathways of AI in scientific discovery, experimental design, and knowledge reasoning.
- Studies AI's cognitive role in scientific understanding, data modeling, and hypothesis generation, abstracting cognitive principles from human reasoning.
- Constructs integrated vision–language–symbol frameworks for scientific intelligence, bridging computational learning and human scientific cognition.
- Advances interdisciplinary applications of AI in education, medicine, psychology, and cognitive science toward the co-evolution of artificial and human intelligence.

## Research Publications

### Book

- 1 X. Zhao, **S. Hu**, and X. Yin, *Visual Object Tracking - An Evaluation Perspective*. Springer, 2025, ISBN: 978-981-96-4558-9.

### Accept

- 1 **S. Hu**, X. Zhao, L. Huang, and K. Huang, “Global instance tracking: Locating target more like humans,” *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI, CCF-A)*, vol. 45, no. 1, pp. 576–592, 2023. DOI: [10.1109/TPAMI.2022.3153312](https://doi.org/10.1109/TPAMI.2022.3153312).
- 2 **S. Hu**, X. Zhao, and K. Huang, “Sotverse: A user-defined task space of single object tracking,” *International Journal of Computer Vision (IJCV, CCF-A)*, vol. 132, pp. 872–930, 2024. DOI: [10.1007/s11263-023-01908-5](https://doi.org/10.1007/s11263-023-01908-5).
- 3 X. Zhao, **S. Hu**✉, Y. Wang, J. Zhang, Y. Hu, R. Liu, H. Ling, Y. Li, R. Li, K. Liu, and J. Li, “Biodrone: A bionic drone-based single object tracking benchmark for robust vision,” *International Journal of Computer Vision (IJCV, CCF-A)*, vol. 132, pp. 1659–1684, 2024. DOI: [10.1007/s11263-023-01937-0](https://doi.org/10.1007/s11263-023-01937-0).
- 4 **S. Hu**, D. Zhang, M. Wu, X. Feng, X. Li, X. Zhao, and K. Huang, “A multi-modal global instance tracking benchmark (mgit): Better locating target in complex spatio-temporal and causal relationship,” in *Conference on Neural Information Processing Systems (NeurIPS, CCF-A, Poster)*, vol. 36, 2023, pp. 25007–25030.

- 5 X. Feng\*, **S. Hu\***, X. Li, D. Zhang, M. Wu, J. Zhang, X. Chen, and K. Huang, “Atctrack: Aligning target-context cues with dynamic target states for robust vision-language tracking,” *International Conference on Computer Vision (ICCV, CCF-A, Highlight)*, 2025.
- 6 **S. Hu**, X. Zhao, and K. Huang, “Visual intelligence evaluation techniques for single object tracking: A survey,” *Journal of Images and Graphics* (《中国图象图形学报》, CCF-B), 2023.
- 7 X. Li, X. Li, and **S. Hu**✉, “Darter: Dynamic adaptive representation tracker for nighttime uav tracking,” in *International Conference on Multimedia Retrieval (ICMR, CCF-B)*, 2025.
- 8 Y. Wang, J. Zhang, Y. Wang, **S. Hu**✉, B. Shen, Z. Hou, and W. Zhou, “Improved sar aircraft detection algorithm based on visual state space models,” *IET Computer Vision (IET-CVI, CCF-C)*, 2025.
- 9 X. Li, X. Li, **S. Hu**, K. Huang, and W. Zhang, “Causalstep: A benchmark for explicit stepwise causal reasoning in videos,” in *AAAI Conference on Artificial Intelligence (AAAI, CCF-A, Oral)*, 2026.
- 10 X. Li, X. Li, **S. Hu**, Y. Guo, and W. Zhang, “Verifybench: A systematic benchmark for evaluating reasoning verifiers across domains,” in *AAAI Conference on Artificial Intelligence (AAAI, CCF-A, Oral)*, 2026.
- 11 X. Feng, H. Yu, M. Wu, **S. Hu**, J. Chen, C. Zhu, J. Wu, X. Chu, and K. Huang, “Narrlv: Towards a comprehensive narrative-centric evaluation for long video generation models,” in *International Conference on Learning Representations (ICLR, CAAI-A, Poster)*, 2026.
- 12 X. Feng, D. Zhang, **S. Hu**, X. Li, M. Wu, J. Zhang, X. Chen, and K. Huang, “Cstrack: Enhancing rgb-x tracking via compact spatiotemporal features,” in *International Conference on Machine Learning (ICML, CCF-A, Poster)*, 2025.
- 13 D. Zhang, **S. Hu**, X. Feng, X. Li, M. Wu, J. Zhang, and K. Huang, “Beyond accuracy: Tracking more like human via visual search,” in *Conference on Neural Information Processing Systems (NeurIPS, CCF-A, Poster)*, 2024.
- 14 X. Feng, X. Li, **S. Hu**, D. Zhang, M. Wu, J. Zhang, X. Chen, and K. Huang, “Memvlt: Visual-language tracking with adaptive memory-based prompts,” in *Conference on Neural Information Processing Systems (NeurIPS, CCF-A, Poster)*, 2024.
- 15 X. Feng, D. Zhang, **S. Hu**, X. Li, M. Wu, J. Zhang, X. Chen, and K. Huang, “Enhancing vision-language tracking by effectively converting textual cues into visual cues,” in *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP, CCF-B, Poster)*, 2025.
- 16 J. Zhang, T. Zhao, **S. Hu**, and X. Zhao, “Robust single-particle cryo-em image denoising and restoration,” in *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP, CCF-B, Poster)*, 2024.
- 17 M. Wu, K. Huang, Y. Cai, **S. Hu**, Y. Zhao, and W. Wang, “Finger in camera speaks everything: Unconstrained air-writing for real-world,” *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT, CCF-B)*, 2024.
- 18 M. Wu, Y. Kang, X. Li, **S. Hu**, X. Chen, Y. Kang, W. Wang, and K. Huang, “Vs-lm: Visual-semantic depression assessment based on lm for drawing projection test,” in *Chinese Conference on Pattern Recognition and Computer Vision (PRCV, CCF-C, Poster)*, 2024.
- 19 X. Feng, **S. Hu**, X. Chen, and K. Huang, “A hierarchical theme recognition model for sandplay therapy,” in *Chinese Conference on Pattern Recognition and Computer Vision (PRCV, CCF-C, Poster)*, 2023, pp. 241–252.  
DOI: [10.1007/978-981-99-8462-6\\_20](https://doi.org/10.1007/978-981-99-8462-6_20).
- 20 Y. Zhang, C. Liu, W. Chen, X. Xu, F. Wang, H. Li, **S. Hu**, and X. Zhao, “Revisiting instance search: A new benchmark using cycle self-training,” *Neurocomputing (Neu, CCF-C)*, vol. 501, pp. 270–284, 2022. DOI: [10.1016/j.neucom.2022.06.027](https://doi.org/10.1016/j.neucom.2022.06.027).
- 21 K. Huang, X. Zhao, Q. Li, and **S. Hu**, “Visual turing: The next development of computer vision in the view of human-computer gaming,” *Journal of Graphics* (《图学学报》, CCF-C), vol. 42, no. 3, p. 339, 2021.  
DOI: [10.11996/JG.j.2095-302X.2021030339](https://doi.org/10.11996/JG.j.2095-302X.2021030339).

- 22 L. Tan, **S. Hu**, D. J. Yeo, and K. H. Cheong, "Artificial intelligence-enabled adaptive learning platforms: A review," *Computers & Education: Artificial Intelligence (C&E:AI)*, p. 100 429, 2025.
- 23 L. Tan, **S. Hu**, D. J. Yeo, and K. H. Cheong, "A comprehensive review on automated grading systems in stem using ai techniques," *Mathematics* (2227-7390), vol. 13, no. 17, 2025.
- 24 Y. Ma, X. Li, **S. Hu**, S. Liu, and K. H. Cheong, "Trustworthy ai in education: Framework, cases, and governance strategies," *Innovation and Emerging Technologies*, vol. 12, p. 2 550 026, 2025.
- 25 K. Huang, Y. Kang, C. Yan, **S. Hu**, L. Wang, T. Tao, and W. Gao, "A review of intelligent psychological assessment based on interactive environment," *Chinese Mental Health Journal* (《中国心理卫生杂志》), 2025.
- 26 Y. Wang, **S. Hu**, and X. Zhao, "Rethinking similar object interference in single object tracking," in *International Conference on Computer Science and Artificial Intelligence (CSAI, EI, Oral)*, 2023, pp. 251–258.

## Workshop

- 1 Y. Ma\*, **S. Hu\***, X. Li, Y. Wang, Y. Chen, S. Liu, and K. H. Cheong, "Learning to be taught: A structured soei framework for modeling and evaluating personality-aligned virtual student agents," in *AAAI Conference on Artificial Intelligence AI4Edu Workshop (AAAIW, CCF-A Workshop, Oral)*, 2026.
- 2 Y. Ma\*, **S. Hu\***, B. Zhu, Y. Wang, Y. Kang, S. Liu, and K. H. Cheong, "Redefining educational simulation: Eduverse as a user-defined and developmental multi-agent simulation space," in *AAAI Conference on Artificial Intelligence AI4Edu Workshop (AAAIW, CCF-A Workshop, Oral)*, 2026.
- 3 B. Zhu\*, **S. Hu\***, Y. Ma, Y. Zhang, and K. H. Cheong, "From objective to subjective: A benchmark for virtual student abilities," in *AAAI Conference on Artificial Intelligence AI4Edu Workshop (AAAIW, CCF-A Workshop, Oral)*, 2026.
- 4 X. Li, X. Feng, **S. Hu**, M. Wu, D. Zhang, J. Zhang, and K. Huang, "Dtllm-vlt: Diverse text generation for visual language tracking based on llm," in *IEEE/CVF Conference on Computer Vision and Pattern Recognition 3rd VDU Workshop (CVPRW, CCF-A Workshop, Oral, Best Paper Honorable Mention)*, 2024.

## Preprint

- 1 **S. Hu\***, X. Li\*, X. Li, J. Zhang, Y. Wang, X. Zhao, and K. H. Cheong, "Fiova: A multi-annotator benchmark for human-aligned video captioning," *arXiv preprint arXiv:2410.15270*, 2024.
- 2 Y. Ma\*, **S. Hu\***, X. Li, Y. Wang, Y. Chen, S. Liu, and K. H. Cheong, "When llms learn to be students: The soei framework for modeling and evaluating virtual student agents in educational interaction," *arXiv preprint arXiv:2410.15701*, 2024.
- 3 Y. Ma\*, **S. Hu\***, B. Zhu, Y. Wang, Y. Kang, S. Liu, and K. H. Cheong, "Eduverse: A user-defined multi-agent simulation space for education scenario," *arXiv preprint arXiv:2510.05650*, 2025.
- 4 B. Zhu\*, **S. Hu\***, Y. Ma, Y. Zhang, and K. H. Cheong, "Edupersona: Benchmarking subjective ability boundaries of virtual student agents," *arXiv preprint arXiv:2510.04648*, 2025.
- 5 X. Li, X. Li, and **S. Hu**✉, "Mattrack: Efficient multiscale adaptive tracker for real-time nighttime uav operations," *arXiv preprint arXiv:2510.21586*, 2025.
- 6 Y. Wang\*, **S. Hu\***, S. Jia, P. Xu, H. Ma, Y. Ma, J. Zhang, X. Lu, and X. Zhao, "Soi is the root of all evil: Quantifying and breaking similar object interference in single object tracking," *arXiv preprint arXiv:2508.09524*, 2025.
- 7 X. Li\*, **S. Hu\***, X. Feng, D. Zhang, M. Wu, J. Zhang, and K. Huang, "How texts help? a fine-grained evaluation to reveal the role of language in vision-language tracking," *arXiv preprint arXiv:2411.15600*, 2024.
- 8 X. Li, **S. Hu**, X. Feng, D. Zhang, M. Wu, J. Zhang, and K. Huang, "Dtvl: A multi-modal diverse text benchmark for visual language tracking based on llm," *arXiv preprint arXiv:2410.02492*, 2024.

- 9 X. Li, **S. Hu**, X. Feng, D. Zhang, M. Wu, J. Zhang, and K. Huang, "Visual language tracking with multi-modal interaction: A robust benchmark," *arXiv preprint arXiv:2409.08887*, 2024.
- 10 S. Jia, **S. Hu**, Y. Cao, F. Yang, X. Lu, and X. Lu, "Tracking by detection and query: An efficient end-to-end framework for multi-object tracking," *arXiv preprint arXiv:2411.06197*, 2024.
- 11 X. Li, X. Li, **S. Hu**, and K. Huang, "Select less, reason more: Prioritizing evidence purity for video reasoning," *arXiv preprint arXiv:2510.15440*, 2025.
- 12 X. Li, X. Li, R. Pi, **S. Hu**, J. Zhao, and J. Gao, "Beyond accuracy: Evaluating grounded visual evidence in thinking with images," *arXiv preprint arXiv:2601.11633*, 2026.
- 13 X. Li, X. Li, J. Gao, R. Pi, **S. Hu**, and W. Zhang, "Look less, reason more: Rollout-guided adaptive pixel-space reasoning," *arXiv preprint arXiv:2510.01681*, 2025.
- 14 **S. Hu**, X. Zhao, Y. Wang, Y. Shan, and K. Huang, *Nearing or surpassing: Overall evaluation of human-machine dynamic vision ability*, 2023. ↗ URL: [https://openreview.net/forum?id=LGbZYw\\_pnsc](https://openreview.net/forum?id=LGbZYw_pnsc).

## Projects

### Framework

- 2018.03 - 2018.11 📚 **Darknet-Cross: Light-weight Deep Learning Framework for Heterogeneous Computing**
- 🌐 <https://github.com/huuuuusy/Darknet-Cross>
  - ✍️ Darknet-Cross supports algorithm acceleration processing on various platforms (e.g., Android and Ubuntu) and various GPUs (e.g., Nvidia GTX1070 and Adreno 630).
  - ✓ The work is a part of my master's thesis at HKU (thesis defense grade: A+).

### Platform (Development & Maintenance)

- 2019.11 - Now 📚 **VideoCube / MGIT Platform**
- 🌐 <http://videocube.aitestunion.com>
  - ✍️ VideoCube / MGIT is the supporting platform for research accepted by IEEE TPAMI 2023 and NeurIPS 2023.
  - ✓ As of Sept. 2024, the platform has received 440k+ page views, 1.2k+ downloads, 420+ trackers from 220+ countries and regions worldwide.
- 2021.07 - Now 📚 **SOTVerse / VLTVerse Platform**
- 🌐 <http://metaverse.aitestunion.com>
  - ✍️ SOTVerse is the supporting platform for research accepted by IJCV 2024.
  - ✍️ As of Sept. 2024, the platform has received 126k+ page views from 150+ countries and regions worldwide.
- 2022.05 - Now 📚 **BioDrone Platform**
- 🌐 <http://biodrone.aitestunion.com/>
  - ✍️ BioDrone is the supporting platform for research accepted by IJCV 2024.
  - ✓ As of Sept. 2024, the platform has received 170k+ page views from 200+ countries and regions worldwide.

### Platform (Maintenance)

- 2020.07 - Now 📚 **GOT-10k Platform**
- 🌐 <http://got-10k.aitestunion.com/>
  - ✍️ GOT-10k is the supporting platform for research accepted by IEEE TPAMI 2021.
  - ✓ As of Sept. 2024, the platform has received 3.92M+ page views, 7.5k+ downloads, 21.5k+ trackers from 290+ countries and regions worldwide.

## Projects (continued)

### Challenge (Organizer)

2023.05 - 2023.11  **Hislopvision Challenge**

 <http://hislopvision.aitestunion.com/>

 Hislopvision Challenge supports the 3rd High-speed and Low-power Visual Understanding Challenge in the 5th Chinese Conference on Pattern Recognition and Computer Vision.

 The participating teams include researchers from Tsinghua University, Beijing Institute of Technology, Jilin University, etc.

### Challenge (Participant)

2021.01 - 2021.04  **Cell Tracking Challenge**

 <https://celltrackingchallenge.net/>

 This project was submitted to the Cell Tracking Challenge in Mar. 2021, and maintains the second place in the Fluo-C2FL-MSC+ dataset and the third place in the Fluo-C2FL-Huh7 dataset (statistics by Oct. 2023).

### Grant (Participant)

2024.01 - 2025.01  **Research on the Dilemma and Countermeasures of Human-Computer Interaction in Intelligent Education**

 The project is funded by the 2023 Intelligent Education PhD Research Fund, supported by the Institute of AI Education Shanghai and East China Normal University, and is currently in progress.

## Academic Activities and Services

- Tutorial  **34th International Joint Conference on Artificial Intelligence (IJCAI)**
- **Title:** Human-Centric and Multimodal Evaluation for Explainable AI: Moving Beyond Benchmarks
  - **Date & Location:** 14:00-15:30, 18th August, 2025, Montreal, Canada
-  **28th European Conference on Artificial Intelligence (ECAI)**
- **Title:** From Benchmarking to Trustworthy AI: Rethinking Evaluation Methods Across Vision and Complex Systems
  - **Date & Location:** 26th October, 2025, Bologna, Italy
-  **2025 IEEE International Conference on Systems, Man, and Cybernetics (SMC)**
- **Title:** The Synergy of Large Language Models and Evolutionary Optimization on Complex Networks
  - **Date & Location:** 5th-8th October, 2025, Vienna, Austria
-  **17th Asian Conference on Computer Vision (ACCV)**
- **Title:** From Machine-Machine Comparison to Human-Machine Comparison: Adapting Visual Turing Test in Visual Object Tracking
  - **Date & Location:** 9:00-12:00, 9th December, 2024, Hanoi, Vietnam
-  **27th International Conference on Pattern Recognition (ICPR)**
- **Title:** Visual Turing Test in Visual Object Tracking: A New Vision Intelligence Evaluation Technique based on Human-Machine Comparison
  - **Date & Location:** 14:30-18:00, 1st December, 2024, Kolkata, India
-  **31st IEEE International Conference on Image Processing (ICIP)**
- **Title:** An Evaluation Perspective in Visual Object Tracking: from Task Design to Benchmark Construction and Algorithm Analysis
  - **Date & Location:** 9:00-12:30, 27th October, 2024, Abu Dhabi, United Arab Emirates

## Academic Activities and Services (continued)

- Mini-Symposium **■ The Fifth International Nonlinear Dynamics Conference (NODYCON 2026)**  
• **Title:** Complex Network Systems and Large Language Models  
• **Date & Location:** 20th-23rd, September, 2026, Sapienza University of Rome, Italy
- Guest Editor **■ Journal:** Electronics (Special Issue: Techniques and Applications of Multimodal Data Fusion)
- Associate Editor **■ Journal:** Innovation and Emerging Technologies
- Reviewer **■ Conference:** NeurIPS, ICML, ICLR, CVPR, ECCV, ICCV, ACL, AAAI, IJCAI, ACMMM, ICRA, AISTATS, etc.
- Journal:** IEEE Transactions on Image Processing, SCIENCE CHINA Information Sciences, Pattern Recognition, IEEE Transactions on Network Science and Engineering, IEEE Transactions on Vehicular Technology, Information Fusion, Engineering Applications of Artificial Intelligence, Expert Systems with Applications, Neurocomputing, Knowledge-Based Systems, Scientific Reports, etc.
- Member **■ Society:** Institute of Electrical and Electronics Engineers (IEEE, No.97803543), China Society of Image and Graphics (CSIG, No.E651129499M), Chinese Association for Artificial Intelligence (CAAI, No.E660120827A), China Computer Federation (CCF, No.Z1771M).

## Skills

- Languages **■** Mandarin Chinese (native speaker) and English.
- Coding **■** Python, Java, Matlab, C, L<sup>A</sup>T<sub>E</sub>X.
- Development **■** Android, Flask, SQLite.
- Linux **■** Shell, OS virtualization.
- Misc. **■** Academic research, leadership, presentation.

## Awards and Honors

- 2025 **■ IEEE SMCS TEAM Program Award**, the IEEE Systems, Man, and Cybernetics Society.
- 2024 **■ Best Paper Honorable Mention**, the 3rd Workshop on Vision Datasets Understanding and DataCV Challenge in CVPR 2024.
- Beijing Outstanding Graduates**, Beijing Municipal Education Commission (Top 5%).
- 2023 **■ China National Scholarship**, Ministry of Education of the People's Republic of China (Top 1%).
- First Prize of Climbing Scholarship**, Institute of Automation, Chinese Academy of Sciences.
- 2022 **■ Merit Student**, University of Chinese Academy of Sciences.
- 2017 **■ Excellent Innovative Student**, Beijing Institute of Technology.
- 2016 **■ College Scholarship**, Chinese Academy of Sciences.
- Excellent League Member on Youth Day Competition**, Beijing Institute of Technology.
- 2015 **■ National First Prize**, Contemporary Undergraduate Mathematical Contest in Modeling (Top 1%).
- First Prize of Mathematics Modeling Competition**, Beijing Institute of Technology.
- Outstanding Individual on Summer Social Practice**, Beijing Institute of Technology.
- Second Prize on Summer Social Practice**, Beijing Institute of Technology (Team Leader).
- Outstanding Student Cadre**, Beijing Institute of Technology.
- Outstanding League Cadre on Youth Day Competition**, Beijing Institute of Technology.
- Outstanding Youth League Branch**, Beijing Institute of Technology (Team Leader).
- Top 10 Activities on Youth Day Competition**, Beijing Institute of Technology (Team Leader).
- 2014 **■ Outstanding Student**, Beijing Institute of Technology.

## Awards and Honors (continued)

2013-2017 ━ ━ Academic Scholarship, Beijing Institute of Technology.

## Assisted Student Supervision

- Ph.D. Student ━ ━ **Xiaokun Feng**, 2023.04-Now, Institute of Automation, Chinese Academy of Sciences  
━ ━ **Yiping Ma**, 2023.08-Now, East China Normal University  
━ ━ **Dailing Zhang**, 2023.08-Now, Institute of Automation, Chinese Academy of Sciences  
━ ━ **Yipei Wang**, 2024.08-Now, Southeast University  
━ ━ **Xuchen Li**, 2024.08-Now, Institute of Automation, Chinese Academy of Sciences  
━ ━ **Buyuan Zhu**, 2025.01-Now, Nanyang Technological University, Singapore  
━ ━ **Zi Ye**, 2025.08-Now, University of Science and Technology Beijing  
━ ━ **Yihan Meng**, 2025.08-Now, University of Science and Technology Beijing  
━ ━ **Meiqi Wu**, 2022.08-2025.06, University of Chinese Academy of Sciences
- M.S. Student ━ ━ **Xuzhao Li**, 2024.07-Now, Beijing Institute of Technology  
━ ━ **Panxi Xu**, 2024.09-Now, University of Science and Technology Beijing  
━ ━ **Hongfei Ma**, 2025.07-Now, University of Science and Technology Beijing  
━ ━ **Yiping Ma**, 2022.05-2023.07, Nanjing Normal University  
━ ━ **Yipei Wang**, 2022.08-2024.07, Southeast University  
━ ━ **Yuqi Cui**, 2024.07-2025.01 University of Science and Technology Beijing  
━ ━ **Nguyen Khanh Truong**, 2025.02-2025.11, Nanyang Technological University, Singapore
- B.E. Student ━ ━ **Yuxiao Li**, 2024.10-Now, Nanyang Technological University, Singapore  
━ ━ **Junyou Zhu**, 2022.09-2023.08, University of Chinese Academy of Sciences  
━ ━ **Lihang Hu**, 2022.09-2023.08, University of Chinese Academy of Sciences  
━ ━ **Dailing Zhang**, 2022.09-2023.08, Southeast University  
━ ━ **Xuchen Li**, 2023.04-2024.07, Beijing University of Posts and Telecommunications  
━ ━ **Le Ying Tan**, 2024.09-2025.05, Nanyang Technological University, Singapore  
━ ━ **Zi Ye**, 2024.09-2025.07, University of Science and Technology Beijing  
━ ━ **Jinlin Ma**, 2024.10-2025.07, Nanyang Technological University, Singapore  
━ ━ **Yihan Meng**, 2024.12-2025.07, University of Science and Technology Beijing  
━ ━ **Yihui Jiang**, 2025.01-2025.05, University of Science and Technology Beijing  
━ ━ **Shunya Hirashima**, 2025.04-2025.07, Nanyang Technological University, Singapore  
━ ━ **Anastasiia Bohachenko**, 2025.07-2025.09, Global Connect Fellow Student in Nanyang Technological University, Singapore

## References

Professors Kaiqi Huang and Xin Zhao served as my Ph.D. supervisor and co-supervisor, respectively, with whom I collaborated on research in computer vision. Additionally, Prof. Choli Wang oversaw my M.Sc. studies at HKU, and I had the privilege of working with him on high-performance computing projects. Currently, I am lucky to work with Prof. Kang Hao Cheong at NTU.

**Prof. Kaiqi Huang**

Professor, IAPR Fellow, IEEE Senior Member, 10,000 Talents Program - Leading Talents  
Director of Center for Research on Intelligent Systems and Engineering (CRISE)  
National Laboratory of Pattern Recognition (NLPR)  
Institute of Automation, Chinese Academy of Sciences (CASIA)  
✉ kqhuang@nlpr.ia.ac.cn

**Prof. Choli Wang**

Honorary Professor  
Department of Computer Science, University of Hong Kong (HKU)  
✉ clwang@cs.hku.hk  
✉ choliwang@gmail.com

**Prof. Xin Zhao**

Professor, IEEE Senior Member, Beijing Science Fund for Distinguished Young Scholars  
School of Computer and Communication Engineering, University of Science and Technology Beijing (USTB)  
✉ xinzha@ustb.edu.cn  
✉ xzhaopersonal@foxmail.com

**Prof. Kang Hao Cheong**

Associate Professor, IEEE Senior Member  
Assistant Dean, School of Physical & Mathematical Sciences  
Assistant Dean, College of Science  
Nanyang Technological University (NTU)  
✉ kanghao.cheong@ntu.edu.sg