

Haoliang Zhang

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🔗 google scholar

EDUCATION

University of Oklahoma · PhD in Electrical & Computer Engineering

Norman, OK

ADVISOR: Samuel Cheng

Jan 2020 - Jun 2026

Topics: geometry processing, computer graphics & vision, geometric learning

California State University · MS in Electrical & Computer Engineering Option

Fresno, CA

ADVISOR: Woonki Na

Jan 2017 - August 2018

Liren College of Yanshan University · BS in Electrical Engineering

QinHuangDao, China

Sep 2011 - May 2015

Joint Training: Shaanxi University of Science & Technology

Xi'an, China

Control Theory & Engineering

Sep 2015 - Sep 2016

WORK EXPERIENCE

University of Oklahoma

Norman, OK

GRADUATE RESEARCHER ASSISTANT

Jan 2020 - ongoing

Research at the intersection of 3D geometry and machine learning. Applications to computer graphics and computer vision. Member of Samuel Cheng's AI Lab.

Vince Technology

Xi'an, China

SENIOR ALGORITHM ENGINEER

Sep 2019 - Jan 2020

Enhanced object detail using infrared radiation data, incorporating the reverse Monte Carlo method. Pioneered the integration of the Geographic Information System (GIS) with infrared technologies to simulate flight patterns in helicopters and unmanned aerial vehicles (UAVs).

Xian Brain Intelligent Technology

Xi'an, China

ALGORITHM ENGINEER

Oct 2018 - Jun 2019

Devised an innovative algorithm that harmonizes electroencephalogram (EEG) data with other physiological indicators. Constructed deep recurrent neural networks capable of identifying sleep stages from single-channel EEG recordings, catering to non-expert users. Launched a state-of-the-art model for EEG signal categorization, resulting in a 3% enhancement in accuracy and optimized company-specific algorithms.

PUBLICATION

- [1] **Haoliang Zhang**, Samuel Cheng, and Christian El Amm. "Unsupervised Landmark Discovery via Karcher Means for Non-Rigid Shape Correspondence". In: *The Visual Computer*. **Accept.** 2026.
- [2] **Haoliang Zhang**, Samuel Cheng, Christian El Amm, and Jonghoon Kim. "Efficient Pooling Operator for 3D Morphable Models". In: *IEEE Transactions on Visualization and Computer Graphics* (2023), pp. 1–9. doi: 10.1109/TVCG.2023.3255820.
- [3] **Haoliang Zhang**, Xintong Li, Jonghoon Kim, Samuel Cheng, and Christian El Amm. "Neural QSLIM for Mesh Autoencoders". In: *Artificial Neural Networks and Machine Learning –ICANN 2025*. Springer Nature Switzerland, 2026, pp. 51–65.

- [4] **Haoliang Zhang**, Woonki Na, and Jonghoon Kim. "State-of-charge estimation of the lithium-ion battery using neural network based on an improved thevenin circuit model". In: *2018 IEEE Transportation Electrification Conference and Expo (ITEC)*. IEEE. 2018, pp. 342–346.
- [5] **Haoliang Zhang**, Wei Tang, Woonki Na, Pyeong-Yeon Lee, and Jonghoon Kim. "Implementation of generative adversarial network-CLS combined with bidirectional long short-term memory for lithium-ion battery state prediction". In: *Journal of Energy Storage* 31 (2020), p. 101489. ISSN: 2352-152X.
- [6] Hua Ye, Siyuan Chen, **Haoliang Zhang**, Weihao Luo, Yanbin Li, and Xuan Zhang. "Synergy over Discrepancy: A Partition-Based Approach to Multi-Domain LLM Fine-Tuning". In: *The Thirty-ninth Annual Conference on Neural Information Processing Systems*. 2025. URL: <https://openreview.net/forum?id=2jzGEudVdS>.
- [7] Hua Ye, Siyuan Chen, Ziqi Zhong, Canran Xiao, **Haoliang Zhang**, Yuhan Wu, and Fei Shen. "Seeing through the Conflict: Transparent Knowledge Conflict Handling in Retrieval-Augmented Generation". In: *AAAI. Accept Oral*. 2026.
- [8] Jiali Zhang, Thomas White, **Haoliang Zhang**, Wenqing Hu, Donald Wunsch, and Jian Liu. "MS-YOLO: Infrared Object Detection for Edge Deployment via MobileNetV4 and SlideLoss". In: *International Joint Conference on Neural Networks*. June 2025, pp. 1–8. doi: 10.1109/IJCNN64981.2025.11228885.

AWARDS & HONORS

2018	Edison Energy Fund	CSU, FRESNO
2023	Journal Paper Award	University of Oklahoma
2024	William H. Barkow Scholarship	University of Oklahoma
2024	Clyde L. Farrar Endowed Scholarship	University of Oklahoma
2025	Invited to present at GMP 2025	
2026	Journal Paper Award	University of Oklahoma
2026	William H. Barkow Scholarship & Graduate Fellowship (ECE)	University of Oklahoma

TEACHING

• Teaching Assistant	ECE 2523-001 Probability, Statistics and Random Processes,	OU, 2024-2026.
• Guest Lecture	ECE 4973 Computer Vision	OU, SP, 2024
• Guest Lecture	ECE 5973 Artificial Neural Networks and Applications	OU, SP, 2024
• Teaching Assistant	ECE 3223-995 Microprocessor System Design	OU, SP, 2021
• Teaching Assistant	ECE 4613/CS 4613 Computer Architecture	OU, FA, 2021/2020

PROFESSIONAL SERVICE

Reviewer for Journals

- IEEE Transactions on Circuits and Systems for Video Technology (2023-2025)

Reviewer for Conferences

- IEEE / CVF Computer Vision and Pattern Recognition Conference (2024)
- The Association for the Advancement of Artificial Intelligence (2025)
- International Conference on Artificial Neural Networks (2025)
- Pattern Recognition and Computer Vision (2025)

SKILLS

Programming	Python, MATLAB, C++ $\LaTeX$
Technologies	Pytorch, Keras, Eigen, CMake, Blender
Statistic/ML	Non-linear control, Deep Learning, Statistical Analysis, Differential Geometry.