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https://scholar.google.com/citations?hl=en&user=qI8OipUAAAAJ

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About Me

I was born in Hebei on 12 Nov. 1989 and received a PhD degree from the University of Chinese Academy of Sciences (UCAS) in 2019. I am an **Assistant Professor** at **National Engineering Laboratory for Big Data System Computing Technology**, Shenzhen University, Shenzhen, China. My main fields involve computer vision and machine learning, with a long-term focus on image anomaly detection, graph representation learning, image diversification generation, and fast retrieval. We are committed to applying visual technology to the human-machine interaction environment of real industrial scenes and virtual reality.

Led the National Natural Science Foundation of China (NSFC)'s "Efficient 3D Anomaly Detection Algorithm for Industrial Vision" (Grant No. 62206122); The project of "Research on industrial image anomaly detection based on visual language models" is awarded the Award of Tencent "Rhinoceros Birds" - Scientifie Research Foundation for Young Teachers of Shenzhen University; Published papers **30+** in important international journals and conferences, such as IEEE TIP, IEEE TCSVT, Neurocomputing, ICCV, ACM MM, NeurIPS, and ICLR, with **1000+** citations and **1** highly-cited paper; Served as a reviewer for international journals and conferences, such as IEEE TIP, IEEE TCSVT, ACM MM, NeurIPS, AAAI, IJCAI, ICML; Currently, as a member of IEEE, ACM and other top artificial intelligence conference procedures committees.

Project

1. 2024.6-2026.5, Tencent "Rhinoceros Birds" - Scientifie Research Foundation for Young Teachers of Shenzhen University project–"Research on industrial image anomaly detection based on visual language models". **50K RMB**. Principal Investigator.
2. 2024.1-2028.12, National Natural Science Foundation of China (NSFC), Major International (Regional) Joint Project–"Research on Key Technologies of High-Fidelity Digital Human Modeling and Driving", Grant No. 62320106007. **600 RMB**. Chinese Side Collaborator.
3. 2023.1-2025.12, National Natural Science Foundation of China (NSFC) Youth Project–"Efficient 3D Anomaly Detection Algorithm for Industrial Vision", Grant No. 62206122. **300K RMB**. Principal Investigator.
4. 2024.1-2026.11, Young Teacher Research Initiation Fund Project. Shenzhen University. **200K RMB**. Principal Investigator.
5. 2023.1-2025.12, Supported by postdoctoral research in Shenzhen. **300K RMB**. Principal Investigator.
6. 2023.4-2023.8. Development of a flexible electrostatic adsorption-assisted unmanned aerial vehicle visual positioning and object grasping platform. Harbin Institute of Technology (Shenzhen). **35K RMB**. Principal Investigator.

Experience

National Engineering Laboratory for Big Data System Computing Technology, Shenzhen University (SZU) — *Shenzhen, China*

Assistant Professor — *2023.12 - PRESENT*

- Research on digital human modelling and driving, image anomaly detection, computer vision, machine learning.

Department of Computer Science and Engineering, College of Engineering, Southern University of Science and Technology (SUSTech) — *Shenzhen, China*

Research Assistant Professor — *2021.11 - 2023.11*

- Research on image anomaly detection, computer vision, machine learning.

Department of Computer Science and Engineering, College of Engineering, Southern University of Science and Technology (SUSTech) — *Shenzhen, China*

Postdoctoral Researcher — *2019.10 - 2021.10*

- Research on graph representation learning, fast retrieval, and computer vision.

Education

University of Chinese Academy of Sciences (UCAS) *Beijing, China*

Ph.D.in Computer Applications Technology *2016.9 - 2019.7*

- Thesis title: *Research on 3D Reconstruction for Objects in Multiview Video Sequences*
- Supervisor: Professor Ke Lu

Beijing Union University (BUU) *Beijing, China*

M.S. in Computer Applications Technology *2013.9 - 2016.7*

- Thesis title: *Research on Digital Image Dehazing*
- Supervisor: Professor Ning He

Hebei University (HBU) *Hebei, China*

B.S. in Electronic Information Science and Technology *2009.9 - 2013.7*

Honors & Awards

2024	**Award of Tencent "Rhinoceros Birds" - Scientifie Research Foundation for Young Teachers of Shenzhen University,** Shenzhen University	*Shenzhen, China*
2019	**Outstanding Graduates from Beijing,** UCAS	*Beijing, China*
2019	**Chinese Academy of Sciences Dean Scholarship,** UCAS	*Beijing, China*
2016	**Outstanding Graduates from Beijing,** BUU	*Beijing, China*
2015	**National Scholarship,** BUU	*Beijing, China*

Program Committees

2024	**Reviewer,** ACM MM, ICLR, IJCAI, NeurIPS, IEEE TASE
2023	**Reviewer,** IEEE TIP, IEEE TCSVT, NeurIPS, Patterns, IJCAI, ACM MM, ICLR, PR

Publications

Note that * contributed equally, † corresponding authors.

First author: 13; Corresponding author: 8; Paper total number: 39

CCF-A Paper **(First author: 2; Corresponding author: 6)**

1. Hongze Zhu, Guoyang Xie, Chengbin Hou, Tao Dai, Can Gao, **Jinbao Wang**†, and Linlin Shen. "Towards High-resolution 3D Anomaly Detection via Group-Level Feature Contrastive Learning." In Proceedings of the 32th ACM International Conference on Multimedia (ACM MM), 2024.
2. Xinpeng Li, Teng Wang, Shuyi Mao, **Jinbao Wang**, Jian Zhao, Xiaojiang Peng, Feng Zheng, and Xuelong Li. "Two in One Go: Single-stage Emotion Recognition with Decoupled Subject-context Transformer." In Proceedings of the 32th ACM International Conference on Multimedia (ACM MM), 2024.
3. Tao Dai, Jianping Wang, Hang Guo, Jinmin Li, **Jinbao Wang**†, and Zexuan Zhu†. "FreqFormer: Frequency-aware Transformer for Lightweight Image Super-resolution." International Joint Conference on Artificial Intelligence (IJCAI). 2024.
4. Jiaqi Liu, Kai Wu, Qiang Nie, Ying Chen, Bin-Bin Gao, Yong Liu, **Jinbao Wang**, Chengjie Wang, and Feng Zheng. "Cross-Modal Alternating Learning with Task-Aware Representations for Continual Learning." Association for the Advancement of Artificial Intelligence (AAAI). 2024.
5. Jiaqi Liu, Guoyang Xie, Ruitao Chen, Xinpeng Li, **Jinbao Wang**†, Yong Liu, Chengjie Wang, Feng Zheng†. "Real3D-AD: A Dataset of Point Cloud Anomaly Detection." NeurIPS Datasets & Benchmarks Track. 2023.
6. Ruitao Chen, Guoyang Xie, Jiaqi Liu, **Jinbao Wang**†, Ziqi Luo, Jinfan Wang, and Feng Zheng†. "EasyNet: An Easy Network for 3D Industrial Anomaly Detection." In Proceedings of the 31st ACM International Conference on Multimedia (ACM MM). 2023.
7. Wujin Li, Jiawei Zhan, **Jinbao Wang**†, Bizhong Xia, Bin-Bin Gao, Jun Liu, Chengjie Wang, and Feng Zheng†. "Towards Continual Adaptation in Industrial Anomaly Detection." In Proceedings of the 30th ACM International Conference on Multimedia (ACM MM), pp. 2871-2880. 2022.
8. Xi Jiang, Jianlin Liu, **Jinbao Wang**†, Qiang Nie, Kai Wu, Yong Liu, Chengjie Wang, and Feng Zheng†. "SoftPatch: Unsupervised Anomaly Detection with Noisy Data." In Advances in Neural Information Processing Systems (NeurIPS). 2022.
9. **Jinbao Wang***, Guoyang Xie*, Yawen Huang*, Yefeng Zheng, Yaochu Jin, and Feng Zheng. "FedMed-ATL: Misaligned Unpaired Cross-Modality Neuroimage Synthesis via Affine Transform Loss." In Proceedings of the 30th ACM International Conference on Multimedia (ACM MM), pp. 1522-1531. 2022.
10. **Jinbao Wang**, Shuo Xu, Feng Zheng, Ke Lu, Jingkuan Song, and Ling Shao. "Learning efficient hash codes for fast graph-based data similarity retrieval."IEEE Transactions on Image Processing (`IEEE TIP`) 30 (2021): 6321-6334.

11. Hongjun Chen, **Jinbao Wang**, Hong Cai Chen, Xiantong Zhen, Feng Zheng, Rongrong Ji, and Ling Shao. "Seminar learning for click-level weakly supervised semantic segmentation." In Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV), pp. 6920-6929. 2021.

Other Published Paper (First author: 11; Corresponding author: 3)

1. Teng Yang, Pengcheng Gao, Chengbin Hou, **Jinbao Wang**, and Yongliang Tang. "Self-supervised Models are Strong Industrial Few-shot Defect Classification Learners." 2nd workshop on Vision-based InduStrial InspectiON. ECCVW-VISION. 2024.
2. Qingyuan Liu, Ke Lv, Zehai Niu, Kun Dong, **Jinbao Wang**, Jian Xue, and Xiaoyu Qin. "FlexControl: Flexible and Efficient Full-Body Controllable Text-to-Motion Generation." Towards a Complete Analysis of People: Fine-grained Understanding for Real-World Applications. ECCVW-TCAP. 2024.
3. Qingyuan Liu, Zehai Niu, Ke Lu, Kun Dong, Jian Xue, Xiaoyu Qin, and **Jinbao Wang**. "AdaptControl: Adaptive Human Motion Control and Generation via User Prompt and Spatial Trajectory Guidance." The 5th International Workshop on Human-centric Multimedia Analysis. ACM MMW-HCMA. 2024. (**Best Student Paper**)
4. Zehai Niu, Ke Lu, Jian Xue, Xiaoyu Qin, **Jinbao Wang**, and Ling Shao. "From Method to Application: A Review of Deep 3D Human Motion Capture." IEEE Transactions on Circuits and Systems for Video Technology (`IEEE TCSVT`). 2024.
5. Zehai Niu, Ke Lu, Jian Xue, and **Jinbao Wang**. "Skeleton Cluster Tracking for robust multi-view multi-person 3D human pose estimation." Computer Vision and Image Understanding (CVIU). 2024.
6. Lian Chen, Zehai Niu, Qingyuan Liu,, **Jinbao Wang**, Jian Xue, and Ke Lu. "Anatomically-informed vector quantization variational auto-encoder for text to motion generation." IEEE International Conference on Multimedia and Expo, Workshop (ICMEW). 2024.
7. Qiang Li, Qianchen Mao, Wenjie Liu, **Jinbao Wang**, Wenming Wang, and Binshu Wang. "Local Information Guided Global Integration For Infrared Small Target Detection." IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP). 2024.
8. Guoyang Xie*, **Jinbao Wang***, Jiaqi Liu*, Jiayi Lyu, Yong Liu, Chengjie Wang, Feng Zheng, and Yaochu Jin. "IM-IAD: Industrial image anomaly detection benchmark in manufacturing." IEEE Transactions on Cybernetics (`IEEE TCYB`). 2024.
9. Wujin Li, Bin-Bin Gao, Bizhong Xia, **Jinbao Wang**, Jun Liu, Yong Liu, Chengjie Wang, and Feng Zheng. "Unsupervised Continual Anomaly Detection with Contrastively-learned Prompt." IEEE Transactions on Multimedia (`IEEE TMM`). 2023.
10. Guoyang Xie*, Yawen Huang*, **Jinbao Wang**†, Jiayi Lyu, Feng Zheng†, Yefeng Zheng, and Yaochu Jin. "Cross-Modality Neuroimage Synthesis: A Survey." ACM Computing Surveys 56 (2023): 1-28.
11. Lingrui Zhang, Shuheng Zhang, Guoyang Xie, Jiaqi Liu, Hua Yan, **Jinbao Wang**†, Feng Zheng†, and Yaochu Jin. "What makes a good data augmentation for few-shot unsupervised image anomaly detection?" In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR Vision Workshop), pp. 4344-4353. 2023.
12. Guoyang Xie*, **Jingbao Wang***†, Jiaqi Liu*, Feng Zheng†, and Yaochu Jin. "Pushing the limits of fewshot anomaly detection in industry vision: Graphcore." The Eleventh International Conference on Learning Representations (ICLR). 2023.
13. Jiaqi Liu*, Guoyang Xie*, **Jinbao Wang***, Shangnian Li, Chengjie Wang, Feng Zheng, and Yaochu Jin. "Deep Industrial Image Anomaly Detection: A Survey." Machine Intelligence Research (MIR). 2023.
14. Guoyang Xie*, **Jinbao Wang***, Guo Yu, Feng Zheng, and Yaochu Jin. "Tiny adversarial multi-objective oneshot neural architecture search." Complex & Intelligent Systems (CIS) 6 (2023): 107-109.
15. **Jinbao Wang***, Guoyang Xie*, Yawen Huang*, Jiayi Lyu, Feng Zheng, Yefeng Zheng, and Yaochu Jin."FedMed-GAN: Federated domain translation on unsupervised cross-modality brain image synthesis." Neurocomputing 546 (2023): 126282.
16. Hao Zheng*, **Jinbao Wang***, Xiantong Zhen, Jingkuan Song, Feng Zheng, Ke Lu, and Guo-Jun Qi. "Continuous cross-modal hashing." Pattern Recognition (PR) 142 (2023): 109662.
17. **Jinbao Wang***, Shujie Tan*, Xiantong Zhen, Shuo Xu, Feng Zheng, Zhenyu He, and Ling Shao. "Deep 3D human pose estimation: A review." Computer Vision and Image Understanding (CVIU) 210 (2021): 103225.
18. Lian Chen, Ke Lu, Pengcheng Gao, Jian Xue, and **Jinbao Wang**. "A Novel Multi-feature Skeleton Representation for 3D Action Recognition." In International Conference on Pattern Recognition (ICPR), pp. 365-379. Springer, Cham, 2021.
19. **Jinbao Wang**, Ke Lu, Jian Xue, and Yutong Kou. "Relative Depth Estimation Prior for Single Image Dehazing." In 2019 IEEE International Conference on Multimedia & Expo Workshops (ICMEW), pp. 270-275. IEEE, 2019.
20. **Jinbao Wang**, Ke Lu, Jian Xue, Pengcheng Gao, and Yanfu Yan. "A markerless body motion capture system for character animation based on multi-view cameras." In ICASSP 2019-2019 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), pp. 8558-8562. IEEE, 2019.
21. **Jinbao Wang**, Ke Lu, Jian Xue, Ning He, and Ling Shao. "Single image dehazing based on the physical model and MSRCR algorithm." IEEE Transactions on Circuits and Systems for Video Technology (`IEEE TCSVT`) 28, no. 9 (2017): 2190-2199.
22. Ning He, **Jinbao Wang**, Lu-Lu Zhang, Guang-Mei Xu, and Ke Lu. "Non-local sparse regularization model with application to image denoising." Multimedia Tools and Applications 75, no. 5 (2016): 2579-2594.
23. Ning He, **Jinbao Wang**, Lu-Lu Zhang, and Ke Lu. "Convex optimization based low-rank matrix decomposition for image restoration." Neurocomputing 172 (2016): 253-261.

24. **Jinbao Wang**, Ning He, Lu-Lu Zhang, and Ke Lu. "Single image dehazing with a physical model and dark channel prior." Neurocomputing 149 (2015): 718-728. **(ESI Highly-Cited Paper)**

25. **Jinbao Wang**, Ning He, and Ke Lu. "A new single image dehazing method with MSRCR algorithm." In Proceedings of the 7th International Conference on Internet Multimedia Computing and Service, pp. 1-4. 2015.

26. Ning He, **Jinbao Wang**, Lu-Lu Zhang, and Ke Lu. "An improved fractional-order differentiation model for image denoising." Signal Processing 112 (2015): 180-188.

27. Ning He, Ke Lu, and **Jinbao Wang**. "Image denoising using fractional-order non-local TV model." In Proceedings of International Conference on Internet Multimedia Computing and Service, pp. 279-282. 2014.

28. Ning He, Ke Lu, Bing-Kun Bao, Lu-Lu Zhang, and **Jinbao Wang**. "Single-image motion deblurring using an adaptive image prior." Information Sciences 281 (2014): 736-749.