Xiaoxiang Han

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Education

2021–2024 **University of Shanghai for Science and Technology**, *M.Eng.*
Biomedical Engineering

2017–2021 **Jinling Institute of Technology**, *B.Eng.*
Computer Science and Technology

Research Interest

Medical Image/Video Analysis, Weakly/Semi/Self-Supervised Learning, Computer Vision

Publications [(Equal) First Author]

*indicates equal contribution, ✉indicates corresponding authors

1. ***Xiaoxiang Han***, *Qiaohong Liu* ✉, *Ziqi Han, Yuanjie Lin, Naiyue Xu*. "Handwritten Mathematical Expression Recognition via GCAttention-Based Encoder and Bidirectional Mutual Learning Transformer", **Pattern Recognition and Computer Vision: 5th Chinese Conference, PRCV 2022. CCF-C.** 10.1007/978-3-031-18913-5_22

2. ***Xiaoxiang Han***, *Yiman Liu, Gang Liu, Yuanjie Lin, Qiaohong Liu* ✉. "LOANet: A Lightweight Network Using Object Attention for Extracting Buildings and Roads from UAV Aerial Remote Sensing Images", **PeerJ Computer Science. IF 3.8, JCR Q2, CAS Q4.** 10.7717/peerjcs.1467

3. *Yiman Liu*,* ***Xiaoxiang Han****, *Tongtong Liang, Bin Dong, Jiajun Yuan, Menghan Hu, Qiaohong Liu* ✉, *Jiangang Chen* ✉, *Qingli Li* ✉, *Yuqi Zhang* ✉. "EDMAE: An Efficient Decoupled Masked Autoencoder for Standard View Identification in Pediatric Echocardiography", **Biomedical Signal Processing and Control. IF 5.1, JCR Q2, CAS Q2, Accepted.** 10.48550/arXiv.2302.13869

4. *Yiman Liu*, Size Hou*,* ***Xiaoxiang Han****, *Tongtong Liang, Menghan Hu, Xin Wang, Wei Gu, Yuqi Zhang* ✉, *Qingli Li* ✉, *Jiangang Chen* ✉. "Intelligent diagnosis of Atria septal defect in children using Echocardiography with deep learning", **Virtual Reality & Intelligent Hardware. EI, Accepted.**

5. *Yiman Liu*,* ***Xiaoxiang Han****, *Yuqi Zhang, Zhifang Zhang, Rong Shen, Lijun Chen, Bin Dong, Jiajun Yuan, Menghan Hu, Qingli Li, Jiangang Chen* ✉. "Application of deep learning in automatic intelligent recognition of standard views of pediatric echocardiography", **Academic Journal of Naval Medical University (Chinese). Accepted.**

Under Review

1. ***Xiaoxiang Han***, *Yiman Liu, Yuanjie Lin, Keyan Chen, Weikun Zhang, Qiaohong Liu* ✉. "Reconstruction of Cardiac Cine MRI under Free-breathing using Motion-guided Deformable Alignment and Multi-resolution Fusion", **Computers in Biology and Medicine. IF 7.7, JCR Q1, CAS Q2.**

2. *Yiman Liu*, Qiming Huang*,* ***Xiaoxiang Han****, *Tongtong Liang, Zhifang Zhang, Lijun Chen, Jinfeng Wang, Angelos Stefanidis, Jionglong Su* ✉, *Jiangang Chen* ✉, *Qingli Li* ✉, *Yuqi Zhang* ✉. "Atrial Septal Defect Detection in Children Based on Ultrasound Video Using Multiple Instances Learning", **Computer Methods and Programs in Biomedicine. IF 6.1, JCR Q1, CAS Q2.** 10.48550/arXiv.2306.03835

Project Experience

2023	**Development and Application of an Artificial Intelligence-Based Training System for Standardized Scanning of Pediatric Cardiac Ultrasound Standard Views**, *Participation*, Principal Implementer, Project Leader: Yuqi Zhang, Yiman Liu
	Research Project of Pediatric Medical Consortium at Shanghai Children's Medical Center, Affiliated with Shanghai Jiao Tong University School of Medicine.
2022	**Development of an Intelligent Interpretation System for Remote Sensing Images of Nautical and Terrestrial Terrains based on Deep Learning Techniques**, *Participation*, Principal Implementer, Project Leader: Qiaohong Liu, Gang Liu
	Science and Technology Project of Changjiang Yichang Waterway Bureau.
2021–2022	**Development of (Perinatal Cloud™) Collaborative Perinatal Neonatal Platform**, *Participation*, Principal Implementer, Project Leader: Zhangbin Yu
	Neonatology Department of Shenzhen People's Hospital.

Awards

2021	○ First Class Scholarship for Postgraduate Student, University of Shanghai for Science and Technology.
2022	○ The Excellent Doctoral/Master's Dissertation Cultivation Project of Shanghai University of Medicine & Health Sciences.

Skills

English	CET-6, good reading and writing skills
Deep Learning	Python, PyTorch, OpenCV. Familiar with mainstream deep learning frameworks.
Web backend	JAVA, Spring Boot, MyBatis, MySQL, etc.
Web frontend	HTML, CSS, JavaScript, jQuery, LayUI, WeChat Mini Program.
Other skills	PyQt, C/C++, etc.