Shoujin Huang (iD)

✉ solor.pikachu@gmail.com   ○ https://github.com/Solor-pikachu

▤ Citations: 284   🅰 IELTS: 6.0

🜀 Birth: Dec. 11, 2000   ✹ Nationality: Chinese

📞 +86 18718547325   📍 Shenzhen, Guangdong, China

Employment History

2022 – 2022

🔖 **Tencent Music Entertainment, Shenzhen, China.**

» **Internship.**

General algorithms for video analysis.

Developed general algorithms for detecting dance amplitude, recognizing musical instruments, and classifying video scenes based on video streams.

2023 – 2024

🔖 **Shenzhen Technology University, Shenzhen, China.**

» **Reseacher Assistant.**

Multi-contrast MRI Super-Resolution.

Develop the deep learning architecture which is more powerful to capture and fuse the shareable information between the multi-contrast images via a dual cross-attention transformer to jointly explore spatial and channel information.

Robust Reconstruction of Accelerated MRI.

Based on diffusion model and inverse problem, devoloping a posterior sampling strategy with a novel noise level adaptive data consistency operation to reconstruct MRI whose field strength ranges from 0.3T to 3T.

Education

2019 – 2023

🔖 **Bachelor, Shenzhen Technology University**

Major: Mechanical design and automation.

MICCAI2023 student member & **ISMRM2023 student member**

Research Interests

Deep Learning	Medical Image Analysis	Video Understanding
DDPM	MRI Reconstruction	Image Super Resolution
Image Denosing	Image Classification	Image Segmentation

Research Publications

Journal Articles

1. Yang, Huaishui, Shaojun Liu, Yilong Liu, Lingyan Zhang, **Shoujin Huang**, Jiayu Zheng, Jingzhe Liu, Hua Guo, Ed X. Wu, and Mengye Lyu. "An Unsupervised Learning Approach for Reconstructing 3T-Like Images from 0.3T MRI Without Paired Training Data". In: *IEEE Transactions on Medical Imaging* (2025), pp. 1–1. DOI: 10.1109/TMI.2025.3597401.

2. Ma, Jun, Yao Zhang, Song Gu, Cheng Ge, Shihao Mae, Adamo Young, Cheng Zhu, Xin Yang, Kangkang Meng, Ziyan Huang, Fan Zhang, Yuanke Pan, **Shoujin Huang**, Jiacheng Wang, Mingze Sun, Rongguo Zhang, Dengqiang Jia, Jae Won Choi, Natália Alves, Bram de Wilde, Gregor Koehler, Haoran Lai, Ershuai Wang, Manuel Wiesenfarth, Qiongjie Zhu, et al. "Unleashing the strengths of unlabelled data in deep learning-assisted pan-cancer abdominal organ quantification: the FLARE22 challenge". In: *The Lancet Digital Health (IF 30.8)* 6.11 (2024), e815–e826. ISSN: 2589-7500. DOI: 10.1016/S2589-7500(24)00154-7.

3. **Shoujin Huang**, Guoxiong Deng, Yan Kang, Jianzhong Li, Jingyu Li, and Mengye Lyu. "Exploring Deep Learning Strategies for Intervertebral Disc Herniation Detection on Veterinary MRI". In: *Scientific Reports (IF 4.9)* 14.1 (2024), p. 16705. DOI: 10.1038/s41598-024-67749-5.

4. **Shoujin Huang**, Guanxiong Luo, Yuwan Wang, Kexin Yang, Lingyan Zhang, Jingzhe Liu, Hua Guo, Min Wang, and Mengye Lyu. "Robust Simultaneous Multislice MRI Reconstruction Using Deep Generative Priors". In: *Medical Image Analysis(IF 10.9) (Accepted)* (2024). URL: https://arxiv.org/pdf/2407.21600.pdf.

5. Mengye Lyu, Lifeng Mei, **Shoujin Huang**, Sixing Liu, Yi Li, Kexin Yang, Yilong Liu, Yu Dong, Linzheng Dong, and Ed X. Wu. "M4Raw: A multi-contrast, multi-repetition, multi-channel MRI k-space dataset for low-field MRI research". In: *Scientific Data (IF 10.8)* 10.1 (May 2023), p. 264. ISSN: 2052-4463. DOI: 10.1038/s41597-023-02181-4.

6. Haseeb Hassan, Zhaoyu Ren, Huishi Zhao, **Shoujin Huang**, Dan Li, Shaohua Xiang, Yan Kang, Sifan Chen, and Bingding Huang. "Review and classification of AI-enabled COVID-19 CT imaging models based on computer vision tasks". In: *Computers in Biology and Medicine (IF 6.9)* 141 (2022), p. 105123. DOI: 10.1016/j.compbiomed.2021.105123.

Conference Proceedings

1. Luo, Guanxiong and **Shoujin Huang**. "Self-diffusion for Solving Inverse Problems". In: *Conference and Workshop on Neural Information Processing Systems (NeurIPS 2025)*. 2024. URL: https://openreview.net/pdf?id=5g9qls1V7Q.

2. **Shoujin Huang**, Jingyu Li, Yuwan Wang, Ziran Chen, Shaojun Liu, Yilong Liu, Yuhui Xiong, Bing Wu, Jingzhe Liu, Hua Guo, Ed X Wu, and Mengye Lyu. "Zero-shot EPI Nyquist ghost correction with diffusion-based generative models and magnitude consistency regularization". In: *International Society for Magnetic Resonance in Medicine (ISMRM 2024)*. 2024, p. 0353.

3. **Shoujin Huang**, Guanxiong Luo, Xi Wang, Ziran Chen, Yuwan Wang, Huaishui Yang, Pheng-Ann Heng, Lingyan Zhang, and Mengye Lyu. "Noise Level Adaptive Diffusion Model for Robust Reconstruction of Accelerated MRI". In: *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI 2024)*. 2024. URL: https://arxiv.org/pdf/2403.05245.pdf.

4. **Shoujin Huang**, Jingyu Li, Lifeng Mei, Tan Zhang, Ziran Chen, Yu Dong, Linzheng Dong, Shaojun Liu, and Mengye Lyu. "Accurate Multi-contrast MRI Super-Resolution via a Dual Cross-Attention Transformer Network". In: *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI 2023)*. Springer. 2023, pp. 313–322. DOI: 10.1007/978-3-031-43999-5_30.

5 **Shoujin Huang**, Sixing Liu, Lifeng Mei, Chenhui Tang, Ed X Wu, and Mengye Lyu. "A Novel Cross-Subject Transformer Denoising Method". In: *International Society for Magnetic Resonance in Medicine (ISMRM 2023)*. 2023, p. 77.

6 Guoxiong Deng, **Shoujin Huang**, Ziran Chen, Jianzhong Li Lifeng Mei, Ruixiang Jiang, WenYue Xiao, Dexing Wei, Yan Kang, and Mengye Lyu. "Deep Learning for Veterinary MRI: Automated Detection of Intervertebral Disc Herniation in Pet Dogs". In: *International Society for Magnetic Resonance in Medicine (ISMRM 2022)*. 2022, p. 3104.

Books and Chapters

1 **Shoujin Huang**, Huaishui Yang, Lifeng Mei, Tan Zhang, Shaojun Liu, and Mengye Lyu. "From Whole-Body to Abdomen: Streamlined Segmentation of Organs and Tumors via Semi-Supervised Learning and Efficient Coarse-to-Fine Inference". In: *MICCAI Challenge on Fast and Low-Resource Semi-supervised Abdominal Organ Segmentation (FLARE2023)*. Springer, 2024, pp. 283–292. 🔗 DOI: 10.1007/978-3-031-58776-4_22.

2 **Shoujin Huang**, Lifeng Mei, Jingyu Li, Ziran Chen, Yue Zhang, Tan Zhang, Xin Nie, Kairen Deng, and Mengye Lyu. "Abdominal CT organ segmentation by accelerated nnUNet with a coarse to fine strategy". In: *MICCAI Challenge on Fast and Low-Resource Semi-supervised Abdominal Organ Segmentation (FLARE2022)*. Springer, 2023, pp. 23–34. 🔗 DOI: 10.1007/978-3-031-23911-3_3.

Miscellaneous Experience

Participation in International Academic Conferences

2022.9	🔖	**Medical Image Computing and Computer Assisted Intervention (MICCAI22)**. Sigapore.
2023.6	🔖	**International Society for Magnetic Resonance in Medicine (ISMRM23)**. Toronto, Canda.

Awards and Achievements

2022	🔖	**Meritorious Winner Award**, MICCAI22 challenge compeition.
2023	🔖	**Shenzhen Technology University**, Minor award.

Chinese Patent

🔖 **An intelligent elderly health monitoring method, device, terminal and storage medium.**

- **Number**: 2022101433404

- **Status**: Granted

- **Applicants**: Shenzhen Techonology University

- **Inventors(Top3)**: **Shoujin Huang**, Junhui Zhu, Tan Zhang

- **Application Date**: 2022-2-16

Chinese Patent (continued)

🔖 **Video scene recognition method, neural network training method, server and medium.**

- **Number**: 2023101949412

- **Status**: Pending

- **Applicants**: Tencent Music Entertainment

- **Inventors(Top3)**: **Shoujin Huang**, Xin Nie, Guowei Hong

- **Application Date**: 2023-6-9