Shoujin Huang

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https://github.com/Solor-pikachu
Citations: 384
IELTS: 6.0
Birth: Dec. 11, 2000
Nationality: Chinese
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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**

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.

Miscellaneous Experience (continued)

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

- **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

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. **Robust Simultaneous Multislice MRI Reconstruction Using Slice-Wise Learned Generative Diffusion Priors**
   Medical Image Analysis (IF 11.8) DOI: doi.org/10.1016/j.media.2025.103851
   Shoujin Huang, Guanxiong Luo, Yunlin Zhao, Yilong Liu, Yuwan Wang, Kexin Yang, Jingzhe Liu, Hua Guo, Min Wang, Lingyan Zhang, and Mengye Lyu

2. **Exploring Deep Learning Strategies for Intervertebral Disc Herniation Detection on Veterinary MRI**
   Scientific Reports (IF 3.9) DOI: 10.1038/s41598-024-67749-5
   Shoujin Huang, Guoxiong Deng, Yan Kang, Jianzhong Li, Jingyu Li, and Mengye Lyu

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

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

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

6. **Unleashing the strengths of unlabelled data in deep learning-assisted pan-cancer abdominal organ quantification: the FLARE22 challenge**
The Lancet Digital Health (IF 30.8) DOI: 10.1016/S2589-7500(24)00154-7
Jun Ma, 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.

Conference Proceedings

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

2. **Noise Level Adaptive Diffusion Model for Robust Reconstruction of Accelerated MRI**
International Conference on Medical Image Computing and Computer-Assisted Intervention **(MICCAI 2024)** DOI: 10.1007/978-3-031-72104-5_48
Shoujin Huang, Guanxiong Luo, Xi Wang, Ziran Chen, Yuwan Wang, Huaishui Yang, Pheng-Ann Heng, Lingyan Zhang, and Mengye Lyu

3. **Autoregressive Image Diffusion: Generating Image Sequence and Application in MRI**
Neural Information Processing Systems **(NeurIPS 2024)** URL: https://openreview.net/pdf?id=jIh4W7r0rn
Guanxiong Luo, **Shoujin Huang**, and Martin Uecker

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

5. **Zero-shot EPI Nyquist ghost correction with diffusion-based generative models and magnitude consistency regularization**
International Society for Magnetic Resonance in Medicine **(ISMRM 2024)** DOI: 10.58530/2024/0353
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

6. **A Novel Cross-Subject Transformer Denoising Method**
International Society for Magnetic Resonance in Medicine **(ISMRM 2023)** DOI: 10.58530/2023/0077
Shoujin Huang, Sixing Liu, Lifeng Mei, Chenhui Tang, Ed X Wu, and Mengye Lyu

Books and Chapters

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

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