QING WU

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Research interests

Inverse Problems in Medical Imaging, Neural Representations.

Education

2020 – PRESENT   **ShanghaiTech University**   Shanghai, China
– Ph.D. Candidate in *Electronic Science and Technology*
– Advisor: Prof. Yuyao Zhang

2016 – 2020   **China University of Geosciences, Wuhan**   Hubei, China
– B.S. in *Communication Engineering*

Selected publications

PREPRINT   Qing Wu, Hongjiang Wei, Jingyi Yu, Yuyao Zhang, "Unsupervised Multi-Parameter Inverse Solving for Reducing Ring Artifacts in 3D X-Ray CBCT", *arXiv preprint arXiv:2412.05853*

ICLR 2025   Qing Wu*, Chenhe Du*, XuanYu Tian, Jingyi Yu, Yuyao Zhang, Hongjiang Wei, "Moner: Motion Correction in Undersampled Radial MRI with Unsupervised Neural Representation", *Thirteenth International Conference on Learning Representations*

NEURIPS 2023   Qing Wu, Lixuan Chen, Ce Wang, Hongjiang Wei, S. Kevin Zhou, Jingyi Yu, Yuyao Zhang, "Unsupervised Polychromatic Neural Representation for CT Metal Artifact Reduction", *Thirty-seventh Conference on Neural Information Processing Systems*

IEEE TCI 2023   Qing Wu, Ruimin Feng, Hongjiang Wei, Jingyi Yu, Yuyao Zhang, "Self-Supervised Coordinate Projection Network for Sparse-View Computed Tomography", *IEEE Transactions on Computational Imaging*

IEEE ISBI 2023   Qing Wu, Xin Li, Hongjiang Wei, Jingyi Yu, Yuyao Zhang, "Joint Rigid Motion Correction and Sparse-View CT via Self-Calibrating Neural Field", *IEEE 20th International Symposium on Biomedical Imaging*

IEEE TCAS-I 2023   Chaolin Rao*, Qing Wu*, Pingqiang Zhou, Jingyi Yu, Yuyao Zhang, Xin Lou, "An Energy-Efficient Accelerator for Medical Image Reconstruction From Implicit Neural Representation", *IEEE Transactions on Circuits and Systems I: Regular Papers*

IEEE J-BHI 2022	Qing Wu, Yuwei Li, Yawen Sun, Yan Zhou, Hongjiang Wei, Jingyi Yu, Yuyao Zhang, "An Arbitrary Scale Super-Resolution Approach for 3D MR Images via Implicit Neural Representation", *IEEE Journal of Biomedical and Health Informatics*
MICCAI 2021	Qing Wu, Yuwei Li, Lan Xu, Ruimin Feng, Hongjiang Wei, Qing Yang, Boliang Yu, Xiaozhao Liu, Jingyi Yu, Yuyao Zhang, "IREM: High-Resolution Magnetic Resonance Image Reconstruction via Implicit Neural Representation", *24th International Conference on Medical Image Computing and Computer Assisted Intervention*

Patents

Yu Jingyi, Zhang Yuyao, Lou Xin, Wu Qing, Rao Chaolin, Yang Jiawen, "Real-time volumetric rendering", *WO2023284275A1&CN117651975A*

Yu Jingyi, Zhang Yuyao, Xu Lan, Li Yuwei, Wu Qing, "Method for high-resolution image reconstruction", *WO2023283795A1&CN115619632A*

Yu Jingyi, Zhang Yuyao, Wu Qing, "System and method for near real-time and unsupervised coordinate projection network for computed tomography images reconstruction", *WO2024078049A1*

Teaching experience

FALL 2022&2023	**CS276: Computational Photography** – Position: Guest Lecture – Instructor: Prof. Jingyi Yu	Shanghaitech University
SPRING 2023	**CS270B: Advanced Digital Image Processing** – Position: Teaching Assistant – Instructor: Prof. Yuyao Zhang	Shanghaitech University

Honors and scholarships

2023 – 2024	**Outstanding Student** (Top 5%)	ShanghaiTech University
2022 – 2023	**Outstanding Student** (Top 5%)	ShanghaiTech University
2020 – 2021	**Merit Student** (Top 10%)	ShanghaiTech University

Academic service

REVIEWER	**Conferences:** *ICML 2025&2024, CVPR 2025&2024, MICCAI 2025&2024&2023, AISTATS 2025, AAAI 2025, ICLR 2025, NeurIPS 2024, IEEE ISBI 2024* **Journals:** *MedIA, IEEE TNNLS, IEEE TCI, IEEE J-BHI, JCDE*
VOLUNTEER	**Conference:** *ASSIST 2023*

Technical skills

Programming languages: Python, MATLAB

Software: LaTeX, Git, ITK-SNAP, Microsoft Word, Microsoft PowerPoint, etc.

Languages: Mandarin (native), English (basic)

Other interests

Esports (e.g., CS2, League of Legends), Music, Sleeping.