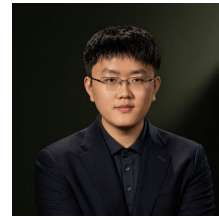


Zikang Xu



130-2258-7096 | zikangxu@ustc.edu.cn | Xuzikang.github.io

Experience

2025.07–present **Special Appointed Associate Researcher (Postdoc)**
Institute of Artificial Intelligence, Hefei Comprehensive National Science Center, Hefei, Anhui
Supervisors: Prof. Jia-Hong Gao, Prof. Wenjie Feng
Research Focus: Artificial Intelligence, Magnetoencephalography (MEG) Signal Analysis

Education

2021.09–2025.06 **Ph.D. in Biomedical Engineering**
University of Science and Technology of China (USTC), Suzhou, Jiangsu
Supervisor: Prof. Shaohua Kevin Zhou (Fellow of IEEE, AIMBE, NAI)
Research Focus: Deep Learning, Medical Image Analysis, AI Fairness, Medical Image Landmark Detection

2018.09–2021.06 **M.Eng. in Biomedical Engineering**
Southeast University (SEU), Nanjing, Jiangsu
Supervisor: Prof. Zhongze Gu (Cheung Kong Scholar, NSFC Distinguished Young Scholar)
Coursework: Medical Image Processing, Fundamentals of AI, Medical Imaging Informatics

2014.09–2018.06 **B.Eng. in Biomedical Engineering**
Southeast University (SEU), Chien-Shiung Wu College / School of Biological Science and Medical Engineering, Nanjing, Jiangsu
Coursework: Engineering Mathematics, C++ Programming, Signals and Systems, Electronic Circuits, Digital Signal Processing, Principles of Medical Imaging, etc.

Research Interests

- **Medical Image Analysis:** Medical image landmark detection, surgical video and medical image segmentation
- **Algorithmic Fairness:** Fairness in deep learning models, unfairness mitigation algorithms, fairness evaluation of foundation models
- **MEG Signal Analysis:** Epileptic spike detection and source localization based on magnetoencephalography

Publications

Fairness in Medical Image Analysis

- 2026 **DUCX: Decomposing Unfairness in Tool-Using Chest X-ray Agents**
*Zikang Xu**, Ruinan Jin*, Xiaoxiao Li
[MICCAI 2026 \(CCF-B\) Early Accepted](#)
- 2025 **Fair Ultrasound Diagnosis via Adversarial Protected Attribute Aware Perturbations on Latent Embeddings**
Zikang Xu, Fenghe Tang, Quan Quan, Qingsong Yao, Qingpeng Kong, Jianrui Ding, Chunping Ning, S. Kevin Zhou
[NPJ Digital Medicine \(Q1, IF=12.4\)](#)
- 2024 **FairMedFM: Fairness Benchmarking for Medical Imaging Foundation Models**
Ruinan Jin, Zikang Xu*, Yuan Zhong*, Qingsong Yao, Qi Dou, S. Kevin Zhou, Xiaoxiao Li*
[NeurIPS 2024 Dataset & Benchmark \(CCF-A\)](#)
- 2024 **Addressing Fairness Issues in Deep Learning-Based Medical Image Analysis: A Systematic Review**
Zikang Xu, Jun Li, Qingsong Yao, Han Li, Mingyue Zhao, S. Kevin Zhou
[NPJ Digital Medicine \(Q1, IF=12.4\)](#)
- 2023 **FairAdaBN: Mitigating Unfairness with Adaptive Batch Normalization and Its Application to Dermatological Disease Classification**
Zikang Xu, Shang Zhao, Quan Quan, Qingsong Yao, S. Kevin Zhou
[MICCAI 2023 \(CCF-B\)](#)

Electrode Landmark Detection

- 2024 **SIX-Net: Spatial-context Information miX-up for Electrode Landmark Detection**
Xinyi Wang, Zikang Xu, Qingsong Yao, Heqin Zhu, Yiyong Sun, S. Kevin Zhou
[MICCAI 2024 \(CCF-B\) \(Early Accepted\)](#)
- 2024 **OFELIA: Optical Flow-based Electrode Localization**
Xinyi Wang, Zikang Xu, Qingsong Yao, Yiyong Sun, S. Kevin Zhou
[MIDL 2024](#)

Other Publications

- 2026 **Medatlas: Evaluating LLMs for Multi-round, Multi-task Medical Reasoning Across Diverse Imaging Modalities and Clinical Text**
*Ronghao Xu, Zhen Huang, Yangbo Wei, Xiaoqian Zhou, **Zikang Xu**, Ting Liu, Zihang Jiang, S. Kevin Zhou*
[AAAI 2026 \(CCF-A\)](#)
- 2025 **FAIR-ESI: Feature Adaptive Importance Refinement for Electrophysiological Source Imaging**
*Linyong Zou, Liang Zhang, Xiongfei Wang, Jia-Hong Gao, Yi Sun, Shurong Sheng, Kuntao Xiao, Wanli Yang, Pengfei Teng, Guoming Luan, Zhao Lv, **Zikang Xu***
[IEEE BIBM 2025 \(CCF-B\)](#)
- 2025 **Style-Aligned Image Composition for Robust Detection of Abnormal Cells in Cytopathology**
*Qiuyi Qi, Xin Li, Ming Kong, **Zikang Xu**, Bingdi Chen, Qiang Zhu, S. Kevin Zhou*
[MIDL 2025 \(Oral\)](#)
- 2024 **Slide-SAM: Medical SAM Meets Sliding Window**
*Quan Quan, Fenghe Tang, **Zikang Xu**, Heqin Zhu, S. Kevin Zhou*
[MIDL 2024 \(Oral\)](#)
- 2024 **LACOSTE: Exploiting Stereo and Temporal Contexts for Surgical Instrument Segmentation**
*Qiyuan Wang, Shang Zhao, **Zikang Xu**, S. Kevin Zhou*
[Medical Image Analysis \(Q1, IF=10.7\)](#)
- 2021 **A Storm in a Teacup – A Biomimetic Lung Micro-physiological System in Conjunction with a Deep-learning Algorithm to Monitor Lung Pathological and Inflammatory Reactions**
*Zaozao Chen, Jie Huang, Jing Zhang, **Zikang Xu**, Qiwei Li, Jun Ouyang, Yuchuan Yan, Shiqi Sun, Huan Ye, Fei Wang, Jianfeng Zhu, Zhangyan Wang, Jie Chao, Yuepu Pu, Zhongze Gu*
[Biosensors and Bioelectronics \(Q1, IF=10.7\)](#)

Research Experience

- 2023.06–2023.10 **Radiology Department Intern**
Fuwai Hospital, Chinese Academy of Medical Sciences, Beijing
Collaborated with radiologists to annotate myocardial and coronary structures on CT images; used nnU-Net for ventricular segmentation and automated 17-segment division of the left ventricular myocardium

Academic Reviewer

IEEE-TMI, BSPC, AAAI, MICCAI, BIBM, ISBI

| Honors & Awards

- 2016 **National Biomedical Engineering Innovation Design Competition**, Second Prize (National Level)
- 2021 **Suzhou Industrial Park Scholarship**
- 2021 **USTC First-Class Academic Scholarship**
- 2022 **USTC Second-Class Academic Scholarship**
- 2023 **USTC First-Class Academic Scholarship**
- 2025 **USTC Outstanding Graduate, Anhui Provincial Outstanding Graduate**
- 2025 **USTC Outstanding Doctoral Dissertation**

| Activities & Skills

- **Leadership:** Class President (Undergraduate); President of the Table Tennis Association, USTC Suzhou Institute (Ph.D.)
- **Volunteer Service:** Nanjing Science and Technology Innovation Week, Suzhou Marathon, Dushu Lake Academic Forum, MARSS Summer School
- **English:** CET-4, CET-6; IELTS 7.0 (Listening 7.5, Reading 7.0, Writing 7.0, Speaking 6.0)
- **Programming:** Python, MATLAB, $\LaTeX$
- **Hobbies:** Table Tennis, Badminton, Photography