

Ruru Xu

Citizenship: Chinese

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[Academic webpage](#)

[Google scholar page](#)

PROFILE

I am a PhD student at Istanbul Technical University, Computer Engineering, where I have studied since 2021. I work as a researcher in the 2232 International Fellowship for Outstanding Researchers Program of TUBITAK(Project No: 118C353) and the ITU BAP research funds (Project ID: 47296). My research focuses on MRI reconstruction using deep learning and reinforcement learning methods. My professor is Ilkay Oksuz.

From 2018 to 2020, I was an exchange student at the Lab of Interactive Media Computing at Fudan University. During this time, I was working on projects related to autonomous driving, which involved object detection, pedestrian recognition, Instance segmentation, path planning, etc., working under the guidance of Professor Cheng Jin.

From 2017 to 2020, I pursued my Master's studies at the SICT(Shanghai Institute of Computing Technology), with a research direction in computer vision. My professor is Xinli Min.

From 2017 to 2020, I interned at Shanghai Shen Teng Technology Co., Ltd. . My work there involved contributing to smart city-related projects.

In 2016, I earned my Bachelor's degree in Computer Science and Technology.

EDUCATION and RESEARCH EXPERIENCE

PhD Candidate, GPA: 3.43,

March 2021-present

Computer Engineering

Istanbul Technical University, Istanbul, Turkey

Exchange learning,

April 2018-March 2020

Lab of Interactive Media Computing

Fudan University, Shanghai, China

Master's Degree, GPA: 3.78,

September 2017-March 2020

Engineering Computer Software and Theory

Shanghai Institute of Computing Technology(SICT), Shanghai, China

Thesis: Research and Implementation of Intelligent Evaluation Algorithm of Street Cleanli-

ness Based on Vision **Online**

Bachelor's degree,
Computer Science and Technology
Liaocheng University, Liaocheng, China

September 2012-July 2016

Work Experience

Student Intern,
R&D department
Shanghai Shen Teng Technology Co., Ltd., Shanghai, China
Working on smart city related projects

September 2017-March 2020

PUBLICATIONS

Journal Papers:

- **Xu R**, K Anvari Hamedani, Yang Z, Oksuz I. “Hierarchical K-Space sampling with Mamba-based Reinforcement Learning for Efficient MRI Diagnosis.” Expert Systems With Applications [Q1, IF: 7.5, Under Review]
- **Xu R**, Oksuz I. “Undersampled K-Space Information Recovery with Long-Range Temporal Memory for Multi-Coil MRI Reconstruction.” Computer Methods and Programs in Biomedicine [Q1, IF: 4.8, Under Review]
- **Xu R**, Oksuz I. “Optimized K-Space Under-sampling for Brain MRI Reconstruction with Reinforcement Learning.” Pattern Recognition Letters (Q1; IF:3.3) [Under Review, Revise stage]
- Wang F, ...etc..**Xu R**, Oksuz I...etc., Towards Modality- and Sampling-Universal Learning Strategies for Accelerating Cardiovascular Imaging: Summary of the CM-RxRecon2024 Challenge. (**Top** Journal: TMI; IF:9.8) **Online**
- **Xu R**, Oksuz I. A Reinforcement Learning Approach for Optimized MRI Sampling with Region-Specific Fidelity. Neurocomputing (Q1, IF: 6.5), 2025. **Online Code**
- **Xu R**, Oksuz I. Segmentation-aware MRI subsampling for efficient cardiac MRI reconstruction with reinforcement learning. Image And Vision Computing (Q1, IF: 4.2), 2024. **Online**

Conference Papers:

- **Xu R**, Oksuz I. “HierAdaptMR: Cross-Center Cardiac MRI Reconstruction with Hierarchical Feature Adapters” (MICCAI2025 CMRxRecon2025 Workshop) **Online Code**
- **Xu R**, Oksuz I. “Adaptive k-space Radial Sampling for Cardiac MRI with Reinforcement Learning” (MICCAI2025 STACOM Workshop) **Online Code Presentation**

- **Xu R**, Özer C, Oksuz I. HyperCMR: Enhanced Multi-Contrast CMR Reconstruction with Eagle Loss. (MICCAI2024 CMRxRecon2024 Workshop). **Online Code Presentation**
- **Xu R**, Oksuz I. Efficient MRI reconstruction with reinforcement learning for automatic acquisition stopping. (MICCAI2022 STACOM Workshop). **Online Presentation**
- **Xu R**, An J, Su L, Min X. Banknotes serial number coding recognition.” In 2019 IEEE International Conference on Big Data (Big Data), pp. 5101-5107. IEEE, 2019. **Online**

HONORS and AWARDS

5th in Special Task1, 4th in Special Task2, CMRxRecon2025 Two Special Tasks. Awards Ceremony will be held at the SCMR 2026, Brazil. We will have oral presentation. **February 2026**

Final Rank

5th Place Award, Regular Task 1: CMR reconstruction model for multi-center evaluation. CMRxRecon2025 Challenge (MICCAI)2025, South Korea **September 2025**
Certification

3rd Place Award, Regular Task 2: CMR reconstruction model for multiple diseases evaluation. CMRxRecon2025 Challenge (MICCAI)2025, South Korea **September 2025**
Certification

5th Place Award, CMRxRecon2024 Challenge (MICCAI)2024, Morocco **October 2024**
Certification

Full Ph.D. Scholarship, **March 2021-present**
Istanbul Technical University, Istanbul, Turkey

TOEFL score

- Score: 108 · Jan 2021, Reading:28, Listening:26, Speaking:24, Writing:30

REFERENCES

- Ilkay Oksuz
Assoc. Prof., Istanbul Technical University, Computer Engineering Department
Research Associate, King’s College London, Biomedical Engineering Department
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- Cheng Jin
School of Computer Science, Shanghai Key Lab of Intelligent Information Processing,
Fudan University, Shanghai, China
Innovation Center of Calligraphy and Painting Creation Technology, MCT, China,
Fudan University, Shanghai, China
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- Xinli Min
Shanghai Energy saving Engineering and Technology Association (SESETA)
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