

# QIAOXIN LI

PhD Researcher in Neuroimaging / Deep Learning for fMRI Reconstruction

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## WORK EXPERIENCE

### CEA / Inria - MIND Team

PhD Researcher

Saclay, France

Sep 2025 – Present

- Conduct research on deep learning-based reconstruction of accelerated whole-brain high-resolution functional MRI.
- Contribute to open-source frameworks(MRI-NUFFT, SNAKE...)
- Investigate non-Cartesian sampling strategies and reconstruction frameworks integrating real-world acquisition constraints.
- Explore downstream neuroimaging applications including brain decoding and extensions toward brain-computer interfaces.

## EDUCATION

### Université Paris-Saclay

PhD in Medical Imaging, NeuroSpin, CEA

Saclay, France

Sep 2025 – Present

- **Thesis:** Deep Learning for High-Resolution 11.7 Tesla Functional Brain MRI Image Reconstruction

### University of Chinese Academy of Sciences

M.Eng in Computer Science, Shenzhen Institutes of Advanced Technology

Beijing / Shenzhen, China

Sep 2022 – Jun 2025

- **Thesis:** High Temporal Resolution CT Imaging Using Deep Learning Methods

### Henan University

B.Sc. in Computational Mathematics, The School of Mathematics and Statistics

Kaifeng, China

Sep 2018 – Jun 2022

- **Thesis:** A Variational Model for Removing Concentric Ring Artifacts from CT Images

## PROJECTS

### Ultra-High-Field High-Resolution Whole-Brain fMRI Reconstruction

NeuroSpin, CEA

Sep 2025 – Sep 2028

- Focused on reconstructing high spatiotemporal resolution fMRI images using 11.7T data.

### Spectral CT Reconstruction

Medical AI Center, Shenzhen Institutes of Advanced Technology

Feb 2023 – Aug 2025

- Addressed critical challenges in sequentially scanning DECT systems, integrating spectral and high temporal resolution reconstruction into generative models to achieve accurate material decomposition.
- Focused on reconstructing CT frames from highly undersampled data using physics-driven self-supervised learning.

## PUBLICATIONS AND MANUSCRIPTS

### Temporal Attention-Induced Scan-Specific fMRI Reconstruction Meets Time-Varying Trajectories

Qiaoxin Li , Caini Pan , Pierre-Antoine Comby , Chaithya Giliyar Radhakrishna , Philippe Ciuciu

Published on 2026 ISMRM & ISMRT Annual Meeting & Exhibition (ISMRM 2026, PowerPitch Oral)

May 2026

### DD-INR: Dynamics-Driven Implicit Neural Representation for Accelerated Whole-Brain Functional MRI Reconstruction

Qiaoxin Li , Caini Pan , Pierre-Antoine Comby , Chaithya Giliyar Radhakrishna , Philippe Ciuciu

Under Review

### ACCELERATION: Sequential-scanning Dual-Energy Computed Tomography Imaging Using High Temporal Image Reconstruction and Temporal Extrapolation

Qiaoxin Li , Dong Liang , Yinsheng Li

Published on 21st IEEE International Symposium on Biomedical Imaging (ISBI 2024)

May 2024

### Sequential-Scanning Dual-Energy CT Imaging Using High Temporal Resolution Image Reconstruction and Error-Compensated Material Basis Image Generation

Qiaoxin Li , Dong Liang , Yinsheng Li

Published on 18th International Meeting on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine (Fully3D 2025, Oral)

May 2025

### Sequential-Scanning Dual-Energy CT Imaging Using High Temporal Resolution Image Reconstruction and Error-Compensated Material Basis Image Generation

HONORS AND AWARDS

|                                                                                                                                                           |                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| <b>Educational Stipend Award</b><br>Issued by <i>ISMARM 2026</i>                                                                                          | <b>Cape Town, South Africa</b><br>May 2026 |
| <b>Best Paper Finalist (Top 2%)</b><br>Issued by <i>ISBI 2024</i>                                                                                         | <b>Athens, Greece</b><br>May 2024          |
| <b>Student Travel Grant</b><br>Issued by <i>ISBI 2024</i>                                                                                                 | <b>Athens, Greece</b><br>May 2024          |
| <b>Oral Academic Presentation Second Prize</b><br>Issued by <i>China BME Conference 2024</i>                                                              | <b>Shenzhen, China</b><br>Sep 2024         |
| <b>Second Prize, National College Mathematics Competition</b><br>Issued by <i>Chinese Mathematical Society</i>                                            | <b>Changchun, China</b><br>Jan 2021        |
| <b>Second Place, World Artificial Intelligence Innovation Application Competition</b><br>Issued by <i>China Artificial Intelligence Industry Alliance</i> | <b>Zhengzhou, China</b><br>Jan 2020        |

SKILLS, LANGUAGES, INTERESTS

- **Languages:** Chinese (Native speaker), English (Professional proficiency), French (Beginner)
- **Programming:** Python, MATLAB, LaTeX, Bash
- **Machine Learning:** Pytorch, Deep Learning, Generative Model, Multi-GPU Training
- **Tools & Environment:** Linux, Git
- **Interests:** Marathon, Cooking, Photography, Road trips and driving, Traveling, Movies