Yuancheng Jiang

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EDUCATION

Master of Science   Aug 2022 -
School of Biomedical Engineering, Tsinghua University   GPA: 3.90/4.00
Advisor: Dr. Hua Guo

Bachelor of Science   Aug 2018 - Jun 2022
Department of Biomedical Engineering, School of Medicine, Tsinghua University   GPA: 3.74/4.00
Awards: First-Class Comprehensive Excellent Scholarship (Top 10%) in 2019/2020/2021

PROJECTS

Multishot EPI Nyquist ghost correction by dual-polarity GRAPPA or SENSE   Aug 2023 -
CBIR & Martinos Center for Biomedical Imaging   Advisor: Dr. Berkin Bilgic & Dr. Hua Guo

· Proposed multishot dual-polarity GRAPPA (msDPG) and dual-polarity SENSE (DPS) for robust Nyquist ghost correction on multishot EPI diffusion data.
· Achieved superior ghost correction performance on scanners with ultra-high field (Terra.X) or high-performance gradients (Connectome 2.0).

Diffusion imaging by navigator-free multishot SMS spiral   Apr 2023 - Mar 2024
CBIR   Advisor: Dr. Hua Guo

· Designed an acquisition and reconstruction workflow for navigator-free multishot SMS spiral diffusion imaging.
· Achieved high-efficiency, high-resolution diffusion imaging.

Real-time PRF thermometry by deep-learning-based reconstruction   Jun 2022 - Jun 2023
CBIR & Beijing Tiantan Hospital   Advisor: Dr. Hua Guo

· Conducted highly undersampled acquisition and proposed a neural network for real-time reconstruction.
· Achieved real-time PRF thermometry with high spatiotemporal resolution on both retrospectively and prospectively undersampled experiments.

JOURNAL PAPERS

# denotes co-first authors

· **Jiang Y** #, Li G #, Shao X, Guo H. Simultaneous Multi-Slice Diffusion Imaging using Navigator-free Multishot Spiral Acquisition. (Preprint, Submitted to *Magn Reson Med*, Minor Revision)
· Pan Z #, **Jiang Y** #, Li S, Lu W, Han M, Kuang Y, Sun H, Wang X, Bai J, Liu W, Wang G, Guo H. Artifact Correction in Magnetic Resonance Temperature Imaging for Laser Interstitial Thermotherapy with Multi-echo Acquisitions. (Preprint, Submitted to *NMR Biomed*, Under Review)
· **Jiang Y** #, Pan Z #, Lu W, Zhang K, Han M, Liu W, Wang G, Guo H. Real-time PRF thermometry for Laser Interstitial Thermotherapy using a recurrent reconstruction network. (Preprint)

- Fang Y, Li S, Wang J, Zhang Z, Jiang W, Wang C, **Jiang Y**, Guo H, Han X, Tian W. Diagnostic efficacy of tract-specific diffusion tensor imaging in cervical spondylotic myelopathy with electrophysiological examination validation. *Eur Spine J* 2024;33(3):1230-1244.

- **Jiang Y**, ..., Guo H, Bilgic B. Ghost correction for segmented EPI data by multishot dual-polarity GRAPPA and SENSE. (In preparation)

MEETING PROCEEDINGS

- Li G, **Jiang Y**, Zhang Y, Guo H. Slice-POCS-ICE: a navigator-free reconstruction for SMS-accelerated multi-shot spiral-based diffusion-weighted imaging. In: Proceedings of the 32th annual meeting of ISMRM, Singapore, 2024. p 1019. (Oral Presentation)

- **Jiang Y**, Pan Z, Zhang K, Han M, Liu W, Wang G, Guo H. Recurrent reconstruction network enables real-time and high-resolution PRF thermometry for LITT. In: Proceedings of the 32th annual meeting of ISMRM, Singapore, 2024. p 2704.

- **Jiang Y**, Llorden GR, Fujita S, Cho J, Yong X, Guo H, Bilgic B. Dual-polarity SENSE with calibration refinement enables robust Nyquist ghost correction on a high-performance gradient system. In: Proceedings of the 32th annual meeting of ISMRM, Singapore, 2024. p 4424.

- Li G, **Jiang Y**, Guo H. Simultaneous Multi-slice Single-shot Spiral Acquisitions for Accelerated Diffusion-weighted Imaging. In: Proceedings of the 31th Annual Meeting of ISMRM, Toronto, ON, Canada, 2023. p 3784.

- **Jiang Y**, Han X, Wang J, Li S, Wang K, Liu Y, Liang W, Jiang W, Guo H. Multi-parameter model proposes a comprehensive imaging index for degenerative cervical myelopathy diagnosis: a preliminary study. In: Proceedings of the 29th Annual Meeting of ISMRM, Virtual Meeting, 2021. p 3460.

- **Jiang Y**, Jun Y, Liu Q, Zhong W, Rathi Y, Guo H, Bilgic B. Robust Nyquist ghost correction for high-resolution EPI using multishot dual-polarity GRAPPA reconstruction. Submitted to: Proceedings of the 33th annual meeting of ISMRM, Honolulu, HI, United States, 2025. Preprint

- Zhong W, **Jiang Y**, Guo H. Do second-order motion-compensation gradients and spiral sampling suppress phase variations in DWI? Submitted to: Proceedings of the 33th annual meeting of ISMRM, Honolulu, HI, United States, 2025.

- Zhong W, **Jiang Y**, Guo H. Simulated Analysis of SNR and SNR efficiency in motion compensated single-slab DWI, multislab, SMSlab and 2D SMS EPI Techniques. Submitted to: Proceedings of the 33th annual meeting of ISMRM, Honolulu, HI, United States, 2025.

- Xiao Y, ..., **Jiang Y**, ..., Guo H. Self-navigated simultaneous multi-slab 3D DWI. Submitted to: Proceedings of the 33th annual meeting of ISMRM, Honolulu, HI, United States, 2025.

- Gao Y, **Jiang Y**, ..., Guo H. 3D-EPI SWI at 0.5T. Submitted to: Proceedings of the 33th annual meeting of ISMRM, Honolulu, HI, United States, 2025.

MISCELLANEOUS

Key Courses
- Medical Imaging (A+), Electrical and Electronic Engineering (A)
- Calculus (A), Numerical Analysis (A), Convex Optimization (A-)

Skills
- MR physics, sequence programming, and image reconstruction.
- Machine learning and deep learning.