Qinyang Shou

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Education

University of Southern California, Los Angeles, CA
Ph.D., Biomedical Engineering,   August 2019-present
Research focus: Magnetic Resonance Imaging, Imaging sequence design, Image processing, Deep Learning
Shanghai Jiao Tong University, Shanghai, China
B.S., Biomedical Engineering,   2015-2019

Awards & Honors

2020   ISMRM Summa Cum Laude Merit Award
2023   Grodins Biomedical Engineering Research Symposium 2nd Place in Imaging Session

Publications

1. **Shou Q**, Shao X, Wang DJ. Super-Resolution Arterial Spin Labeling Using Slice-Dithered Enhanced Resolution and Simultaneous Multi-Slice Acquisition. Frontiers in neuroscience. 2021;15.
2. Wang K, **Shou Q**, Ma SJ, Liebeskind D, Qiao XJ, Saver J, Salamon N, Kim H, Yu Y, Xie Y, Zaharchuk G. Deep learning detection of penumbral tissue on arterial spin labeling in stroke. Stroke. 2020 Feb;51(2):489-97.
3. Shao X, Guo F, **Shou Q**, Wang K, Jann L, Yan L, Toga AW, Zhang P, Wang DJJ, Laminar perfusion imaging with zoomed arterial spin labeling at 7 Tesla, Neuroimage, Volume 245, 2021
4. **Shou Q**, Zhao C, Shao X, Jann K, Helmer K, Lu H, Wang DJ. Transformer based deep learning denoising of single and multi-delay 3D Arterial Spin Labeling. medRxiv. 2023:2023-04.
5. Zhao C, Shao X, **Shou Q**, Ma SJ, Gokyar S, Graf C, Stollberger R, Wang DJ. Whole-Cerebrum distortion-free three-dimensional pseudo-Continuous Arterial Spin Labeling at 7T. NeuroImage. 2023 Jun 24:120251.

Conference Presentations

1. Poster session, Denoising single and multi-delay 3D pCASL using SWIN Transformer. ISMRM 2023
2. Poster session, Knowledge Distillation Enables Efficient Neural Network for Better Generalizability in MR Image Denoising and Super Resolution. ISMRM 2023
3. Oral session, Measuring Spinal Cord Blood Flow with Multi-delay Arterial Spin Labeling (pCASL). ISMRM 2022
4. Poster session, Age Dependent Changes of Water Exchange Rate in Blood Brain Barrier (BBB) Assessed by Diffusion-Prepared Arterial Spinal Labeling. ISMRM 2022

Professional Membership

International Society for Magnetic Resonance in Medicine (ISMRM)   2019-present

Internship

Subtle Medical Inc.
Worked on a project of knowledge distillation for image denoising and super-resolution (presented a poster at ISMRM 2023)   2022 Summer

Skills

Programming Languages: C++, Matlab, Python, Latex
Office Applications: Microsoft Office, SPSS
Deep Learning tools: TensorFlow, Keras, Pytorch
MRI brain image study tools: Freesurfer, FSL, AFNI
MRI sequence design and engineering: SIEMENS IDEA