

Khoi Huynh

Chapel Hill, USA
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EDUCATION

- 2017 – Present **PhD candidate**, *The University of North Carolina at Chapel Hill*, Chapel Hill, USA.
Biomedical Engineering
- 2012 – 2016 **Bachelor of Engineer**, *International University*, Ho Chi Minh City, Vietnam,
GPA: 3.53/4.00 - 1st class honor.
Biomedical Engineering

RESEARCH EXPERIENCE

- 2017 – Present **Graduate Research Assistant**, *The University of North Carolina at Chapel Hill*, Chapel Hill, USA.
Diffusion MRI Processing and Analysis
- 2013 – 2016 **Undergraduate Research Assistant**, *International University*, Ho Chi Minh City, Vietnam.
Functional MRI Processing and Analysis

RESEARCH INTERESTS

- MR Physics MRI Reconstruction, Signal Representation, Noise Removal
- Diffusion MRI Microstructure, Tractography, Harmonization, Infant Brain Atlas, Diffusion Model, Connectivity
- Neuroscience Infant Brain Structural and Functional Development

AWARDS

- 2021 ISMRM Educational Stipend Award
- 2020 UNC Graduate Student Transportation Grant
UNC-BME Travel Award
- 2019 UNC-BME Travel Award
MICCAI 2019 Graduate Student Travel Award
UNC-BME Travel Award
ISMRM Educational Stipend Award
- 2018 ISMRM Educational Stipend Award
- 2017 UNC Graduate Research Assistant Award
- 2014 Pony Chung Scholarship
- 2012 International University Entrance Scholarship

SKILLS

Programming Languages: C++, MATLAB, Bash script, Python, R, Assembly, \LaTeX
Packages: FSL, SPM, MRTrx, ANTS, DWITK, MITK, Freesurfer

PUBLICATIONS

** denotes equal contributions*

- Journals [J2] *Probing Tissue Microarchitecture of the Baby Brain via Spherical Mean Spectrum Imaging*, IEEE Transactions on Medical Imaging, 2020. **Khoi Minh Huynh***, Tiantian Xu*, Ye Wu*, Xifeng Wang, Geng Chen, Haiyong Wu, Kim-Han Thung, Weili Lin, Dinggang Shen, and Pew-Thian Yap
- [J1] *Multi-Site Harmonization of Diffusion MRI Data via Method of Moments*, IEEE Transactions on Medical Imaging, 2019. **Khoi Minh Huynh**, Geng Chen, Ye Wu, Dinggang Shen, and Pew-Thian Yap
- Workshops [W2] *Longitudinal Parcellation of the Infant Cortex Using Multi-Modal Connectome Harmonics*, Computational Diffusion MRI 2020 (MICCAI Workshop). Hoyt Patrick Taylor IV, Sahar Ahmad, Ye Wu, **Khoi Minh Huynh**, Zhen Zhou, Zhengwang Wu, Weili Lin, Li Wang, Gang Li, Han Zhang, and Pew-Thian Yap
- [W1] *Longitudinal Harmonization for Improving Tractography in Baby Diffusion MRI*, Computational Diffusion MRI 2018 (MICCAI Workshop). **Khoi Minh Huynh**, Geng Chen, Ye Wu, Dinggang Shen, and Pew-Thian Yap
- Conferences [C6] *Noise Mapping and Removal in Complex-Valued Multi-Channel MRI via Optimal Shrinkage of Singular Values*, MICCAI 2021. **Khoi Minh Huynh**, Wei-Tang Chang, Sang Hun Chung, Yong Chen, Yueh Lee, and Pew-Thian Yap
- [C5] *Characterizing Intra-Soma Diffusion with Spherical Mean Spectrum Imaging*, MICCAI 2020. **Khoi Minh Huynh**, Ye Wu, Kim-Han Thung, Sahar Ahmad, Hoyt Patrick Taylor IV, Dinggang Shen, and Pew-Thian Yap
- [C4] *Estimating Tissue Microstructure with Undersampled Diffusion Data via Graph Convolutional Neural Networks*, MICCAI 2020. Geng Chen, Yoonmi Hong, Yongqin Zhang, Jaeil Kim, **Khoi Minh Huynh**, Jiquan Ma, Weili Lin, Dinggang Shen, and Pew-Thian Yap
- [C3] *Fast Correction of Eddy-Current and Susceptibility-Induced Distortions Using Rotation-Invariant Contrasts*, MICCAI 2020. Sahar Ahmad, Ye Wu, **Khoi Minh Huynh**, Kim-Han Thung, Weili Lin, Dinggang Shen, and Pew-Thian Yap
- [C2] *Probing Brain Micro-Architecture by Orientation Distribution Invariant Identification of Diffusion Compartments*, MICCAI 2019. **Khoi Minh Huynh**, Tiantian Xu, Ye Wu, Geng Chen, Kim-Han Thung, Haiyong Wu, Weili Lin, Dinggang Shen, and Pew-Thian Yap, for the UNC/UMN Baby Connectome Project Consortium

- [C1] *Characterizing Non-Gaussian Diffusion in Heterogeneously Oriented Tissue Microenvironments*, MICCAI 2019. **Khoi Minh Huynh**, Tiantian Xu, Ye Wu, Kim-Han Thung, Geng Chen, Weili Lin, Dinggang Shen, and Pew-Thian Yap
- Abstracts [A14] *An Automated Processing Pipeline for Diffusion MRI in the Baby Connectome Project*, ISMRM 2021. Ye Wu*, Sahar Ahmad*, **Khoi Minh Huynh***, Siyuan Liu*, Kim-Han Thung*, Weili Lin, and Pew-Thian Yap, for the UNC/UMN Baby Connectome Project Consortium. *Summa Cum Laude award*.
- [A13] *Navigator-Free Submillimeter Diffusion MRI using Multishot-encoded Simultaneous Multi-slice (MUSIUM) Imaging*, ISMRM 2021. Wei-Tang Chang, **Khoi Minh Huynh**, Pew-Thian Yap, and Weili Lin
- [A12] *Quantifying Cell Size and Membrane Permeability with Microstructure Fingerprinting*, ISMRM 2021. **Khoi Minh Huynh**, Ye Wu, and Pew-Thian Yap
- [A11] *Reducing Noise in Complex-Valued Multi-Channel Diffusion-Weighted Data via Optimal Shrinkage of Singular Values*, ISMRM 2021. **Khoi Minh Huynh**, Wei-Tang Chang, and Pew-Thian Yap
- [A10] *Dense Temporal Mapping of Cortical Microstructure in the Early Developing Brain*, OHBM 2020. **Khoi Minh Huynh**, Ye Wu, Kim-Han Thung, Sahar Ahmad, Zhengwang Wu, Weili Lin, Han Zhang, Li Wang, Gang Li, and Pew-Thian Yap
- [A9] *Correlation of Myelin Content and Neurite Density in the Early Developing Human Cortex*, OHBM 2020. **Khoi Minh Huynh**, Sahar Ahmad, Ye Wu, Kim-Han Thung, Zhengwang Wu, Weili Lin, Han Zhang, Li Wang, Gang Li, and Pew-Thian Yap
- [A8] *Multivariate Quantification of Brain Development During the First Two Years of Life*, OHBM 2020. **Khoi Minh Huynh**, Ye Wu, Kim-Han Thung, Sahar Ahmad, Hoyt Patrick Taylor IV, Weili Lin, and Pew-Thian Yap
- [A7] *Tackling Degeneracy in Linear Tensor Encoding Diffusion MRI*, ISMRM 2020. **Khoi Minh Huynh**, Ye Wu, Hoyt Patrick Taylor IV, Weili Lin, and Pew-Thian Yap
- [A6] *Quantifying Intra-Soma Diffusion Properties via Spherical Mean Spectrum Imaging*, ISMRM 2020. **Khoi Minh Huynh**, Ye Wu, Kim-Han Thung, Sahar Ahmad, Hoyt Patrick Taylor IV, Weili Lin, and Pew-Thian Yap
- [A5] *Quantifying Tissue Microstructure Non-Gaussianity in the Presence of Fiber Dispersion*, 105th RSNA Scientific Assembly and Annual Meeting 2019. **Khoi Minh Huynh**, Ye Wu, Geng Chen, Kim-Han Thung, Weili Lin, Dinggang Shen, and Pew-Thian Yap

[A4] *Dense Mapping of Microstructural Development in the Human Brain During the First Two Years of Life*, OHBM 2019. **Khoi Minh Huynh**, Ye Wu, Kim-Han Thung, Geng Chen, Weili Lin, Dinggang Shen, and Pew-Thian Yap, for the UNC/UMN Baby Connectome Project Consortium

[A3] *Biases of Microstructure Models in Baby Diffusion MRI*, ISMRM 2019. **Khoi Minh Huynh**, Ye Wu, Kim-Han Thung, Geng Chen, Weili Lin, Dinggang Shen, and Pew-Thian Yap, for the UNC/UMN Baby Connectome Project Consortium

[A2] *Longitudinal Harmonization of Baby Diffusion MRI Data*, OHBM 2018. **Khoi Minh Huynh**, Jaeil Kim, Geng Chen, Dinggang Shen, and Pew-Thian Yap

[A1] *Spatially Varying Signal-Drift Correction in Diffusion MRI*, ISMRM 2018. **Khoi Minh Huynh**, Geng Chen, Wei-Tang Chang, Weili Lin, Dinggang Shen, and Pew-Thian Yap

ACADEMIC SERVICES

Reviewer **Journal:** NeuroImage, PLoS ONE, IEEE-TCDS, IEEE-TMI
Conference: MICCAI, ISMRM, OHBM, MLMI