# CHUNMING GU

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716 N Broadway
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## EDUCATION

**Ph.D.** Biomedical Engineering, Johns Hopkins University 2018-Present

**B.Eng.** Biomedical Engineering, Xi'an Jiaotong University 2014-2018
Graduated with the highest distinction

## RESEARCH EXPERIENCE

**Graduate Research Assistant** 08/2018-Present
F.M. Kirby Research Center for Functional Brain Imaging
Kennedy Krieger Institute, Baltimore, MD, USA
The Russell H. Morgan Department of Radiology and Radiological Sciences
Johns Hopkins University School of Medicine, Baltimore, MD, USA
Advisor: Dr. Jun Hua

- Work on functional and physiological MRI studies

**Undergraduate Dissertation** 02/2018-05/2018
Institute of Biomedical Engineering and Informatics (BMTI)
Technische Universität Ilmenau, Ilmenau, Thüringen, Germany
Advisors: Lorenz Esch, Daniel Strohmeier

- Project: Implementation and validation of functional brain connectivity measures for Electroencephalography (EEG) and Magnetoencephalography (MEG) data
- The implementation was performed in the open-source MNE-CPP project, written in C++. The validation of the resulting algorithms made use of existing EEG and MEG datasets.

**Summer Research Student** 07/2017-09/2017
Department of Radiological Sciences
David Geffen School of Medicine, University of California, Los Angeles, CA, USA
Advisors: Dr. Peng Hu, Dr. Yingli Yang, Yu Gao

- Cross-disciplinary Scholars in Science and Technology Program (CSST)
- Project: Longitudinal Diffusion MRI for Predicting Response to Radiotherapy in Sarcoma Patients

**Visiting Student** 06/2016-07/2016
Faculty of Pharmaceutical Sciences
University of British Columbia (UBC), Vancouver, BC, Canada

## TEACHING EXPERIENCE

**Volunteer of Teaching Assistant and Academic Counselor** 12/2014-06/2017
Undergraduate Academic Counseling Center, Chungying College
Xi'an Jiaotong University, Xi'an, Shaanxi, China

- Offered tutorial lectures to a series of undergraduate courses
- Awarded as one of the best volunteers at XJTU in 2016

## HONORS AND AWARDS

**Trainee Stipend** 2020
28th Annual Meeting of International Society for Magnetic Resonance in Medicine (ISMRM), Sydney, Australia

**New Entrant Stipend** 2019
27th Annual Meeting of International Society for Magnetic Resonance in Medicine (ISMRM), Montreal, Canada

**CSST Scholarship** 2017
University of California, Los Angeles (UCLA)

**Dean's Scholarship** 2017
Chungying College & Cyrus Tang Foundation

**China National Scholarship** 2015, 2016 and 2017
Ministry of Education of the People's Republic of China

## PUBLICATIONS

### *Journal Publications*

1. S. Zhang, R. Xu, S. Shang, Y. Han, S. Liu, T. Xu, **C. Gu**, X. Zhu, G. Niu, M. Wan. In vivo monitoring of microwave ablation in a porcine model using ultrasonic differential attenuation coefficient intercept imaging. *International Journal of Hyperthermia*, 2018, 34:1-14.
2. S. Zhang, S. Shang, Y. Han, **C. Gu**, S. Wu, S. Liu, G. Niu, A. Bouakaz, M. Wan. Ex vivo and in vivo monitoring and characterization of thermal lesions by high-intensity focused ultrasound and microwave ablation using ultrasonic Nakagami imaging. *IEEE Transactions on Medical Imaging*, 2018, 37(7):1701-1710.

### *Conference Proceedings*

1. **C. Gu**, M. Kronenbuerger, D. Cao, A. Paez, X. Miao, X. Hou, J. Bang, K. Ultz, W. Duan, R. Margolis, P. van Zijl, C. Ross, and J. Hua. Increases in Arteriolar Cerebral Blood Volume in Huntington's Disease Measured with Inflow-based Vascular-space-occupancy (iVASO) MRI at 7T. *Proc. Intl. Soc. Mag. Reson. Med*, 2020.

2. D. Cao, A. Paez, X. Miao, D. Liu, C. Gu, and J. Hua. Evaluation of point-spread-function and signal-to-noise ratio in highly-accelerated Compressed Sensing-SENSE (CS-SENSE) and SENSE MRI. *Proc. Intl. Soc. Mag. Reson. Med*, 2020.
3. H. Liu, C. Zhang, **C. Gu**, L. Cheng, Q. Wu, P. Liu, H. Lu, J. Xu, P. van Zijl, C. Ross, J. Hua, W. Duan. Altered CBVa and therapeutic effect of CRISPR/Cas9-mediated HTT lowering are revealed by iVASO MRI in presymptomatic zQ175 mouse model of Huntington's disease. *CHDI Conference*, 2020.
4. A. Paez, S. Rajan, G. Chaney, X. Miao, D. Cao, **C. Gu**, D. Liu, A. Pantelyat, L. Rosenthal, Z. Mari, K. Mills, T. Dawson, P. van Zijl, S. Bassett, D. Yousem, V. Kamath, and J. Hua. Olfactory functional MRI (fMRI) using T2-prepared BOLD fMRI at ultra-high field (7T). *Proc. Intl. Soc. Mag. Reson. Med*, 2019.
5. Y. Gao, **C. Gu**, J. Kim, M. Cao, J. Fu, A. Kalbasi, D. Ruan, et al. Treatment Response Prediction Using Texture Features from Longitudinal Diffusion MRI in Sarcoma Patients. In *MEDICAL PHYSICS*, vol. 45, no. 6, pp. E582-E582, 2018.
6. Y. Gao, **C. Gu**, J. Kim, M. Cao, A. Kalbasi, D. Ruan, D. Low, P. Hu, and Y. Yang. Longitudinal Diffusion MRI for Predicting Response to Radiotherapy in Sarcoma Patients. *Proc. Intl. Soc. Mag. Reson. Med*, 2018.
7. S. Zhang, S. Shang, Y. Han, R. Xu, **C. Gu**, L. Zhang, S. Wu, G. Niu, and M. Wan. In Vivo and Ex Vivo Monitoring of Thermal Ablation in a Porcine Model Using Ultrasonic Nakagami Imaging. *International Society for Therapeutic Ultrasound*, 2017.

***Posters***

1. K. Zhang, L. Chen, A. Paez, X. Miao, D. Cao, **C. Gu**, P. van Zijl, A. Bakker, and J. Hua. Layer specific T2-prepared BOLD fMRI in the entorhinal cortex at 7T: initial results. *4th ICP network symposium*, 2019, Baltimore, MD, USA.
2. A. Paez, S. Rajan, G. Chaney, X. Miao, D. Cao, **C. Gu,** D. Liu, A. Pantelyat, L. Rosenthal, Z. Mari, K. Mills, T. Dawson, P. van Zijl, S. Bassett, D. Yousem, V. Kamath, and J. Hua. Imaging the Olfactory Cortex at 7T. *MHSRS*, 2019, Kissimmee, FL, USA.
3. Y. Gao, **C. Gu**, J. Kim, M. Cao, J. Fu, A. Kalbasi, D. Ruan, et al. Treatment Response Prediction Using Texture Features from Longitudinal Diffusion MRI in Sarcoma Patients. 6th MR in RT Symposium, 2018, Utrecht, The Netherlands.

## PRESENTATIONS AND INVITED TALKS

1. **C. Gu**, D. Cao, A. Paez, R. Margolis, P. van Zijl, C. Ross and J. Hua. Longitudinal Changes in Arteriolar Cerebral Blood Volume in Huntington's Disease. *4th ICP network symposium*, 2019, Baltimore, MD, USA.
2. **C. Gu**, D. Cao, A. Paez, R. Margolis, P. van Zijl, C. Ross and J. Hua. Longitudinal Changes in Arteriolar Cerebral Blood Volume in Huntington's Disease. *22nd Annual Division of MR Research Retreat*, 2019, Cambridge, MD, USA.

## PROFESSIONAL TRAINING

**Philips Pulse Programming Environment Workshop**
Philips Healthcare, Rochester, MN, USA, 2019

**Philips Reconstruction Workshop**
Philips Healthcare, Rochester, MN, USA, 2019

**Philips SDM Workshop**
Philips Healthcare, Rochester, MN, USA, 2019

## PROFESSIONAL AFFILIATIONS

Member, International Society for Magnetic Resonance in Medicine 2018-Present

## COMMUNITY SERVICE

**Director** 07/2016-07/2017
**Volunteer of Teaching Assistant and Academic Counselor** 11/2014-07/2017
Undergraduate Academic Counseling Center, Chungying College
Xi'an Jiaotong University

## LANGUAGES

**Chinese**: Native Language

**English**: Working Proficiency

**Japanese**: Elementary Proficiency

**Korean**: Reading Knowledge

## COMPUTER SKILLS

**Programming**: C++, Python

**Platforms**: MATLAB, R

## ACCOMPLISHMENTS

Coursera course certificates

- Data Science: The R Programming Environment, Managing Data Analysis, A Crash Course in Data Science, The Data Scientist's Toolbox, Data Science in Real Life
- Biology & Medicine: Understanding Cancer Metastasis, Introduction to the Biology of Cancer

- Imaging Science: Introduction to Neurohacking In R, Principles of fMRI 1, Fundamental Neuroscience for Neuroimaging

## REFERENCE

**Dr. Jun Hua**, Associate Professor
F.M. Kirby Research Center for Functional Brain Imaging
Kennedy Krieger Institute
The Russell H. Morgan Department of Radiology and Radiological Sciences
Johns Hopkins University School of Medicine
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