

Zijian Chen

CONTACT INFORMATION email: zijianc@bu.edu

RESEARCH FOCUS Clinical Brain Imaging (for aphasia and autism)

EDUCATION **Boston University**, Boston, MA 2023-Present
Ph.D. student in Electrical Engineering
Advisor: Archana Venkataraman

University of Wisconsin-Madison, Madison, WI 2021-2023
M.A. in Mathematics

Shanghai Jiao Tong University, Shanghai, China 2020-2022
Bachelor Minor in Mathematics

East China Normal University, Shanghai, China 2018-2022
B.Sc. in Statistics

PUBLICATIONS

6. Chen, Z., Varkanitsa, M., Ishwar, P., Konrad, J., Betke, M., Kiran, S. and Venkataraman, A., 2024. A Lesion-aware Edge-based Graph Neural Network for Predicting Language Ability in Patients with Post-stroke Aphasia. arXiv preprint arXiv:2409.02303. *Accpeted by MLCN workshop at MICCAI 2024.* [selected for oral]
5. Chen, Z., Wang, J. and Venkataraman, A., 2024. QID²: An Image-Conditioned Diffusion Model for Q-space Up-sampling of DWI Data. arXiv preprint arXiv:2409.02309. *Accpeted by CDMRI workshop at MICCAI 2024.* [selected for oral]
4. Chen, Z., Das, S. and Chung, M.K., 2023, Sulcal Pattern Matching with the Wasserstein Distance. In 2023 IEEE 20th International Symposium on Biomedical Imaging (ISBI) (pp. 1-5). IEEE. [invited for special session talk]
3. Dakurah, S., Anand, D.V., Chen, Z., Chung, M.K. 2022, Modeling Cycles in Brain Networks Using Hodge Laplacian, Medical Image Computing and Computer Assisted Intervention - MICCAI 2022. Lecture Notes in Computer Science, vol 13431. Springer, Cham. [student travel award]
2. Chung, M.K., Chen, Z. 2022, Embedding of Functional Human Brain Networks on a Sphere. <https://arxiv.org/abs/2204.03653>
1. Liu, T., Chen, Z., Xu, J. 2021, Epidemiological characteristics and incubation period of SARS-CoV-2 during the 2020-2021 winter pandemic wave in north China: an observational study. J Med Virol.2021;1-6.

INVITED TALKS **Sulcal Pattern Matching with the Wasserstein Distance**, 2023
ISBI 2023 Special section *Wasserstein Distance in Biomedical Imaging*.
Invited by Moo K. Chung

Review of Sample Size Calc. in Phase 3 SARS-CoV-2 Vaccine Clinical Trials, 2021
Shanghai Biostatistics Forum (SBF) Q3 Event, 2021.
Invited by Jin Xu.

POSTER PRESENTATIONS **A GNN for Predicting Language Ability in Patients with Post-stroke Aphasia**, 2024
2024 Population Health Data Science Poster Session, Boston University.

An Image-Conditioned Diffusion Model for Q-space Up-sampling of DWI Data, 2024
2024 Population Health Data Science Poster Session, Boston University.

Sulcal Pattern Matching with the Wasserstein Distance, 2023
ISBI 2023, Cartagena de Indias, Columbia.

	Multiscale Representation of Brain Networks in the Hyperbolic Space, Computation and Informatics in Biology and Medicine Annual Retreat, UW-Madison.	2022
TEACHING AND MENTORING	Madison Experimental Mathematics Lab @ UW-Madison Mentor four students for undergraduate research project on Ergodic Theory and Dynamics. Title: <i>Vectors of smallest slope for translation surfaces.</i>	2022
	Direct Reading Program @ UW-Madison Topic of the semester: <i>Probabilistic perspectives in machine learning</i>	2022
	Teaching Assistant: Biostatistics @ ECNU Job duty: Computer Lab Instructing, Grading, Office Hours, and Recitation.	2021
FELLOWSHIP AND AWARDS	National First Prize in Chinese Undergraduate Mathematical Modeling Contest.	2020
	National Third Prize in Chinese Undergraduate Mathematics Competition.	2019
	ECNU Outstanding Student Fellowship	2019,2020,2021
CODING SKILLS	Python, MATLAB, C++ (in descending order)	