Zijian Chen, email me for a more detailed version

CONTACT   Email: zijianc@bu.edu   Phone: (608) 977-3300   Homepage: https://zchen.pro ⬈

SHORT BIO   Experienced machine learning researcher with a strong math background. Trained as a problem-oriented engineer in statistical signal processing and unstructured data analysis, and still passionate about advanced methodological development. Proven ability in interdisciplinary collaboration, independent research, written and oral communication to diverse audiences, and mentoring.

Graph and Manifold Learning · Unstructured Data Analysis · Stochastic Modeling

EDUCATION

Boston University   2023-Now
Ph.D. Candidate in Electrical Engineering (Advisor: Archana Venkataraman ⬈)

University of Wisconsin - Madison   2021-2023
M.A. in Mathematics (Advisor: Hao Shen ⬈)

East China Normal University & Shanghai Jiao Tong University   2018-2022
B.S. in Statistics, minor in Mathematics (Joint Program)

CODING AND SOFTWARE

ML/DL/Data Science: Python (PyTorch, Scikit-learn, SciPy, Numpy, Pandas, TensorFlow)
Scientific Algorithm Development: MATLAB, C++
Others: R, Git, Docker

SELECTED PUBLICATIONS

5. Behavior-Informed Subgroup-Consistent Connectome Template for Interpretable Brain Network
Zijian Chen, Stefen Beeler, ..., Archana Venkataraman (7 authors)
MICCAI'25.

4. A Lesion-aware Edge-based Graph Neural Network for Predicting Language Ability in Patients with Post-stroke Aphasia
Zijian Chen, Maria Varkanitsa, ..., Archana Venkataraman (7 authors)
MLCN workshop at MICCAI'24. **[oral]**

3. QID^2: An Image-Conditioned Diffusion Model for Q-space Up-sampling of DWI Data
Zijian Chen, Jueqi Wang, Archana Venkataraman,
CDMRI workshop at MICCAI'24. **[oral]**

2. Sulcal Pattern Matching with the Wasserstein Distance
Zijian Chen, Soumya Das, Moo K. Chung,
ISBI'23 **[oral]**

1. Modeling Cycles in Brain Networks Using Hodge Laplacian
Sixtus Dakurah, D. Vijay Anand, **Zijian Chen**, Moo K. Chung
MICCAI'22. **[travel award]**

INVITED TALKS AND LECTURES

Introduction to Modern Graph Neural Networks   2025
Guest Lecture (105 min) for *Deep Learning* course at BU
Invited by Brian Kulis ⬈

Sulcal Pattern Analysis as an Optimal Transport Problem   2023
ISBI 2023 Special section *Wasserstein Distance in Biomedical Imaging*
Invited by Moo K. Chung ⬈

SERVICE

Research in Science & Engineering (RISE) Program @ BU   2025
Mentored one high school student for summer research project on modeling ASD brain states.
Title: *Temporal Dynamics in Brain Activity associated with Autism*

Madison Experimental Mathematics Lab @ UW-Madison   2022
Mentored four students for undergraduate research project on Ergodic Theory and Dynamics.
Title: *Vectors of smallest slope for translation surfaces*

Directed Reading Program @ UW-Madison   2022
Organized and mentored a reading group for undergraduate students.
Topic of the semester: *Probabilistic perspectives in machine learning*

Reviewer for IEEE TMI (1 per month), MICCAI, ISBI   2022-Present

Teaching Assistant for Foundations in Probabilistic Machine Learning (BU), Deep Learning (BU), Probability (BU), Biostatistics (ECNU).

Awards and Fellowships		
National First Prize in Chinese Undergraduate Mathematical Modeling Contest.	2020
National Third Prize in Chinese Undergraduate Mathematics Competition.	2019
Finalist (top 1%) in Mathematical Contest in Modeling (MCM/ICM).	2019
ECNU Outstanding Student Fellowship ($\approx$ Dean's List)	2019,2020,2021