Haocheng Dai

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Education

University of Utah — *Salt Lake City, UT*
Ph.D. student in Computer Science — *2019 - Present*
Interests: Geometric Deep Learning, Physics-Informed Machine Learning
Advisor: *Sarang Joshi*

Tongji University — *Shanghai, China*
B.Eng. in Computer Science and Technology — *2015 - 2019*

Institut de Mathématiques de Toulouse — *Toulouse, France*
Exchange Student — *2019*

Technion - Israel Institute of Technology — *Haifa, Israel*
Exchange Student — *2018*

Publications & Preprints

Neural Operator Learning for Ultrasound Tomography Inversion.
H. Dai*, M. Penwarden*, R. M. Kirby, S. C. Joshi. (*equal contribution)
In Submission

High Fidelity, CT on Rails-based Characterization of Total Delivered Dose Variation for Conformal Head and Neck Treatment: With Evaluation of Adaptive Replanning Time-point Implications.
H. Dai, V. Sarkar, C. Dial, M. Foote, S. C. Joshi, B. J. Salter.
In Submission

Modeling the Shape of the Brain Connectome via Deep Neural Networks.
H. Dai, M. Bauer, P. T. Fletcher, S. C. Joshi.
International Conference on Information Processing in Medical Imaging (IPMI), 2023.

Integrated Construction of Multimodal Atlases with Structural Connectomes in the Space of Riemannian Metrics.
K. M. Campbell, H. Dai, Z. Su, M. Bauer, P. T. Fletcher, S. C. Joshi.
Machine Learning for Biomedical Imaging (MELBA), 2022

Structural Connectome Atlas Construction in the Space of Riemannian Metrics.
K. M. Campbell, H. Dai, Z. Su, M. Bauer, P. T. Fletcher, S. C. Joshi.
International Conference on Information Processing in Medical Imaging (IPMI), 2021.
François Erbsmann Prize (**Best Paper Award**)

Industry Experience

Amazon — *Seattle, WA*
Applied Scientist Intern — *2022 & 2023 Summer*

Teaching

CS 4150: Algorithms — *2022 Spring*
Teaching Mentor — *University of Utah*

CS 3190: Foundations of Data Analysis — *2021 Fall*
Teaching Mentor — *University of Utah*

Honors& Awards

François Erbsmann Prize (Best Paper Award) — *IPMI 2021*
Department Fellowship — *School of Computing, University of Utah*
Scholarship for France Excellence Summer School — *French Embassy in China*
Scholarship for Summer School of Engineering and Science of Technion — *CHE of Israel & Technion*
Tongji Scholarship of Excellence(three times) — *Tongji University*

Languages and Skills

Mandarin, English
`Python`, `C++`, `CUDA`, LaTeX, `Matlab`, `git`, `shell`, `PyTorch`, `OpenSUSE`