Haocheng Dai

Contact Information

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Education

University of Utah — *Salt Lake City, UT*
Ph.D. Student in Computer Science — *2024*
Committee: *SC Joshi (Chair), M Bauer, PT Fletcher, RM Kirby, RT Whitaker*
Geometric Deep Learning, Physics-Informed Machine Learning

Tongji University — *Shanghai, China*
Bachelor of Engineering in Computer Science — *2019*

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

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

Publications

Neural Operator Learning for Ultrasound Tomography Inversion, H. Dai*, M. Penwarden*, R. M. Kirby, S. C. Joshi (*equal contribution), *International Conference on Medical Imaging with Deep Learning (MIDL) 2023*, 🔗.

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, *Under Review at Physics in Medicine & Biology*, 🔗.

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*, Oral Presentation, 🔗.

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, *Journal of 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: *Text-Image Fusion* — *2023*
Applied Scientist Intern: *Visual Documents Understanding* — *2022*

Teaching Experience

Teaching Mentor — *University of Utah*
CS 4150: *Algorithms* — *2022*
CS 3190: *Foundations of Data Analysis* — *2021*

Honors& Awards

François Erbsmann Prize (Best Paper Award), *IPMI 2021*
Department Fellowship, *School of Computing, University of Utah*
Tongji Scholarship of Excellence (2016, 2017, 2018), *Tongji University*