

Yixue Feng

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Education

University of Southern California

Los Angeles, CA

PHD NEUROSCIENCE

2021 - present

- Advisor: Dr. Paul M. Thompson
- GPA: 3.87/4

University of Pennsylvania

Philadelphia, PA

MS COMPUTER AND INFORMATION SCIENCE (CIS)

2019 - 2021

- Advisor: Dr. Li Shen
- GPA: 3.94/4

University of Virginia

Charlottesville, VA

BA COMPUTER SCIENCE, BA COGNITIVE SCIENCE

2015 - 2019

- Concentration: Cognitive Psychology
- GPA: 3.77/4

Professional Experience

2019-2021 **Graduate Research Assistant**, Perelman School of Medicine, University of Pennsylvania

2018 **Research Intern**, School of Biomedical Informatics, The University of Texas Health Science Center at Houston

2016-2017 **Undergraduate Research Assistant**, Department of Psychology, University of Virginia

Publications

JOURNAL

Feng Y, Kim M, Yao X, Liu K, Long Q, Shen L, & for the Alzheimer's Disease Neuroimaging Initiative. (2022). *Deep multiview learning to identify imaging-driven subtypes in mild cognitive impairment*. BMC Bioinformatics, 23(S3), 402. [[paper](#)]

Zhang X, **Feng Y**, Li F, Ding J, Tahseen D, Hinojosa E, Chen Y, & Tao C. (2024). *Evaluating MedDRA-to-ICD terminology mappings*. BMC Medical Informatics and Decision Making, 23(S4), 299. [[paper](#)] [[code](#)]

CONFERENCE PROCEEDINGS

Feng Y, Chandio BQ, Villalón-Reina, JE, Thomopoulos SI, Joshi H, Nair G, Joshi AA, Venkatasubramanian G, John JP, & Thompson PM. (2023). *BundleCleaner: Unsupervised Denoising and Subsampling of Diffusion MRI-Derived Tractography Data*. Computational Diffusion MRI (Vol. 14328, pp. 152–164). Springer Nature Switzerland. [[paper](#)] [[code](#)]

Feng Y, Chandio BQ, Thomopoulos SI, Chattopadhyay T, & Thompson PM. (2023). *Variational Autoencoders for Generating Synthetic Tractography-Based Bundle Templates in a Low-Data Setting*. 2023 45th Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC). [[paper](#)]

Feng Y, Chandio BQ, Chattopadhyay T, Thomopoulos SI, Owens-Walton C, Jahanshad N, Garyfallidis E, & Thompson PM. (2023). *Learning optimal white matter tract representations from tractography using a deep generative model for population analyses*. 18th International Symposium on Medical Information Processing and Analysis (p. 48). SPIE. [[paper](#)] [[code](#)] [**Best Virtual Paper Award**]

Feng Y, Kim M, Yao X, Liu K, Long Q, & Shen L. (2020). *Deep Multiview Learning to Identify Population Structure with Multimodal Imaging*. 2020 IEEE 20th International Conference on Bioinformatics and Bioengineering (BIBE), 308–314. [[paper](#)]

PREPRINT

Feng Y, Chandio BQ, Villalón-Reina JE, Benavidez S, Chattopadhyay T, Chehrzadeh S, Laltoo E, Thomopoulos SI, Joshi H, Venkatasubramanian G, John JP, Jahanshad N, & Thompson PM. (2024). *Deep Normative Tractometry for Identifying*

Joint White Matter Macro- and Micro-structural Abnormalities in Alzheimer's Disease. [Preprint, Accepted to EMBC 2024]. Neuroscience. [paper]

Chandio BQ, Villalon-Reina JE, Nir TM, Thomopoulos SI, **Feng Y**, Benavidez S, Jahanshad N, Harezlak J, Garyfallidis E, & Thompson PM. (2024). *Bundle Analytics based Data Harmonization for Multi-Site Diffusion MRI Tractometry*. [Preprint, Accepted to EMBC 2024]. Neuroscience. [paper]

Chattopadhyay T, Joshy NA, Ozarkar SS, Buwa K, **Feng Y**, Laltoo E, Thomopoulos SI, Villalon JE, Joshi H, Venkatasubramanian G, John JP, & Thompson PM. (2024). *Brain Age Analysis and Dementia Classification using Convolutional Neural Networks trained on Diffusion MRI: Tests in Indian and North American Cohorts*. [Preprint, Accepted to EMBC 2024]. Neuroscience. [paper]

Homdee N, Boukhechba M, **Feng YW**, Kramer N, Lach J, & Barnes LE. (2019). *Enabling Smartphone-based Estimation of Heart Rate*. ArXiv:1912.08910 [Cs, Eess, Stat]. [paper] [code]

IN REVIEW

Feng, Y., Chandio, B. Q., Villalón-Reina, J. E., Thomopoulos, S. I., Nir, T. M., Benavidez, S., Laltoo, E., Chattopadhyay, T., Joshi, H., Venkatasubramanian, G., John, J. P., Jahanshad, N., Jack, C. R., Weiner, M. W., Thompson, P. M., for the Alzheimer's Disease Neuroimaging Initiative (2024). *Microstructural Mapping of Neural Pathways in Alzheimer's Disease using Macrostructure-Informed Normative Tractometry*. [Preprint, Submitted to Alzheimer's & Dementia, Special Issue on the 20th Anniversary of ADNI, May 1, 2024]. Neuroscience. [paper]

Honor & Awards

2024 Generative Artificial Intelligence (GenAI) Research Grant , University of Southern California	\$50000
2022 Best Virtual Paper Award , 18th International Symposium on Medical Information Processing and Analysis (SIPAIM)	Valparaíso, Chile
2021 Travel Award , International Conference on Intelligent Biology and Medicine (ICIBM)	Philadelphia, PA
2021 Outstanding Service Award , Penn Engineering, University of Pennsylvania	Philadelphia, PA
2018 Member, Order of Omega , University of Virginia	Charlottesville, VA

Presentations

* *presenting author*

Feng Y*, Chandio BQ, Joshi AA, & Thompson PM. (2023). *Bundlecleaner: point-cloud based denoising and subsampling of tractography data*. Poster: SfN 2023, Washington DC, USA.

Feng Y*, Chandio BQ, Villalon-Reina JE, Thomopoulos SI, Joshi H, Venkatasubramanian G, John JP, & Thompson PM. (2023). *Alzheimer's Disease Effects on White Matter Tracts Mapped using 3D Tractometry in an Indian Cohort*. Poster: SfN 2023, Washington DC, USA.

Feng Y*, Chandio BQ, Garyfallidis E, Thompson PM. (2023). *Detecting Structural Anomalies in Tractography using Deep Variational Autoencoders*. Poster: OHBM 2023, Montreal, QC, Canada.

Feng Y*, Chandio BQ, Chattopadhyay T, Thomopoulos SI, Owens-Walton C, Jahanshad N, Garyfallidis E, & Thompson PM. (2022). *Deep generative model for learning tractography streamline embeddings based on Convolutional Variational Autoencoder*. Poster: ISMRM 2022, London, England, UK.

Feng Y*, Chandio BQ, Chattopadhyay T, Thomopoulos SI, Owens-Walton C, Garyfallidis E, Jahanshad N, & Thompson PM. (2022). *Learning Streamline Embeddings with Variational Autoencoder for Intersubject Bundle Comparison in Alzheimer's Disease*. Poster: AAIC 2021, San Diego, CA, USA. Alzheimer's & Dementia, 18(S5). [abstract]

Feng Y*, Kim M, Liu K, Saykin AJ, Moore JH, Long Q, & Shen L. (2021). *Identifying multimodal imaging-driven subtypes in mild cognitive impairment using deep multiview learning*. Poster: AAIC 2021, Denver, CO, USA. Alzheimer's & Dementia, 17(S4). [abstract]

Teaching

2021 **Neuromatch Academy Deep Learning**, Teaching Assistant

Leadership & Service

- 2020-2021 **CIS Representative**, Engineering Master’s Advisory Board, University of Pennsylvania *Philadelphia, PA*
- 2019-2021 **Event Coordinator**, Computer and Information Science (CIS) MSE Program, University of Pennsylvania *Philadelphia, PA*
- 2017-2018 **Vice President**, Multicultural Greek Council, University of Virginia *Charlottesville, VA*
- 2016-2017 **Vice President of External Affairs**, alpha Kappa Delta Phi International Sorority Inc., Sigma Chapter *Charlottesville, VA*