CURRICULUM VITAE

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www.labs-laboratory.com/bridgeport (BRIDGEPORT)

H-index: 16 (Google Scholar; as of 03/21/2024)

Education

2008-2012, BS	Beihang University, China
2012-2015, MS	Beihang University, China
2015-2019, PhD	Sorbonne University (UPMC; Paris 6), France

Professional Employment & Services

Academic Appointments

2024-present	Tenure-track Assistant Professor, Department of Neurology, University of Southern California, USA
2019-2024	Postdoc researcher, Department of Radiology, University of Pennsylvania, USA
2018	Visiting Scholar, Centre for Medical Image Computing, University of College London, UK

Scientific Community Services

2023-2024	Hybrid chair, Open Science SIG, Organization for Human Brain Mapping (OHBM)
2023-present	Co-chair, Brain Imaging Genetics (BIG) workgroup, ISTAART Community, Alzheimer's Association International Conference (AAIC)
2023-present	Member, Large-biobank All-by-All working group, Global Biobank Meta-Analysis Initiative,

2020-2023	Organizer, Machine learning seminar, CBICA Lab, Department of Radiology, University of Pennsylvania

Honors & Awards

2008	First-class student scholarship at Beihang University
2009	First-class student scholarship at Beihang University
2010	First-class student scholarship at Beihang University
2011	First-class student scholarship at Beihang University
2012	First-class student scholarship at Beihang University
2013	First-class student scholarship at Beihang University
2014	First-class student scholarship at Beihang University
2013	2nd position in the English Speech context at Beihang University
2018	OHBM 2018 Travel Award Winner
2022	OHBM 2022 Merit Award Winner

Membership in Professional Societies

2017-present	Alzheimer's Association International Conference (AAIC)
2017-present	Organization for Human Brain Mapping (OHBM)
2019-present	Society of Biological Psychiatry (SOBP)
2023-present	American Society of Human Genetics (ASHG)

Editorial & Reviewer Services

2023-present	Grant Reviewer for UK Medical Research Council (MRC)
2019-present	Reviewer for Nature Neuroscience
2023-present	Reviewer for Nature Machine Intelligence
2022-present	Reviewer for Nature Communications
2017-present	Reviewer for Medical Image Analysis
2017-present	Reviewer for NeuroImage
2017-present	Reviewer for IEEE Transactions on Medical Imaging
2017-present	Reviewer for JAMA Network Open
2020-present	Reviewer for Cognitive Computation
2020-present	Reviewer for PLOS One
2021-present	Reviewer for Brain Imaging and Behavior
2022-present	Reviewer for Journal of Alzheimer's Disease
2021-present	Reviewer for Neurobiology of Aging
2023-present	Reviewer for NPJ Parkinson's Disease
2023-present	Reviewer for Translational Psychiatry
2016-present	Reviewer for AAIC
2016-present	Reviewer for OHBM
2016-present	Reviewer for International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)
2021-present	Reviewer for IEEE International Symposium on Biomedical Imaging

2019-present	Reviewer Editor for Frontiers in Neuroscience
2019-present	Reviewer Editor for Frontiers in Neuroimaging

Teaching Activity

2022	Teaching Assistant for Spring 2022: AI III: Advanced Methods and Health Applications in Machine Learning (BMIN522), Professor Li Shen, University of Pennsylvania

Presentation & Talk

2024	Co-organizer and speaker at the annual OHBM 2024 Symposia titled: "*Brain imaging genetics in Alzheimer's Disease: linking genetics and imaging-derived endophenotypes*"; co-present with Dr. Neda Jahanshad.
2024	Oral presentation at the quarterly meeting with NIH staff on behalf of the AI4AD consortium: "*Multi-organ AI-derived (endo)phenotypes for Alzheimer's disease and aging*"
2024	Online webinar presentation at the Douglas Research Centre at McGill: "*Multi-omics approaches to dissect disease heterogeneity*."
2024	Oral presentation at AAIC2024: "*AI-derived endophenotypes are causally linked to Alzheimer's disease*."
2024	In-person webinar talk and visit at ATRI, USC: "*AI/ML in precision medicine: Reproducibility, disease heterogeneity, and beyond the brain.*"
2024	Webinar talk and visit at ADRC, USC: "*Precision medicine: Challenges in reproducibility, disease heterogeneity, and beyond the brain.*"
2024	Webinar talk at ISTAART, AAIC: "*The genetic architecture of two AD dimensions defined by AI.*"
2023	NIH ADSP AI/ML Consortium, oral presentation: "*Using AI to model disease heterogeneity in Alzheimer's disease.*"
2023	NIH AI4AD, oral presentation: "*Dissecting disease heterogeneity using semi-supervised clustering method in Alzheimer's disease.*"
2022	BMIN522, guest lecture: "*Subtyping brain diseases from neuroimaging.*"
2023	AAIC2023, oral presentation: "*Genetic, Clinical Underpinnings of Brain Change Along Two Neuroanatomical Dimensions of Clinically-defined Alzheimer's Disease.*"
2019	MICCAI2019, oral presentation: "*MAGIC: Multi-scale Heterogeneity Analysis and Clustering for Brain Diseases.*"
2023	Job Talk at LONI, USC: "*Medical imaging analysis and machine learning application in brain diseases.*"
2018	OHBM2018, poster presentation: "*NODDI Highlights Promising New Markers In Presymptomatic C9orf72 Carriers.*"

2019	OHBM2019, poster presentation: "*Beware of feature selection bias! Example on Alzheimer's disease classification from diffusion MRI.*"
2021	SOBP2021, poster presentation: "*Patterns of Structural Covariance Abnormalities and Clinical Correlations in Schizophrenia*"
2023	ASHG2023, poster presentation: "*Genome-wide Associations of Biological Age in Nine Human Organ Systems*"

Mentoring Experience

2019-present	Zhijian Yang (PhD) University of Pennsylvania Co-supervision with Dr. Christos Davatzikos, Zhijian published two papers in Nature Communications (link and link), one paper in ICLR (link), and another one under revision in Nature Medicine (link).
2021-present	Jingxuan Bao (PhD) University of Pennsylvania Co-supervision with Dr. Li Shen, Jingxuan published one paper in Neuroimage (link), one paper in Methods (link), one paper in BIBM 2022 (link), and another one under revision in Nature Neuroscience.
2023-present	Marilena De Pian (PhD) University of Pennsylvania Co-supervision with Dr. Christos Davatzikos, Marilena's PhD topic is brain imaging genetics, which aligns with my research interest.
2022	Marilena De Pian (Master) National Technical University of Athens Marilena's Mater's topic is to apply non-negative matrix factorization to brain MRI data.
2021-2022	Jiong Chen (Master) University of Pennsylvania I supervised Jiong's Master's topic, and he worked on using AI/ML to derive new phenotypes in imaging genetic associations in Alzheimer's disease.

Major Research Interest

Medical Imaging Analysis	Artificial Intelligence & Machine Learning
Population Genetics	Clinical Neuroscience

Open-source Software

MLNI (https://github.com/anbai106/mlni)	Developer
SOPNMF (https://github.com/anbai106/SOPNMF)	Developer
MAGIC (https://github.com/anbai106/MAGIC)	Developer
Clinica (https://www.clinica.run/)	Developer

Publications

Published (*ordered by my perspective of scientific significance*)

1. ***Wen, J.***, Thibeau-Sutre, E., Diaz-Melo, M., Samper-González, J., Routier, A., Bottani, S., Dormont, D., Durrleman, S., Burgos, N., Colliot, O. and Alzheimer's Disease Neuroimaging Initiative, 2020. Convolutional neural networks for classification of Alzheimer's disease: Overview and reproducible evaluation. ***Medical Image Analysis*** (**>500 citations**), *63*, p.101694 (link).
2. ***Wen, J. (sole corr. author)***, Tian, Y.E., Skampardoni, I., Yang, Z., Mamourian, E., Anagnostakis, F., Zhao, B., Toga, A.W., Zaleskey, A. and Davatzikos, C., 2023. The Genetic Architecture of Biological Age in Nine Human Organ Systems. ***Nature Aging*** (link).
3. Yang, Z., ***Wen, J. (Co-supervision & Genetic analysis)***, Erus, G., Govindarajan, S.T., Melhem, R., Mamourian, E., Cui, Y., Srinivasan, D., Abdulkadir, A., Parmpi, P. and Wittfeld, K., 2023. Five dominant dimensions of brain aging are identified via deep learning: associations with clinical, lifestyle, and genetic measures. *medRxiv*, pp.2023-12 ***In press*** in ***Nature Medicine*** (link).
4. ***Wen, J. (sole corr. author)***, Zhao, B., Yang, Z., Erus, G., Skampardoni, I., Mamourian, E., Cui, Y., Hwang, G., Bao, J., Boquet-Pujadas, A. and Zhou, Z., 2024. The Genetic Architecture of Multimodal Human Brain Age. ***Nature Communications*** (link).
5. ***Wen, J.***, Fu, C.H., Tosun, D., Veturi, Y., Yang, Z., Abdulkadir, A., Mamourian, E., Srinivasan, D., Skampardoni, I., Singh, A. and Nawani, H., 2022. Characterizing heterogeneity in neuroimaging, cognition, clinical symptoms, and genetics among patients with late-life depression. ***JAMA Psychiatry***, *79*(5), pp.464-474 (link).
6. ***Wen, J.***, Nasrallah, I.M., Abdulkadir, A., Satterthwaite, T.D., Yang, Z., Erus, G., Robert-Fitzgerald, T., Singh, A., Sotiras, A., Boquet-Pujadas, A. and Mamourian, E., 2023. Genomic loci influence patterns of structural covariance in the human brain. ***Proceedings of the National Academy of Sciences***, *120*(52), p.e2300842120 (link).
7. Hwang, G., ***Wen, J. (co-first)***, Sotardi, S., Brodkin, E.S., Chand, G.B., Dwyer, D.B., Erus, G., Doshi, J., Singhal, P., Srinivasan, D. and Varol, E., 2023. Assessment of neuroanatomical endophenotypes of autism spectrum disorder and association with characteristics of individuals with schizophrenia and the general population. ***JAMA Psychiatry*****,** 80(5), pp.498-507 (link).
8. Bertrand, A., ***Wen, J. (co-first)***, Rinaldi, D., Houot, M., Sayah, S., Camuzat, A., Fournier, C., Fontanella, S., Routier, A., Couratier, P. and Pasquier, F., 2018. Early cognitive, structural, and microstructural changes in presymptomatic C9orf72 carriers younger than 40 years. ***JAMA Neurology***, 75(2), pp.236-245 (link).
9. ***Wen, J.***, Antoniades, M., Yang, Z., Hwang, G., Skampardoni, I., Wang, R. and Davatzikos, C., 2024. Dimensional Neuroimaging Endophenotypes: Neurobiological Representations of Disease Heterogeneity Through Machine Learning. ***Biological Psychiatry*** (link).
10. ***Wen, J.***, Varol, E., Sotiras, A., Yang, Z., Chand, G.B., Erus, G., Shou, H., Abdulkadir, A., Hwang, G., Dwyer, D.B. and Pigoni, A., 2022. Multi-scale semi-supervised clustering of brain images: Deriving disease subtypes. ***Medical Image Analysis***, *75*, p.102304 (link).
11. ***Wen, J.***, Zhang, H., Alexander, D.C., Durrleman, S., Routier, A., Rinaldi, D., Houot, M., Couratier, P., Hannequin, D., Pasquier, F. and Zhang, J., 2019. Neurite density is reduced in the presymptomatic phase of C9orf72 disease. ***Journal of Neurology, Neurosurgery & Psychiatry***, *90*(4), pp.387-394 (link).

12. ***Wen, J.***, Samper-González, J., Bottani, S., Routier, A., Burgos, N., Jacquemont, T., Fontanella, S., Durrleman, S., Epelbaum, S., Bertrand, A. and Colliot, O., 2021. Reproducible evaluation of diffusion MRI features for automatic classification of patients with Alzheimer's disease. ***Neuroinformatics***, *19*, pp.57-78 (link).
13. ***Wen, J.***, Varol, E., Chand, G., Sotiras, A. and Davatzikos, C., 2020. MAGIC: Multi-scale heterogeneity analysis and clustering for brain diseases. In ***Medical Image Computing and Computer Assisted Intervention–MICCAI 2020****: 23rd International Conference, Lima, Peru, October 4–8, 2020, Proceedings, Part VII 23* (pp. 678-687). Springer International Publishing (link).
14. ***Wen, J.***, Varol, E., Yang, Z., Hwang, G., Dwyer, D., Kazerooni, A.F., Lalousis, P.A. and Davatzikos, C., 2023. Subtyping brain diseases from imaging data. ***Machine Learning for Brain Disorders***, pp.491-510 (link).
15. Yang, Z., ***Wen, J.***, Abdulkadir, A., Cui, Y., Erus, G., Mamourian, E., Melhem, R., Srinivasan, D., Govindarajan, S.T., Chen, J. and Habes, M., 2024. Gene-SGAN: discovering disease subtypes with imaging and genetic signatures via multi-view weakly-supervised deep clustering. ***Nature Communications***, *15*(1), p.354 (link).
16. Yang, Z., ***Wen, J.***, and Davatzikos, C., 2022. Surreal-GAN: Semi-Supervised Representation Learning via GAN for uncovering heterogeneous disease-related imaging patterns. ***ICLR*** (link).
17. Skampardoni, I., Nasrallah, I.M., Abdulkadir, A., ***Wen, J. (Genetic analysis)***, Melhem, R., Mamourian, E., Erus, G., Doshi, J., Singh, A., Yang, Z. and Cui, Y., 2024. Genetic and Clinical Correlates of AI-Based Brain Aging Patterns in Cognitively Unimpaired Individuals. ***JAMA Psychiatry*** (link).
18. Yang, Z., Nasrallah, I.M., Shou, H., ***Wen, J.***, Doshi, J., Habes, M., Erus, G., Abdulkadir, A., Resnick, S.M., Albert, M.S. and Maruff, P., 2021. A deep learning framework identifies dimensional representations of Alzheimer's Disease from brain structure. ***Nature Communications***, *12*(1), p.7065 (link).
19. Samper-González, J., Burgos, N., Bottani, S., Fontanella, S., Lu, P., Marcoux, A., Routier, A., Guillon, J., Bacci, M., ***Wen, J.***, and Bertrand, A., 2018. Reproducible evaluation of classification methods in Alzheimer's disease: Framework and application to MRI and PET data. ***NeuroImage***, *183*, pp.504-521 (link).
20. Sha, J., Bao, J., Liu, K., Yang, S., Wen, Z., ***Wen, J.***, Cui, Y., Tong, B., Moore, J.H., Saykin, A.J. and Davatzikos, C., 2023. Preference matrix guided sparse canonical correlation analysis for mining brain imaging genetic associations in Alzheimer's disease. ***Methods***, *218*, pp.27-38 (link).
21. Dwyer, D.B., Chand, G.B., Pigoni, A., Khuntia, A., ***Wen, J.***, Antoniades, M., Hwang, G., Erus, G., Doshi, J., Srinivasan, D. and Varol, E., 2023. Psychosis brain subtypes validated in first-episode cohorts and related to illness remission: results from the PHENOM consortium. ***Molecular Psychiatry***, *28*(5), pp.2008-2017 (link).
22. Bao, J., ***Wen, J.***, Wen, Z., Yang, S., Cui, Y., Yang, Z., Erus, G., Saykin, A.J., Long, Q., Davatzikos, C. and Shen, L., 2023. Brain-wide genome-wide colocalization study for integrating genetics, transcriptomics and brain morphometry in Alzheimer's disease. ***NeuroImage***, *280*, p.120346 (link).
23. Zhou, Z., Li, H., Srinivasan, D., Abdulkadir, A., Nasrallah, I.M., ***Wen, J.***, Doshi, J., Erus, G., Mamourian, E., Bryan, N.R. and Wolk, D.A., 2023. Multiscale functional

connectivity patterns of the aging brain learned from harmonized rsfMRI data of the multi-cohort iSTAGING study. ***NeuroImage***, *269*, p.119911 (link).

24. Wang, R., Bashyam, V., Yang, Z., Yu, F., Tassopoulou, V., Chintapalli, S.S., Skampardoni, I., Sreepada, L.P., Sahoo, D., Nikita, K. and Abdulkadir, A. ***Wen, J.***, 2023. Applications of generative adversarial networks in neuroimaging and clinical neuroscience. ***NeuroImage***, *269*, p.119898 (link).
25. Lalousis, P.A., Schmaal, L., Wood, S.J., Reniers, R.L., Barnes, N.M., Chisholm, K., Griffiths, S.L., Stainton, A., ***Wen, J.***, Hwang, G. and Davatzikos, C., 2022. Neurobiologically based stratification of recent-onset depression and psychosis: identification of two distinct transdiagnostic phenotypes. ***Biological Psychiatry***, *92*(7), pp.552-562 (link).
26. Wang, Z., Chen, J., Yang, W., Gara, S., Xu, F.H., ***Wen, J.***, Davatzikos, C. and Shen, L., 2023, April. Shape analysis of amygdala atrophy using SPHARM-OT. In ***Medical Imaging 2023: Image Processing*** (Vol. 12464, pp. 24-33). SPIE (link).
27. Marcoux, A., Burgos, N., Bertrand, A., Teichmann, M., Routier, A., ***Wen, J.***, Samper-González, J., Bottani, S., Durrleman, S., Habert, M.O. and Colliot, O., 2018. An automated pipeline for the analysis of PET data on the cortical surface. ***Frontiers in Neuroinformatics***, *12*, p.94 (link).
28. Yue, L., Hu, D., Zhang, H., ***Wen, J.***, Wu, Y., Li, W., Sun, L., Li, X., Wang, J., Li, G. and Wang, T., 2021. Prediction of 7-year's conversion from subjective cognitive decline to mild cognitive impairment. ***Human Brain Mapping***, *42*(1), pp.192-203(link).
29. Routier, A., Burgos, N., Díaz, M., Bacci, M., Bottani, S., El-Rifai, O., Fontanella, S., Gori, P., Guillon, J., Guyot, A. and Hassanaly, R., ***Wen, J.***, 2021. Clinica: An open-source software platform for reproducible clinical neuroscience studies. ***Frontiers in Neuroinformatics***, *15*, p.689675 (link).
30. Chand, G.B., Singhal, P., Dwyer, D.B., ***Wen, J.***, Erus, G., Doshi, J., Srinivasan, D., Mamourian, E., Varol, E., Sotiras, A. and Hwang, G., 2022. Schizophrenia imaging signatures and their associations with cognition, psychopathology, and genetics in the general population. ***American Journal of Psychiatry***, *179*(9), pp.650-660 (link).
31. Sha, J., Bao, J., Liu, K., Yang, S., Wen, Z., Cui, Y., ***Wen, J.***, Davatzikos, C., Moore, J.H., Saykin, A.J. and Long, Q., 2022, December. Preference Matrix Guided Sparse Canonical Correlation Analysis for Genetic Study of Quantitative Traits in Alzheimer's Disease. In *2022* ***IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*** (pp. 541-548). IEEE (link).
32. Ansart, M., Epelbaum, S., Bassignana, G., Bône, A., Bottani, S., Cattai, T., Couronné, R., Faouzi, J., Koval, I., Louis, M. and Thibeau-Sutre, E., ***Wen, J.***, 2021. Predicting the progression of mild cognitive impairment using machine learning: a systematic, quantitative and critical review. ***Medical Image Analysis***, *67*, p.101848 (link).
33. Wen, Z., Bao, J., Yang, S., ***Wen, J***, Zhan, Q., Cui, Y., Erus, G., Yang, Z., Thompson, P., Zhao, Y., Davatzikos, C., Shen, L., 2024. Multiscale estimation of morphometricity for revealing neuroanatomical basis of cognitive traits. ***ISBI'24: IEEE Int. Sym. on Biomedical Imaging***, *In Press*, Athens, Greece, May 27-30, 2024.
34. Skampardoni. I., ***Wen, J***, Erus, G., Shou. H., Davatzikos, C., 2024. Mutually-constrained cross-sectional and longitudinal non-negative matrix factorization: application to modeling brain aging trajectories. ***ISBI'24: IEEE Int. Sym. on Biomedical Imaging***, *In Press*, Athens, Greece, May 27-30, 2024.

35. Bao, J., Lee, B.N., ***Wen, J***, Kim, M., Mu, S., Yang, S., Davatzikos, C., Long, Q., Ritchie, M.D. and Shen, L., 2024. Employing Informatics Strategies in Alzheimer's Disease Research: A Review from Genetics, Multiomics, and Biomarkers to Clinical Outcomes. ***Annual Review of Biomedical Data Science***, *7* (link).
36. Hou B, Wen Z, Bao J, Zhang R, Tong B, Yang S, ***Wen, J***, Cui Y, Moore JH, Saykin AJ, Huang H, Thompson PM, Ritchie MD, Davatzikos C, Shen L, for the Alzheimer's Disease Neuroimaging Initiative. (2024) Interpretable Deep Clustering Survival Machines for Alzheimer's Disease Subtype Discovery. ***Medical Image Analysis*** (link).
37. Duggan, M.R., Yang, Z., Cui, Y., Dark, H.E., ***Wen, J***, Erus, G., Hohman, T.J., Chen, J., Lewis, A., Moghekar, A., Coresh, J., Resnick, S.M., Davatzikos, C., Walker, K.A. (2024). Proteomic analyses reveal plasma EFEMP1 and CXCL12 as biomarkers and determinants of neurodegeneration. ***Alzheimer's and Dementia***. (**in press**).
38. Shou, Q., Cen, S., Chen, N.K., Ringman, J.M., ***Wen, J.***, Kim, H. and Wang, D.J., 2024. Diffusion model enables quantitative CBF analysis of Alzheimer's Disease. medRxiv, pp.2024-07 (link).
39. Chen, J., Ionita, M., Feng, Y., Lu, Y., Orzechowski, P., Garai, S., Hassinger, K., Bao, J., ***Wen, J.***, Duong-Tran, D. and Wagenaar, J., 2024. Automated Cytometric Gating with Human-Level Performance Using Bivariate Segmentation. bioRxiv, pp.2024-05 (link).
40. Boquet-Pujadas, A., Hardouïn, J., ***Wen, J.***, Ignés-Mullol, J. and Sagués, F., 2023. Inverse Measurements in Active Nematics. *arXiv preprint arXiv:2312.15553* (link).