

# Sina Mansour L. | Curriculum Vitae

Postdoctoral Research Fellow

Centre for Sleep and Cognition, National University of Singapore, Singapore

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## Education & Employment

### **Postdoctoral Research Fellow**

*Centre for Sleep and Cognition, National University of Singapore*

**2023–present**

*Singapore, Singapore*

### **Honorary Research Fellow**

*Department of Psychiatry, The University of Melbourne*

**2023–present**

*Melbourne, Australia*

### **Postdoctoral Research Fellow**

*Department of Psychiatry, The University of Melbourne*

**2022–2023**

*Melbourne, Australia*

### **Ph.D., Dept. of Biomedical Engineering**

*Melbourne School of Engineering, The University of Melbourne*

**2018–2022**

*Melbourne, Australia*

### **Double degrees in electrical engineering and computer sciences**

*Depts. of Electrical Engineering & Mathematical Sciences, Sharif University of Technology,*

**2011–2017**

*Tehran, Iran*

## Awards & Honors

**2025:** Awarded the [NMRC's Open Fund - Young Individual Research Grant](#) (315K SGD) for a project exploring benefits of novel normative modeling approaches for Alzheimer's Disease.

**2025:** Awarded the Merit Abstract Award at [OHBM 2025](#).

**2023:** Awarded the Runner-Up International Open Science Trainee Prize from [the Neuro](#).

**2022:** Awarded the Best Student Paper Prize from the IEEE Victorian Section.

**2021:** Awarded the best poster ECR award at Maths in the Brain 2021.

**2021:** Awarded the Open Science fellowship from the OHBM Open Science Special Interest Group.

**2021:** Awarded the IEEE Special Recognition Award from the IEEE Region 10 (Student Branch chair).

**2020:** Awarded a Student Engagement Grant (SEG) 2020 as chair of the IEEE student branch at the University of Melbourne to organize programming workshops tailored for undergraduate and graduate students.

**2019:** Best graphical abstract from SOBR symposium 2019

**2019:** Poster presentation excellence award in engineering, computational and systems neuroscience, SOBR symposium 2019

**2019:** Awarded a grant from the Graduate Students' Association (GSA) at The University of Melbourne to support the Programming for Neuroimaging Data Analysis (PNDA) workshop series.

**2018:** Melbourne Research Scholarship for postgraduate research

**2017:** Ranked 2<sup>nd</sup> among participants in Nationwide Graduate University Entrance Exam for Computer Sciences (for Master's Degree)

**2015:** Ranked 23<sup>rd</sup> in the IEEEXtreme 9.0 worldwide programming contest as a member of team CoDeFX (3<sup>rd</sup> in Iran)

# Scholarly Work

For the complete list of publications, refer to my [Google Scholar profile](#).

## Intellectual Property and Software

**2024:** Yeo, B. T. T., **Mansour L., S.**, Zhou, J., Chen, C., Zalesky, A., & Di Biase, M. (2024). *Normative reference model and uses* (Patent application No. 10202401839Y). National University of Singapore & The University of Melbourne. Pending.

**2024:** **Mansour L., S.**, Bryant, A. G., Jeganathan, J., Kai, J., Kuehn, T., ..., & Arun, A. (2024). *Cerebro Brain Viewer* (Software). Zenodo. <https://doi.org/10.5281/zenodo.7885668>.

**2023:** **Mansour L., S.** (2023). *Connectome Spatial Smoothing* (Software). Zenodo. <https://doi.org/10.5281/zenodo.5746618>.

## Publications

**2025:** Liu, Y., Seguin, C., **Mansour L., S.**, Tian, Y. E., Di Biase, M. A., & Zalesky, A. (2025). Deep generation of personalized connectomes based on individual attributes. *Medical Image Analysis*, 103761. <https://doi.org/10.1016/j.media.2025.103761>

**2025:** **Mansour L., S.**, Di Biase, M., ..., Chen, C., Zhou, J. H., Yeo, B. T. T., & Zalesky, A. (2025). Spectral normative modeling of brain structure. *medRxiv*. <https://doi.org/10.1101/2025.01.16.25320639> (PREPRINT)

**2025:** Reilly, T. C., Di Biase, M. A., **Mansour L., S.**, Seguin, C., Cropley, V. L., Velakoulis, D., ... & Walterfang, M. (2025). A whole-brain structural connectivity signature in adult Niemann-Pick disease type C. *Brain Communications*, fcaf426. <https://doi.org/10.1093/braincomms/fcaf426>

**2025:** Siu, P. H., ..., **Mansour L., S.**, ..., & Grayden, D. B. (2025). Structural Eigenmodes of the Brain to Improve the Source Localisation of EEG: Application to Epileptiform Activity. *bioRxiv*. <https://doi.org/10.1101/2025.07.27.667083> (PREPRINT)

**2025:** Seguin, C., **Mansour L., S.**, Betzel, R. F., ..., & Zalesky, A. (2025). Neuroanatomical pathways of TMS therapy for depression. *medRxiv*. <https://doi.org/10.1101/2025.02.10.25322034> (PREPRINT)

**2024:** Olsen, A. S., **Mansour L., S.**, Pang, J. C., Zalesky, A., Van De Ville, D., & Behjat, H. (2024). On reconstruction of cortical functional maps using subject-specific geometric and connectome eigenmodes. *2025 IEEE 22nd International Symposium on Biomedical Imaging (ISBI)*, IEEE, 2025. <https://doi.org/10.1109/ISBI60581.2025.10980669>

**2025:** Amirmoezzi, Y., Cropley, V., **Mansour L., S.**, Seguin, C., Zalesky, A., & Tian, Y. E. (2025). Characterizing brain-cardiovascular aging using multi-organ imaging and machine learning. *Journal of Neuroscience*, e1440242024. <https://doi.org/10.1523/JNEUROSCI.1440-24.2024>

**2025:** Jeganathan, J., Koussis, N. C., Paton, B., **Mansour L., S.**, Zalesky, A., & Breakspear, M. (2024). Spurious correlations in surface-based functional brain imaging. *Imaging Neuroscience* 3 (2025): imag\_a\_00478. [https://doi.org/10.1162/imag\\_a\\_00478](https://doi.org/10.1162/imag_a_00478)

**2025:** Oldham, S., **Mansour L., S.**, & Ball, G. (2025). Perinatal development of structural thalamocortical connectivity. *Imaging Neuroscience*, 3, imag\_a\_00418. [https://doi.org/10.1162/imag\\_a\\_00418](https://doi.org/10.1162/imag_a_00418)

**2024:** Greaves, M. D., Novelli, L., **Mansour L., S.**, Zalesky, A., & Razi, A. (2024). Structurally informed models of directed brain connectivity. *Nature Reviews Neuroscience*, 26, 23–41. <https://doi.org/10.1038/s41583-024-00881-3>

**2024:** **Mansour L., S.**, Seguin, C., Winkler, A., Noble, S., & Zalesky, A.. (2024). Topological cluster statistic (TCS): Toward structural connectivity-guided fMRI cluster enhancement. *Network Neuroscience*. [https://doi.org/10.1162/netn\\_a\\_00375](https://doi.org/10.1162/netn_a_00375)

**2024:** Dehestani, N., Vijayakumar, N., Ball, G., **Mansour L., S.**, Whittle, S., & Silk, T. J. (2024). “Puberty age gap”: new method of assessing pubertal timing and its association with mental health problems. *Molecular*

*Psychiatry*, 29(2), 221-228. <https://doi.org/10.1038/s41380-023-02316-4>

**2024:** Mansour L., S., Behjat, H., Van De Ville, D., Smith, R. E., Yeo, B. T. T., & Zalesky, A. (2024). Eigenmodes of the brain: revisiting connectomics and geometry. *bioRxiv*, 2024.04.16.589843. <https://doi.org/10.1101/2024.04.16.589843> (PREPRINT)

**2023:** Mansour L., S., Di Biase, M. A., Smith, R. E., Zalesky, A., & Seguin, C. (2023). Connectomes for 40,000 UK Biobank participants: A multi-modal, multi-scale brain network resource. *NeuroImage*, 283, 120407. <https://doi.org/10.1016/j.neuroimage.2023.120407>

**2023:** Tanner, J., Mansour L., S., Coletta, L., Gozzi, A., & Betzel, R. F. (2023). Functional connectivity modules in recurrent neural networks: function, origin and dynamics. *arXiv preprint*, arXiv:2310.20601. <https://doi.org/10.48550/arXiv.2310.20601> (PREPRINT)

**2023:** Girard, G., Rafael-Patiño, J., Truffet, R., Aydogan, D. B., ..., Mansour L., S., ... & Thiran, J. P. (2023). Tractography passes the test: Results from the diffusion-simulated connectivity (disco) challenge. *NeuroImage*, 277, 120231. <https://doi.org/10.1016/j.neuroimage.2023.120231>

**2023:** Liu, Y., Seguin, C., Mansour L., S., Oldham, S., Betzel, R., Di Biase, M. A., & Zalesky, A. (2023). Parameter estimation for connectome generative models: Accuracy, reliability, and a fast parameter fitting method. *NeuroImage*, 270, 119962. <https://doi.org/10.1016/j.neuroimage.2023.119962>

**2023:** Seguin, C., Jedynak, M., David, O., Mansour L., S., Sporns, O., & Zalesky, A.. (2023). Communication dynamics in the human connectome shape the cortex-wide propagation of direct electrical stimulation. *Neuron*. <https://doi.org/10.1016/j.neuron.2023.01.027>

**2023:** Nikolaidis, A., Mancini, M., Auer, T., Bottenhorn, K. L., ..., Mansour L., S., ... & Zwiers, M. P. (2023). Proceedings of the OHBM Brainhack 2021. *Aperture Neuro*, 3, 1-20.

**2023:** Smout, C, Holford, D. L., Garner, K., Martinez, P. A., Campbell, M., ..., Mansour L., S., ... & Coelho, L. P. (2023). An open code pledge for the neuroscience community. *Aperture Neuro* Proceedings of the OHBM Brainhack 2021. <https://apertureneuropub.cloud68.co/articles/87/>

**2022:** Eisenmann, M., Reinke, A., Weru, V., Tizabi, M. D., ..., Mansour L., S., ... & Finzel, R. (2022). Biomedical image analysis competitions: The state of current participation practice. *arXiv preprint*. <https://doi.org/10.48550/arXiv.2212.08568> (PREPRINT)

**2022:** Seguin, C., Mansour L., S., Sporns, O., Zalesky, A., & Calamante F. (2022). Network communication models narrow the gap between the modular organization of structural and functional brain networks. *NeuroImage*, 257, 119323. <https://doi.org/10.1016/j.neuroimage.2022.119323>

**2022:** Mansour L., S., Seguin, C., Smith, R. E., & Zalesky, A. (2021). Connectome spatial smoothing (CSS): Concepts, methods, and evaluation. *NeuroImage*, 250, 118930. <https://doi.org/10.1016/j.neuroimage.2022.118930>

**2021:** Levitis, E., van Praag, C. D. G., Gau, R., Heunis, S., DuPre, E., Kiar, G., ..., Mansour L., S., ... & Maumet, C. (2021). Centering inclusivity in the design of online conferences—An OHBM–Open Science perspective. *GigaScience*, 10(8), giab051. <https://doi.org/10.1093/gigascience/giab051>

**2021:** Gau, R., Noble, S., Heuer, K., Bottenhorn, K. L., Bilgin, I. P., Yang, Y. F., ..., Mansour L., S., ... & Marinazzo, D. (2021). Brainhack: Developing a culture of open, inclusive, community-driven neuroscience. *Neuron*, 109(11), 1769-1775. <https://doi.org/10.1016/j.neuron.2021.04.001>

**2021:** Omidvarnia, A., Zalesky, A., Mansour L., S., Van De Ville, D., Jackson, G. D., & Pedersen, M. (2021). Temporal complexity of fMRI is reproducible and correlates with higher order cognition. *NeuroImage*, 230, 117760. <https://doi.org/10.1016/j.neuroimage.2021.117760>

**2021:** Mansour L., S., Tian, Y., Yeo, B. T. T., Cropley, V., & Zalesky, A. (2021). High-resolution connectomic fingerprints: Mapping neural identity and behavior. *NeuroImage*, 229, 117695. <https://doi.org/10.1016/j.neuroimage.2020.117695>

**2020:** Cropley, V. L., Tian, Y., Fernando, K., Mansour L., S., Pantelis, C., Cocchi, L., & Zalesky, A. (2021). Brain-

predicted age associates with psychopathology dimensions in youths. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 6(4), 410-419.

**2020:** Rakesh, D., Fernando, K. B., & **Mansour L., S.** (2020). Functional dedifferentiation of the brain during healthy aging. *Journal of neurophysiology*, 123(4), 1279-1282. <https://doi.org/10.1152/jn.00039.2020>

## Conferences (peer-reviewed abstracts).....

**July 2025:** "Spectral Normative Modeling (SNM) for High-resolution Brain Abnormality Inference" Featured talk and poster presentation at the Organization for Human Brain Mapping Annual Meeting (OHBM 2025), Brisbane, Australia.

**June 2025:** "From Code to Visualization: Reproducible Pipelines for Neuroimaging Research" [Educational course](#) at the Organization for Human Brain Mapping Annual Meeting (OHBM 2025), Brisbane, Australia.

**June 2024:** "Human Brain Normative Modeling Using Eigenmodes" [Poster presentation](#) at the Organization for Human Brain Mapping Annual Meeting (OHBM 2024), Seoul, South Korea.

**June 2024:** "Creating and using representative Big Open datasets: global challenges and promises" co-chaired [this symposium](#) as the Brainhack Chair of Open Science SIG at the Organization for Human Brain Mapping Annual Meeting (OHBM 2024), Seoul, South Korea.

**July 2023:** "Topological Cluster Statistic (TCS): Linking tractography and brain activation to make anatomically-informed inference" Featured talk at the symposium on "Inference on the Brain, advances and practices in brain activity inference" at the Organization for Human Brain Mapping Annual Meeting (OHBM 2023), Montreal, Canada.

**July 2023:** "Connectomes for 40,000 UK Biobank participants: A multi-modal, multi-scale dataset for network neuroscience" Poster presentation at the Organization for Human Brain Mapping Annual Meeting (OHBM 2023), Montreal, Canada.

**November 2022:** "Topological Cluster Statistic (TCS): fMRI cluster enhancement using anatomically-guided inference" Poster Presentation at the "Maths in the Brain 2022" Conference organized by the Turner Institute for Brain and Mental Health, Monash University.

**June 2022:** "Spectral connectome analysis across modalities & resolutions" Featured talk at the symposium on "Novel insights into brain organization via graph signal processing" at the Organization for Human Brain Mapping Annual Meeting (OHBM 2022), Glasgow, Scotland.

**June 2022:** "Topological Cluster Statistic: Structural connectivity guided fMRI cluster enhancements" Poster presentation at the Organization for Human Brain Mapping Annual Meeting (OHBM 2022), Glasgow, Scotland.

**November 2021:** "Connectome-Based Smoothing (CBS) for structural connectomes" Poster Presentation at the "Maths in the Brain" Conference organized by the Turner Institute for Brain and Mental Health & Monash Biomedical Imaging.

**June 2021:** "Challenges and impacts of spatial smoothing on high-resolution structural connectomes" Poster presentation at the Organization for Human Brain Mapping Annual Meeting (OHBM 2021), Online.

**August 2020:** "Prediction-Identification Landscape for Brain Structure and Connectivity" Poster presentation at the ISMRM & SMRT Virtual Conference & Exhibition, Online.

**July 2020:** "High-resolution connectivity analyses" Poster presentation at the 29th Annual Computational Neuroscience Meeting, Organization for Computational Neuroscience (OCNS), Online.

**November 2019:** "Structural Connectome Fingerprinting" Poster presentation and graphical abstract at the Students of Brain Research (SOBR) 2019 Student Symposium, The Melbourne Brain Centre, Parkville, Victoria, Australia.

**November 2019:** "Prediction-Identification Landscape for Brain Structure and Connectivity" Poster presentations at the BiomedLink 2019 annual conference, St. Vincent's Hospital Melbourne, Victoria, Australia.

## Invited talks

**November 2025:** "Open Science in Academia; Practical Steps To Get Started" Invited talk at the Systems Neuropsychiatry Lab, The University of Melbourne, Melbourne, Australia.

**November 2025:** "Lifespan Normative Modeling; Charting Healthy Norms & Detecting Pathological Deviations" Invited talk for the Centre for Sleep and Cognition, National University of Singapore, Singapore.

**June 2025:** "NeuroImaging Data Visualization with Python" Hands-on tutorial during a [Train Track session of OHBM BrainHack 2025](#).

**February 2025:** "Charting Multi-Scale Brain Phenotypes Using Spectral Normative Models" Invited talk at the session on AI & Big Data for ISMRM Workshop on 40 Years of Diffusion: Past, Present & Future Perspectives.

**December 2024:** "Open Science Volunteering and Academia: Navigating the Challenges and Rewards" Invited talk at MRI Together 2024 virtual conference.

**November 2024:** "High-resolution Connectomic Models: Challenges, Promises, and Prospects" Invited virtual presentation for Melbourne Ultra-High Field Functional Imaging Network.

**November 2024:** "Spectral normative modeling for high-resolution inference of brain abnormalities" Spotlight talk at the 2024 Annual OHBM Australia Meeting.

**June 2024:** "OHBM Brainhack 2024" Intro talk as the brainhack chair for OHBM Brainhack 2024, Seoul, South Korea.

**July 2023:** "Cerebro: One tool to view them all!" Software pitch at OHBM Brainhack 2023, Montreal, Canada.

**March 2023:** "Charting the human brain; toward resolution-independent reusable normative brain models" Talk at Donders Institute for Brain, Cognition and Behaviour, Nijmegen, The Netherlands.

**February 2023:** "Charting the human brain; toward resolution-independent, interpretable, and reusable normative brain models" Talk at Charité – Universitätsmedizin, Berlin, Germany.

**February 2023:** "High-resolution Connectomics, a tale of two disciplines" Talk at Charité – Universitätsmedizin, Berlin, Germany.

**December 2022:** "Cerebro: One tool to view them all!" Software pitch at Brainhack Global (Australasia hub), The University of Sydney, Sydney, Australia.

**November 2022:** "Computational models of High-resolution Human Connectomics, a tale of two disciplines" Talk at Mathematics of The Interactions Between Brain Structure and Brain Functions, MATRIX House, Creswick, Victoria, Australia.

**July 2022:** "An introduction to High-resolution Human Connectomics & its applications" Research presentation hosted by the neuroanatomy and tractography laboratory (Natbrainlab) King's College London, London, United Kingdom.

**May 2022:** "Connectome Spatial Smoothing" Virtual research presentation at lab meeting hosted by the Shine Lab, University of Sydney, Sydney, Australia.

**March 2022:** "Workshop on white-matter tractography" Virtual workshop at lab meeting hosted by the Computational & Systems Neuroscience Laboratory, Monash University, Clayton Campus, Melbourne, Australia.

**February 2022:** "Connectome Spatial Smoothing" Virtual research presentation at lab meeting hosted by Sydney Imaging and Brain & Mind Centre (BMC), University of Sydney, Sydney, Australia.

**February 2022:** "High-resolution Connectomics" Research presentation at lab meeting hosted by the Computational & Systems Neuroscience Laboratory, Monash University, Clayton Campus, Melbourne, Australia.

**October 2021:** "High-resolution Connectomics" Research presentation at lab meeting hosted by the Neural Systems and Behavior lab, Monash University, Clayton Campus, Melbourne, Australia.

**September 2021:** "High-resolution connectomic fingerprints: Mapping neural identity and behavior" Research presentation at the Neuroimage Journal Club hosted by Sydney Imaging and Brain & Mind Centre (BMC), University of Sydney, Sydney, Australia.

**August 2021:** "High-resolution Connectomics" Research presentation at the Melbourne-Berlin Brain Connectivity and Machine Learning Online Workshop.

**August 2021:** "Connectome-based Smoothing" Research presentation at the Biomedical Engineering Colloquium hosted by Department of Biomedical Engineering, University of Melbourne, Melbourne, Australia.

**April 2021:** "Neural correlates of identity and behavior": research presentation hosted by the Systems Neuropsychiatry Lab at Melbourne Neuropsychiatry Centre, Melbourne, Australia.

**March 2021:** "High-resolution connectivity; A novel biomarker of brain-behavior associations": research presentation in the webinar series on "Improved methods and important considerations for correlating brain and behavior" organized by the Australian Chapter of the Organization for Human Brain Mapping.

**November 2020:** "High-Resolution Brain Networks as Cerebral Fingerprints" Research presentation at the Biomedical Engineering Colloquium hosted by Department of Biomedical Engineering, University of Melbourne, Melbourne, Australia.

**October 2019:** "Structural Connectome Fingerprinting" Research presentation at the Biomedical Engineering Colloquium hosted by Department of Biomedical Engineering, University of Melbourne, Melbourne, Australia.

## Leadership and Service

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**2025:** Guest Editor, [Aperture Neuro](#), Special Issue on Open Datasets

**2025:** ECR Representative, [OHBM Australia 2025](#) committee

**2024:** Hackathon Chair, [OHBM OSSIG](#); [OHBM Brainhack 2024](#) (International hackathon)

**2023:** Project Instigator ([Cerebro](#)), OHBM Brainhack 2023

**2023:** Hackathon Co-chair Elect, OHBM OSSIG; [OHBM Brainhack 2023](#) (International hackathon)

**2022:** Student Representative, [OHBM Australia 2022](#) committee

**2022:** Project Instigator ([Cerebro](#)), Brainhack Global 2022 (Australasia Hub)

**2022:** Hackathon Organizer, [Brainhack Global 2022](#) (Australasia Hub)

**2020–2021:** Chair, [IEEE Student Branch at The University of Melbourne](#)

**2020:** Victorian Section Ambassador, [IEEEExtreme 14.0](#) Programming Competition

**2019–2020:** Vice-chair, [IEEE Student Branch at The University of Melbourne](#)

**2018–2019:** Secretary, [IEEE Student Branch at The University of Melbourne](#)

## Teaching Experience

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**2025:** Speaker, OHBM 2025 Educational Sessions, Brisbane, Australia

**2025:** Tutor and Project lead, OHBM Brainhack 2025, Brisbane, Australia

**2021:** Tutor and Organizer, Unlock Xtreme 15.0, IEEE student branch of University of Melbourne, Online

**2021:** Tutor, Applied Computation in Bioengineering, The University of Melbourne, Online

**2021:** Tutor, Circuits and Systems, The University of Melbourne, Online

**2021:** Tutor, Machine Learning and Data Visualization with Python, OHBM Brainhack 2021, Online

**2020:** Tutor and Organizer, Unlock Xtreme 14.0, IEEE student branch of University of Melbourne, Online

**2020:** Tutor and Project lead, OHBM Brainhack 2020, Online

**2019:** Tutor and coordinator, Programming for Neuroimaging Data Analysis (PNDA) workshop series, Melbourne Neuropsychiatry Centre, Melbourne, Australia

**2016:** Tutor, Operating Systems, Sharif Univ. of Technology, Tehran, Iran

**2015:** Tutor and lab demonstrator, Advanced C++ Programming, Sharif Univ. of Technology, Tehran, Iran