

# Sina Mansour L. | Curriculum Vitae

Postdoctoral Research Fellow

Melbourne Neuropsychiatry Centre, The University of Melbourne, Melbourne, Australia

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## 🎓 Education

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

**2018–2022**

*Melbourne School of Engineering, University of Melbourne*

*Melbourne, Australia*

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

**2011–2017**

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

*Tehran, Iran*

## 🌟 Awards & Honors

**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 (Student Branch Category) from the IEEE Region 10 (as the branch chair).

**2020:** Awarded the Student Engagement Grant (SEG) 2020 as part of the IEEE student branch University of Melbourne (In collaboration with Dr. Nandakishor Desai, Amount funded: \$4,200). This grant supported a wide range of programming workshop series aimed at improving technological skills of 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) to support the Programming for Neuroimaging Data Analysis (PNDA) workshop series under SONR (In collaboration with D. Rakesh, Amount funded: \$200)

**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 Masters Degree)

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

## 🔍 Research Experience

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

### 📖 Publications

**2022: Mansour L., S., Seguin, C., Winkler, A., Noble, S., & Zalesky, A.. (2022).** Topological Cluster Statistic (TCS): Towards structural-connectivity-guided fMRI cluster enhancement. *Research Square*. <https://doi.org/10.21203/rs.3.rs-2059418/v1>

- 2022:** Seguin, C., Jedynak, M., David, O., **Mansour L., S.**, Sporns, O., & Zalesky, A.. (2022). Communication dynamics in the human connectome shape the cortex-wide propagation of direct electrical stimulation. *bioRxiv*. <https://doi.org/10.1101/2022.07.05.498875>
- 2022:** Dehestani, N., Ball, G., **Mansour L., S.**, Whittle, S., & Silk, T. J. (2022). Puberty age gap: A new method of pubertal timing and its association with psychopathology. *medRxiv*. <https://doi.org/10.1101/2022.05.13.22275069>
- 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:** Smout, C, Holford, D. L., Garner, K., Martinez, P. A., Campbell, M., ..., **Mansour L., S.**, ... & Coelho, L. P. (2021). An open code pledge for the neuroscience community. *MetaArXiv*. <https://doi.org/10.31222/osf.io/vrwm7>
- 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., 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:** Cropley, V., Tian, Y., Fernando, K., **Mansour L., S.**, Pantelis, C., Cocchi, L., & Zalesky, A. (2020). O2. 3. ABNORMAL BRAIN AGING IN YOUTH WITH SUBCLINICAL PSYCHOSIS AND OBSESSIVE-COMPULSIVE SYMPTOMS. *Schizophrenia Bulletin* 46.Suppl 1 (2020): S4.
- 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).....

**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**" 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**.....

**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.

## Teaching Experience

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- 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)