

Dr. Zara Qureshi

Postdoctoral Fellow, Systems Neuroscience

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PROFILE

Neuroscientist studying how sleep consolidates memory, combining rodent electrophysiology with human EEG. Preparing to start an independent lab on sleep and early dementia markers.

Research interests: Memory consolidation · sleep · EEG biomarkers · neurodegeneration

EDUCATION

Ph.D., Neuroscience <i>Centre for Brain Research, Deccan Plateau University</i> Thesis: Hippocampal replay and memory during sleep	2015 – 2021
M.Sc., Life Sciences <i>Lakeview University, Hyderabad</i>	2013 – 2015
B.Sc., Zoology <i>Lakeview University, Hyderabad</i>	2010 – 2013

RESEARCH EXPERIENCE

Postdoctoral Fellow <i>Institute for Brain and Mind, Bengaluru</i> - Built a 64-channel recording pipeline used by 4 labs. - Leads a human EEG study of 150 older adults on sleep spindles and memory.	2021 – Present
Graduate Researcher <i>Centre for Brain Research</i> First-author paper on replay timing; 2 co-authored papers.	2015 – 2021

PUBLICATIONS

Fischer, A., Haddad, N., **Qureshi, Z.**, & Mensah, K. (2026). Designing for dopamine and decision making. *Journal of Systems Neuroscience*, 29(5), 471–492.

Rao, S., Fischer, A., **Qureshi, Z.**, & Haddad, N. (2026). New approaches to functional connectivity in adolescents. *Brain Imaging Methods*, 10(9), 893–907.

Qureshi, Z., & Gupta, R. (2026). Towards EEG markers of early dementia. *Brain Imaging Methods*, 46(6), 219–236.

Qureshi, Z., Okafor, D., Sato, Y., & Iyer, M. (2025). Revisiting neuroinflammation in Parkinson disease. *Neurodegeneration Research*, 33(6), 502–510.

- Fischer, A., Banerjee, P., **Qureshi, Z.**, & Kim, J. (2025). Revisiting stroke rehabilitation with brain-computer interfaces. *Journal of Systems Neuroscience*, 20(8), 521–536.
- Menon, V., **Qureshi, Z.**, & Okafor, D. (2025). Towards EEG markers of early dementia. *Neurodegeneration Research*, 34(10), 116–126.
- Sato, Y., **Qureshi, Z.**, & Menon, V. (2024). Revisiting dopamine and decision making. *Proceedings of the Asian Neuroscience Meeting*, pp. 284–294.
- Gupta, R., **Qureshi, Z.**, Kim, J., & Okafor, D. (2024). Revisiting EEG markers of early dementia. *Journal of Systems Neuroscience*, 14(2), 758–776.
- Menon, V., Chen, L., **Qureshi, Z.**, & Rao, S. (2024). Designing for EEG markers of early dementia. *Journal of Systems Neuroscience*, 30(3), 299–321.

CONFERENCE PRESENTATIONS & INVITED TALKS

- Invited talk: “Measuring neuroinflammation in Parkinson disease”, Brain Imaging Methods, Toronto, 2026.
- Contributed talk: “Evidence on neuroinflammation in Parkinson disease”, Proceedings of the Asian Neuroscience Meeting, Kyoto, 2026.
- Keynote: “Evidence on stroke rehabilitation with brain-computer interfaces”, Proceedings of the Asian Neuroscience Meeting, Pune, 2025.
- Contributed talk: “New approaches to EEG markers of early dementia”, Brain Imaging Methods, Hyderabad, 2025.
- Seminar: “Rethinking dopamine and decision making”, Brain Imaging Methods, London, 2024.
- Poster: “Rethinking stroke rehabilitation with brain-computer interfaces”, Neurodegeneration Research, Bengaluru, 2024.

TEACHING

- Teaching assistant, Systems Neuroscience (M.Sc.)
- Workshop instructor, computational neuroscience summer school (2022, 2024)

GRANTS, AWARDS & HONOURS

- Early-career fellowship, international biomedical alliance (2022–2027)
- Travel award, Asian Neuroscience Meeting (2019)

PROFESSIONAL SERVICE

- Co-founder, women-in-neuroscience mentoring circle
- Reviewer, Brain Imaging Methods

SKILLS

Experimental: In-vivo electrophysiology, EEG, optogenetics, behaviour

Computational: Python, MATLAB, MNE, spike sorting

Languages: Urdu, Hindi, English, Telugu

REFERENCES

Prof. K. Reddy

Professor, Centre for Brain Research

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Dr. A. Fernandes

Group Leader, Institute for Brain and Mind

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