DR. MONISA RAJKHOWA

ASSOCIATE PROFESSOR | DEPARTMENT OF PHYSICS

Jorhat Institute of Science and Technology (JIST), Jorhat, Assam, India

PROFESSIONAL SUMMARY

Academician and researcher in Physics with specialisation in theoretical particle physics, particularly neutrino masses and mixing. Academic engagement encompasses higher education, research, departmental academic initiatives, scholarly communication and institutional service.

ACADEMIC QUALIFICATIONS

- Ph.D. in Physics – Doctoral research in theoretical neutrino physics, focusing on neutrino masses and mixing in the seesaw framework.
- M.Sc. in Physics.

CURRENT ACADEMIC POSITION

- Associate Professor, Department of Physics, Jorhat Institute of Science and Technology (JIST), Jorhat, Assam, India.

RESEARCH AREAS AND SPECIALISATION

- Theoretical Particle Physics and Neutrino Physics
- Neutrino mass models, mass matrices and seesaw framework
- Neutrino mixing parameters and neutrino oscillations
- Tri-bimaximal mixing and deviations from tri-bimaximal mixing
- Flavour structures and normal and inverted neutrino mass hierarchies
- Radiative corrections to neutrino masses, mass-squared differences and mixing angles

SELECTED RESEARCH PUBLICATIONS

- “New Parametrisation of Tri-Bimaximal Mixings.” Indian Journal of Physics, 83(9), 1343–1351 (2009). DOI: 10.1007/s12648-009-0115-y.
- “Lowering Solar Mixing Angle in Inverted Hierarchy Without Charged Lepton Corrections.” Journal of Physics G: Nuclear and Particle Physics, 34, 345–351 (2007).
- “Deviation from Tri-Bimaximal Mixings Through Flavour Twisters in Inverted and Normal Hierarchical Neutrino Mass Models.” Pramana – Journal of Physics, 69(4), 533–549 (2007).
- “Possible Radiative Origin of Δm^2_{21} and sin θ_{13} Revisited.” Indian Journal of Physics, 80(8), 829–835 (2006).
- “Neutrino Mass Matrices in the Light of Latest KamLAND Data.” Journal of the Assam Science Society, 46(2), 32–38 (2006).

EDITORIAL AND SCHOLARLY CONTRIBUTIONS

- Editorial Board Member, AACST Newsletter – Association of All Computer Science Teachers (AACST).
- Life Member, AACST – Association of All Computer Science Teachers.
- Adviser, Trajectory – Newsletter of the Department of Physics, JIST; listed as Adviser in the inaugural issue (Vol. 1, Issue 1, January 2022).
- Contribution to academic communication, documentation of departmental activities, and dissemination of faculty and student achievements.

ACADEMIC LEADERSHIP AND INSTITUTIONAL SERVICE

- Involvement in departmental academic planning, seminars, student-oriented activities and initiatives promoting scientific engagement.
- Departmental initiatives documented in JIST publications include a Physics Forum, departmental seminar committee and newsletter activities.
- Involvement in a college-level open quiz on “Science and Technology” held in December 2021, as documented in the departmental newsletter.
- Presiding Officer, Internal Complaints Committee (ICC), JIST – listed in an institutional office order dated July 2024, with a three-year tenure specified in the order.
- Member, Anti-Ragging Squad, JIST – listed for the academic session 2025–2026.

FACULTY DEVELOPMENT AND PROFESSIONAL ENRICHMENT

- Faculty Enrichment Webinar for Physics Teachers in Higher Education, National Institute of Educational Planning and Administration (NIEPA), New Delhi – 12 March 2021.
- Refresher Course on Astronomy and Astrophysics, Teaching Learning Centre, Inter-University Centre for Astronomy and Astrophysics (IUCAA) – 10 May to 11 June 2021.

ONLINE RESEARCH PROFILE

- ResearchGate: https://www.researchgate.net/profile/Monisa-Rajkhowa

REFERENCES / INSTITUTIONAL LINKS

- JIST – Department of Physics faculty information
- JIST – Research publications attributed to Dr. Monisa Rajkhowa
- ResearchGate – Dr. Monisa Rajkhowa
- Trajectory – Physics Department, JIST, Vol. 1, Issue 1
- Trajectory – Physics Department, JIST, Volume I, Issue V
- JIST – Internal Complaints Committee Office Order, July 2024
- JIST – Anti-Ragging Squad, Academic Session 2025–2026
- AACST – Individual Life Members