

Applications are invited for a Junior Research Fellow (JRF) position to work on a DST-SERB sponsored research project titled “**Landscape of Beyond the Standard Model Physics at Neutrino Experiments**”. This project is a part of the DST Swarnajayanti Fellowship (2019 - 2020) awarded to Prof. Sanjib Kumar Agarwalla at Institute of Physics (IOP), Bhubaneswar.

Essential and Desirable Qualifications:

M.Sc. in Physics with 60% marks and above from a recognized University/Institution and qualified in at least one of the eligibility tests at the national level which are UGC-CSIR-NET (JRF/LS)/GATE/JEST. Those eligible for INSPIRE fellowship may also apply. Experience at the basic level in Quantum Field Theory and Particle Physics with a basic knowledge in Neutrino Physics will be preferable. Programming skills in C++/Root/GLOBES and a familiarity with Unix/Linux based operating systems will be added advantages.

Fellowship and Allowances:

As per the existing guidelines issued by the DST-SERB and IOP. For details, click [here](#). Accommodation inside the campus is subject to availability. HRA would be given at a permissible rate for the candidates staying outside the campus.

Duration:

Initial appointment of the JRF will be for one year, extendable for one more year depending upon the performance of the candidate. The candidate can be further promoted to the SRF position depending upon the performance and the extension of the project. The project position is co-terminus with the above project.

How to Apply:

Interested candidates should email their application (**a single merged PDF file**) latest by **1st September, 2021** to sanjib@iopb.res.in with the following documents:

- A complete curriculum vitae providing information about her/his academic records, courses taken in M.Sc., details about any past experience related to the above project.
- Self-attested scanned copy of the mark-sheets/testimonials/certificates from 10th standard onwards, date of birth proof, and award of the UGC-CSIR-NET/GATE/JEST/INSPIRE Fellowship.

Shortlisted candidates will be intimated by email before 15th September, 2021 and may be asked for a virtual interview/presentation over Skype/Google-Meet/Zoom. Candidate can join immediately after the selection. Exact joining date is negotiable.

A Brief Description of the Project :

Under this project, we plan to probe various beyond the Standard Model (BSM) scenarios at very high (TeV-PeV) energies (beyond the reach of modern colliders) by detecting astrophysical neutrinos from cosmic distances using giant neutrino telescopes such as IceCube at the South Pole, future IceCube-Gen2, and KM3NeT in the Mediterranean Sea. Another important facet of this project is to unravel various new physics models at low (MeV-GeV) energies using accelerator and atmospheric neutrinos travelling terrestrial distances.