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IIT  
Indore

Dated: 22/02/2024

## Advertisement for a Postdoctoral Position Under Max Planck Partner Group Grant

**Eligibility:** Ph.D. in Astronomy/Astrophysics/Physics or Submitted Doctoral thesis preferably in Astronomy & Astrophysics. Desirable candidate would be one who has just finished with his/her thesis and has experience in working and developing numerical simulations of astrophysical and space plasma flows. Brief details of the research focus for this position are mentioned below.

### Stipend:

Postdoctoral Fellow (01 position) will be paid a monthly salary of **INR 58000 + HRA** (as per norms) + travel funds (as per requirements). The fellow will be part of the Max Planck Partner Group established at Department of Astronomy, Astrophysics and Space Engineering, IIT Indore and work in collaboration with Dr. Bhargav Vaidya.

### Tenure: up to December 31, 2024

Apply directly to Dr. Bhargav Vaidya ([bvaidya@iiti.ac.in](mailto:bvaidya@iiti.ac.in)) with the following documents :

1. Latest Resume (as PDF)
2. PhD Degree/Provisional Certificate/Proof of Thesis Submission
3. 2-3 pages research proposal (maximum 1000 words as PDF).

Additionally, two recommendations to be directly sent by the referees. (one should be from the Ph.D. supervisor). All the above documents and recommendation letters should be sent by **10th March 2024** to the above email address.

### **Research Focus: Relativistic Jets in the era of multi-messenger Astronomy.**

Relativistic jets from black holes are magnetized plasma beams that can experience shocks, turbulence, and serve as possible locations for particle acceleration. The jets provide a perfect environment for multi-messenger astronomy due to the presence of observable indicators linked to neutrino emission, gravitational waves from NS-NS merger, and

associated electromagnetic events in the form of jets. The postdoctoral researcher will need to create numerical experiments and simulations to analyze the various aspects of relativistic jets near a black hole. The main goal is to generate synthetic emission and polarization data that can be compared to data from current telescopes or used as models for future telescope observations.

**More details of the group :** <https://www.iiti.ac.in/people/~bvaidya/group.html>

**NOTE:** Only shortlisted candidates will be informed about the date of selection process by email. The appointment is purely temporary and co-terminus with the project. No TA & DA will be paid for attending the selection process. Mere fulfillment of essential qualifications does not entitle the selection. IIT Indore reserves the right not to fill up the advertised post if the candidates are not found suitable for the post.