



**टाटा मूलभूत अनुसंधान संस्थान**  
**TATA INSTITUTE OF FUNDAMENTAL RESEARCH**

1 . होमी भाभा रोड, कुलाबा, मुंबई – 400005

1. Homi Bhabha Road, Colaba, Mumbai 400 005

भारत सरकार के परमाणु ऊर्जा विभाग की स्वायत्त संस्था एवं समविश्वविद्यालय  
An Autonomous Institution of the Department of Atomic Energy of  
Government of India and a Deemed to be University

**Advertisement No. 2026/4**

Applications are invited **for the position of Junior Research Fellow and Postdoctoral Fellow** [PI: Prof. Shravan M Hanasoge] in the Department of Astronomy and Astrophysics (DAA)

**Location:** Tata Institute of Fundamental Research (TIFR), Mumbai

**Machine Learning for Computational Pathology**

**TIFR–Tata Memorial Centre Collaboration, Mumbai**

The Tata Institute of Fundamental Research (TIFR), in collaboration with the Tata Memorial Centre (TMC), invites applications for Junior Research Fellow and Postdoctoral positions at the interface of machine learning, computational science, and oncology. This project focuses on developing advanced AI and machine learning methods to extract quantitative biomarkers from histopathology images, with the goal of improving prognostic assessment and understanding cancer biology better using computational assessments. The work will involve designing robust computational pipelines that combine modern deep learning, image analysis, and statistical modeling with clinically grounded datasets and questions.

This is an opportunity to work in a highly interdisciplinary environment, closely integrating fundamental science, machine learning, and clinical research. Researchers will contribute to the development of deployable AI tools while engaging with foundational questions in representation learning, geometric structure extraction, and predictive modeling. The collaboration brings together expertise in machine learning and large-scale computation at TIFR with one of the world's leading cancer research and treatment centers at TMC. Faculty members at TIFR (Profs. Shravan Hanasoge, Rajdeep Sensarma, and Sandip Trivedi) and scientists / clinicians at TMC (Dr. Swapnil Rane and Dr. Tripti Bameta) will be involved in the project and mentor the successful candidate(s).

We seek highly motivated candidates with backgrounds in machine learning, computer science, physics, mathematics, engineering, or related quantitative fields. Strong analytical and problem-solving abilities. Comfort with Python and scientific data analysis (e.g. NumPy, SciPy, pandas, matplotlib). Familiarity with machine learning methods is a plus but not required. Ability to work independently and in a team-oriented environment. These positions offer the opportunity to work on scientifically and clinically meaningful problems in a focused, collaborative setting.

## What we offer:

- Flexible visiting terms (short- or medium-term stays).
- Appointment will be initially for a period of one year, extendable for a maximum period of 3 years based on performance.
- A stimulating and collaborative research environment.
- Junior Research Fellow will be awarded a per month fellowship of Rs. 37,000 + HRA and depending on their experience, Postdoctoral Fellows will be paid over the range Rs. 58,000 - Rs. 67,000 + HRA. The Housing and Rent Allowance (HRA) will be set as per TIFR rules.
- Compensation will follow standard TIFR norms for Junior Research Fellows and for Postdoctoral Fellows.
- Age preferably below 30 years for JRF and for Postdoctoral Fellow below 35 years as on the date of the application.

## Junior Research Fellow:

Applications should be addressed to [hanasoge@tifr.res.in](mailto:hanasoge@tifr.res.in) with the subject line “Application for Junior Research Fellowship”

### Required Materials

1. **Cover Letter** – short, describing motivation, research interests, and relevant coursework or projects.
2. **Curriculum Vitae (CV)** – with details of education, skills (coding, data analysis, etc.), internships, and any prior research exposure.
3. **Academic Transcripts** – undergraduate (and postgraduate, if applicable).
4. **References** – contact details for 1–2 academic referees (professors, supervisors).

## Postdoctoral Fellows

Applications should be addressed to [hanasoge@tifr.res.in](mailto:hanasoge@tifr.res.in) with the subject line “Application for Postdoctoral Research Fellowship”

### Required Materials

1. **Cover Letter** – detailing motivation, past research contributions, and why this position is a good fit.
2. **Curriculum Vitae (CV)** – full list of education, research appointments, skills, publications, invited talks, and collaborations.
3. **Research Statement** (2–3 pages) – summary of past work and clear outline of proposed future directions.
4. **References** – 3 letters of recommendation, ideally from PhD advisor and collaborators.
5. **Sample Publications** – 1–3 key papers or preprints authored by the candidate.

**LAST DATE FOR RECEIPT OF APPLICATIONS IS APRIL 25, 2026.**