



भारतीय प्रौद्योगिकी संस्थान इंदौर

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IIT
Indore

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Advertisement for a JRF Position

Applications are invited from motivated and eligible candidates for a Junior Research Fellow (JRF) position in the SERB funded project titled “**Observing the Cosmic Dawn in Multicolour using Next Generation Telescopes**”.

The project is under the umbrella of Core Research Grants from the Science and Engineering Research Board, Government of India.

The project aims to explore the possibility of observing the era of the Cosmic Dawn (CD) and the Epoch of Reionization (EoR), one of the least known periods in the history of our Universe, using synergistic radio and far infrared observations with the upcoming **Square Kilometre Array (SKA)** and the **SPHEREx, CDIM, TIME, CONCERTO** etc, respectively. The project will develop large-scale, physically motivated and fast numerical simulations of the **Line Intensity Maps** from the CD-EoR for neutral hydrogen 21-cm and singly ionized carbon (CII) lines. The project envisions developing novel statistical inference pipelines, for interpreting such targeted multi-wavelength observations of CD-EoR, using **Bayesian Inference and Machine Learning techniques**. For more information on the research group which will be hosting this project please visit – <http://people.iiti.ac.in/~sumanm/> .

Eligibility:

M.Sc. in Physics or Astronomy or equivalent disciplines with minimum 60% marks and valid GATE or CSIR/UGC NET-JRF or NET-Lectureship qualification. Candidates with higher degrees such as MS/MTech/Equivalent with relevant subject expertise are also encouraged to apply.

Desirable skills:

Preferences will be given to candidates with good knowledge of programming (in C/ C++/ Python). Experience with cosmological simulations and related statistical analysis is not necessary but desirable.

Stipend:

JRF: Rs. 31,000/- per month+HRA as per norms.

Duration:

The initial appointment will be for 3 months, which is extendable up to the duration of the project (until March 2025) solely based on performance.

How to apply:

Interested candidates are requested to submit a **detailed CV**, a **1-page statement of interest**, **all mark sheets and certificates** starting from class X up to the highest degree and valid GATE or CSIR/UGC NET-JRF or NET-Lectureship **scorecards/results**, to Dr. Suman Majumdar, DAASE, Indian Institute of Technology Indore, via e-mail: suman.majumdar@iiti.ac.in with the subject line "JRF application for the SERB-CRG project" latest by **6th March 2023**. Please also request **two of your referees** to send their **recommendation letters** directly to Dr. Suman Majumdar via email.

Note:

The CV should include details of academic grades starting from standard X onwards with details of the year of passing, university or institute, etc and also work experience and nature of work if applicable. Complete details of NET/GATE should be mentioned in the CV. Incomplete applications will be rejected.