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IIT Indore

Date: 20-May-2025

Recruitment for Project Positions

Applications are invited from motivated and eligible candidates for the project positions of Junior Research Fellow (two positions) in the project **[TTDF/6G/80]** titled: **"ARISE ML: ML driven SixG AR optimization for Advanced Self-sustainable IoT devices"** sponsored by Bharat 6G Mission from Department of Telecom (DoT) implemented by TTDF.

Selected candidates will be involved in:

- Conducting extensive literature reviews on waveform optimization, RF power transmission techniques, and ML-based IoT management modules.
- Developing and simulating ML algorithms for waveform optimization and intelligent system modules for concurrent data and power transmission.
- Designing, prototyping, and validating RF battery-integrated IoT nodes, Rectenna systems, and smart multi-antenna arrays in both lab and realistic settings.
- Integrating hardware and software components including ML modules, feedback mechanisms, and beamforming techniques into the 6G Adaptive Radio (6G-AR) system.
- Assisting in system co-design, experimental validation, dataset generation, publication preparation, and technology transfer activities.

The candidates are expected to have a good knowledge of Wireless Communications, Signal Processing, Internet-of-Things (IoTs), Simultaneous Wireless Information and Power Transmission (SWIPT), Machine Learning/Artificial Intelligence, and preferably have a good understanding of Software-Defined Radio (SDR) Platforms.

1. Junior Research Fellow (JRF) – Two positions
Duration: Initial appointments would be for one year, respectively, which are extendable further based on performance.
Emolument: 37000 p.m. + 20% HRA.
Eligibility:
Essential Qualification: Master's degree in the relevant branch of Electronics/ Electronics and Communication Engineering/ Microwave engineering/ Electrical

Engineering/ Computer Science or equivalent, with a valid GATE score. Post two years' experience, the (selected) candidate(s) will be eligible for SRF position. **Age limit:** As per TTDF norms. Relaxation for SC/ST/OBC candidates as per Government of India norms.

How to Apply: Interested candidates are requested to send their detailed CV to Dr. Sumit Gautam, Department of Electrical Engineering, Indian Institute of Technology Indore and Prof. Vimal Bhatia, Department of Electrical Engineering, Indian Institute of Technology Indore, via e-mail to sumit.gautam@iiti.ac.in with a copy (cc) to vbhatia@iiti.ac.in **bearing the subject line: "[JRF] Application for TTDF/6G/80 project: ARISE-ML"**.

Note: CV should include academic grades starting from 10th standard onwards with details of the year of passing, University or Institute, etc., and work experience and nature of work if applicable. Complete details of NET/GATE such as year of passing/validity, discipline, marks, **All India Rank**, and number of candidates who appeared should be mentioned in the CV. Incomplete applications will be rejected. Only shortlisted candidates will be intimated by email for an interview. No **TA/DA** will be paid to appear in the interview.

Last Date for Application Submission: **01-June-2025.**

Webpages:

1. Dr. Sumit Gautam: https://sites.google.com/site/sumitgautamjbp/
2. Prof. Vimal Bhatia: https://sites.google.com/view/signalsoftware/sasg