



Government of India, Department of Space  
Indian Institute of Space Science and Technology  
[Declared as Deemed to be University under Sec.3 of the UGC Act 1956]  
Valiamala PO, Thiruvananthapuram -695 547, Kerala



**Application for Project Fellow (Online Application only)**

Indian Institute of Space Science and Technology (IIST) invites application for the following positions to work in the different Research Projects undertaken in the Departments of Aerospace Engineering, Avionics, Humanities, Earth and Space Sciences and Physics of IIST:

Sl. No.	Category No.	Qualification / Skill	Project Title	No. of Position
<b>Senior Project Fellow (SPF)</b>				
1	SPF 29	ME / M.Tech in VLSI and Microsystems / Microelectronics / Solid State Technology. Basic degree should be in BE / B.Tech Electronics and Communication Engineering / Electrical and Electronics Engineering. <b>Desirable:</b> Experience in MEMS / Microsystems / Nanoelectronics Design / Fabrication of MEMS or Semiconductor device.	Development of MEMS Accelerometer with Ultra Sensitive Transducers for Space Applications	1
2	SPF 30	ME / M.Tech or M.Sc (Engg) in Electrical Engineering / Electronics Engineering / Electrical and Electronics Engineering / Instrumentation Engineering / Control Engineering / Electronics Design and Technology. <b>Desirable:</b> Experience in MATLAB / Simulink, Electric Machine models and Embedded Systems, DSP and FPGA Programming Design of Inverters.	Decoupled Control Scheme for Dual Permanent Magnet Machine Actuators	1
3	SPF 31	ME / M.Tech / MS in Image Processing / Signal Processing / Computer Vision / Machine Learning or Applied Mathematics or equivalent. Basic degree should be in BE / B.Tech Avionics / Electronics and Communication / Electrical and Electronics / Computer Science or equivalent <b>Desirable:</b> Good academic record and inclination towards implementation of image processing algorithms, sound mathematical skills. The candidate should be familiar with programming languages C / C++, modelling and analysis software MATLAB / Simulink	Development and Analysis of Image Fusion Techniques for Satellite Images	1
4	SPF 32	ME / M.Tech or equivalent degree in Power Electronics / Control Systems / Power Systems with sufficient exposure in Power Electronics: 1. Thorough understanding of conventional DC - DC Converter and their Controller design in domain frequency is required. 2. Understanding of soft switching techniques is desirable. 3. Should be proficient in MATLAB / SPICE Software and setting up and debugging circuits on Bread board / general purpose PCBs.	Study of Soft Switching Topologies and Control Schemes for Isolated DC-DC Power Converters	1
5	SPF 33	ME / M.Tech in Power Electronics / Electrical Engineering / Control Systems with exposure to Power Electronics and drives. <b>Desirable:</b> Expertise in control of Power Electronic	Development of Control Schemes for Multi-phase Dual Converter fed Open-end Winding	1

		Converters and Drives.	BLDC / Induction Motor Drives	
<b>Junior Project Fellow (JPF)</b>				
6	<a href="#">JPF 41</a>	BE / B.Tech in Aerospace Engineering / Mechatronics / Electronics and Electrical / Electronics and Communication or equivalent The candidate should have basic understanding in Mechatronics / Electronics Systems (microprocessors / Basic Electrical Systems) / Control Systems. Familiarity with modelling and analysis packages (Autocad / Inventor / Solid Works, MATLAB / Simulink etc) is preferable. The candidate should be willing to work on design, fabrication and control of quadcopter based systems and learn such systems / topics from open resources.	ADCS test setup for spacecraft docking system using quadcopters	1
7	<a href="#">JPF 42</a>	BE / B.Tech in Electronics and Communication / Electrical and Electronics or equivalent. <b>Desirable:</b> Good academic record and one year experience in R&D industry at the time of joining. The candidate should be familiar with programming languages C/C++, modelling and analysis software MATLAB / Simulink, circuits, multilayer layout design, PCB fabrication. The candidate should be willing to work in the subsystems of nano / small satellite and learn such systems / topics from open resources.		1
8	<a href="#">JPF 43</a>	BE / B.Tech in Mechatronics / Mechanical Engineering / Aerospace Engineering / Electronics and Electrical / Electronics and Communication or equivalent. <b>Desirable:</b> Good academic record, the candidate should be familiar with modelling and analysis packages (Autocad / Inventor / Solid Works / ANSYS / Abaqus, MATLAB / Simulink etc.). The candidate shall have basic understanding in Mechatronics / Electronics Systems (Microprocessors / Basic Electrical Systems) / Control Systems. The candidate shall also have knowledge in manufacturing related activities. The candidate should be willing to work on design, fabrication and control of underactuated robotic arm for planetary exploration and learn such systems / topics from open resources.	IIST Small Satellite	1
9	JPF 44	BE / B.Tech in Mechanical / Aerospace / Mechatronics or equivalent. <b>Desirable:</b> 1) Familiarity with modeling and analysis packages (AutoCAD / Solidworks/ Inventor/Ansys/Abaqus) 2) Basic understanding in Mechatronics / Electronic / Basic electrical systems 3) Knowledge in design and manufacturing related areas	Development of an FDM based single / multijet open source desktop type polymer based rapid prototyping system and allied research	1
10	JPF 45	BE / B.Tech or equivalent in Computer Science and Engineering / Electrical and Electronics Engineering / Electronics and Communication Engineering / Information Technology / Avionics / Physical Sciences / Engineering Physics / Aerospace Engineering/ Geoinformatics / Civil Engineering or in equivalent areas. 1. The work primarily involves simulations and visualization various disaster scenarios using satellite data and other mathematical models 2. The candidate should be interested and willing to learn Virtual Reality and Computer Graphics both	Developing of Virtual reality model for disaster simulation	1

		theory and programming. 3. Candidate should possess very good programming skills and should be ready to learn new algorithms / software packages to implement assigned algorithm.		
11	JPF 46	M.Sc. Physics or related areas. Candidate with experience in laser and interferometer will be preferred.	Laser Speckle for small Deformation Measurement	1
12	JPF 47	BE / B.Tech Avionics/ Applied Electronics and Instrumentation/ Electronics and Communication Engineering/ Instrumentation/ Electronics and Instrumentation Engineering <b>Desirable:</b> Good hands-on experience in analog circuit design, analysis and implementation, sensors, PCB-designing, embedded-system-design skills. Prior work experience in analog electronics/instrumentation/PCB designing/routing.		1
13	JPF 48	BE / B.Tech Avionics/ Electronics and Communication Engineering. <b>Desirable:</b> Good hands-on Experience in embedded systems/FPGA. Prior work experience in digital systems design and PCB layout/routing.	Retarding Potential Analyzer for the observation of Martian Ionosphere.	1
14	JPF 49	BE / B.Tech Engineering Physics/Aerospace/Mechanical Engineering/M.Sc. Physics. <b>Desirable:</b> Experience with simulations using MATLAB, COSMOL or any other equivalent platform, particularly electrostatic simulations, ion trajectory simulations and basic Engineering drawing experience. Prior work experience in plasma diagnostic tools.		1
<b>Project Assistant (PA)</b>				
15	PA 03	Graduate in Sociology with knowledge in Statistics and Computer Science. Post Graduate in Sociology is preferred. <b>Desirable:</b> Previous experience in data handling & analysis and experience as project fellow / project assistant in similar research projects in any academic institute / R & D organisation for a minimum period of one year.	Assessment of the contributions made by IIST alumni in the ISRO Programmes	1

**Age limit:** 35 years as on 14.08.2017 (Age relaxation as per Government of India rules).

**Remuneration per month (Consolidated):**

**Senior Project Fellow**

SPF 29 to SPF 33 – Rs. 22,000/-

**Junior Project Fellow**

JPF 41 to JPF 46 – Rs. 20,000/-

JPF 47 to JPF 49 – Rs. 20,000/- + House Rent Allowance (HRA)

**Project Assistant**

PA 03 – Rs. 15,000/-

**General Conditions/ Instructions:**

- 1) Only Indian Nationals need apply.
- 2) All the degrees such as BE/B.Tech/ME/M.Tech/M.Sc mentioned above should be in FIRST CLASS.
- 3) Tenure of the JPF/SPF/PA will be for a period of One year or co-terminus with the project whichever is earlier. The tenure is extendable on performance and need basis.

- 4) Application received online only will be considered for processing under any circumstances.
- 5) The applicants will not be allowed to make any changes in the profile registration once submitted. Hence utmost care should be taken by the candidates while filling the profile.
- 6) Only short listed candidates will be called for written test/interview, as the case may be, based on merit.
- 7) Candidates shortlisted for written test / interview will be intimated through e-mail id mentioned in their online application.
- 8) Shortlisted candidates belonging to SC/ST/OBC/PWD should produce copies of the relevant certificates issued by the Competent Authority to that effect.
- 9) A 'No Objection Certificate' from the employer concerned is required in respect of those applicants who are employed under Central/State Government/Public Sector Undertakings/ Autonomous Bodies.
- 10) Outstation candidates called for interview will be paid 'to and fro' Second class Railway Fare by the shortest route including reservation / sleeper charges on production of proof of journey such as Railway Tickets / Bus Tickets, etc. If the candidates travel in higher class of accommodation than the one prescribed, only Second class rail fare excluding the reservation charges / sleeper charges will be paid. The applicants are advised to make their own arrangements for their stay at Thiruvananthapuram, at their cost.
- 11) The Institute reserves the right to terminate the appointment at any time before completion of the tenure / project, if it so decides.
- 12) No interim correspondence will be entertained.
- 13) Canvassing in any form will be a disqualification.
- 14) Government strives to have a work force which reflects gender balance and women candidates are encouraged to apply.
- 15) Candidates who are selected for the positions have to join IIST by the specified date.
- 16) Facility for **online submission** of application will be **available from 24.07.2017 (1500hrs onwards) to 14.08.2017(upto1700hrs)**.
- 17) Candidates are advised to refer the IIST website <https://www.iist.ac.in/career/3> for any updates.
- 18) SPF / JPF / PA are not entitled for hostel facility at IIST.

**Advt. No. IIST/Admn/RMT/8 b/2017 dated 23.07.2017**