



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 Staff (Online Application only)

Indian Institute of Space Science and Technology (IIST) invites application for the following Project staff positions to work in the different Research Projects:

Sl. No.	Category No.	Qualification / Skill	Project Title	No. of Positions
Senior Research Fellow (SRF)				
1	SRF-02/2018	BE / B.Tech in Electronics and Communication (or subjects related to communication) and Two years of research experience in FPGA/ DSP/ Embedded Systems based applications or related areas in reputed R&D institution or industry OR M.E / M.Tech in Signal Processing/ Communication Systems/Digital System Design/VLSI Design or related areas with Basic degree should be in BE / B.Tech in Electronics and Communication (or subjects related to communication). M.Tech should have been done through GATE. It is desirable that the candidates should (i) have good Programming Skill (ii) be willing to work in all aspects of design, development and fabrication of IRNSS Navigation receiver (iii) background in Digital Design/VLSI and knowledge in Communication Systems/Designs (iv) have worked on GNSS based receivers like IRNSS, GPS etc. (v) be willing to travel at short notice to anywhere in India for data collection and to the partner institutions (vi) be willing to learn such systems/topics from open resources.	Design and Development of NavIC Receiver	2
Junior Research Fellow (JRF)				
2	JRF-07/2018	BE / B.Tech in Electronics and Electrical Engineering / Electrical Engineering/ Electronics and Communication Engineering / Applied Electronics and Instrumentation Engineering or related disciplines. Desirable:- 1. ME / M.Tech in Power electronics or related areas. 2. Experience in designing power electronic systems.	Retarding Potential Analyzer for the observation of Martian Ionosphere.	1

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Junior Project Fellow (JPF)				
3	JPF-01/2018	BE / B.Tech in Electrical / Electronics Engineering or related areas.	Development & Implementation of diagnostic tools for high thrust electric propulsion system	1
4	JPF-02/2018	BE / B.Tech in Mechanical Engineering or related areas.		1
5	JPF-03/2018	M.Sc Physics or related areas	Configuration study and design finalization of diagnostic probes	1
6	JPF-04/2018	BE / B.Tech in Mechanical Engineering / Aerospace Engineering or related areas.	Hydrodynamic instabilities in Solid Rocket Motors	1
7	JPF-05/2018	BE / B.Tech in Avionics / Applied Electronics & Instrumentation / Electronics & Communication / Instrumentation & Control or related areas. Desirable:- Exposure to Sensors, Circuits, Finite element analysis, PCB development and circuit implementation.	Reluctance-Hall Effect Based Through-shaft Angular Position sensors–Finite Element studies and Development	1
8	JPF-06/2018	BE / B.Tech in Avionics / Electronics & Communication / Electronics & Telecommunication / Electrical / Electrical & Electronics/ Computer Sciences / Information Technology / System Science or related areas. Desirable:- C/C++ Programming, Exposure to Linux Operating System, System Programming.	Development of rapid network stack development tools for internet of things operating systems	1
9	JPF-07/2018	BE / B.Tech in Avionics / Electronics and Communication / Electrical and Electronics or related areas. The candidates should be good with electronics circuit design, multilayer layout design, PCB fabrication and familiar with programming languages C/C++, modelling and analysis software Matlab/ Simulink. The candidates should be willing to work in the subsystems of Nano/small small satellites and learn such systems/topics from open resources. The candidates should have a good academic background. Desirable: Atleast one year experience in R&D industry.	Subsystems for INSPIRE sat 1	1
10	JPF-08/2018	BE / B.Tech in Computer Sciences and Engineering / Electronics and Communication or related areas.The candidates should have a flair for programming languages C/C++, scripting languages like PYTHON etc., modelling and analysis software MATLAB/Simulink, embedded systems development, real time operating systems, software for hardware access layer and firmware development. The candidates should have good understanding of the software life		1

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		<p>cycle development process. The candidates should be willing to work in the design and development of firmwork for subsystems and flight software for small satellites and learn such systems/topics from open resources. The candidates should have a good academic background.</p> <p>Desirable: Atleast one year experience in R&D industry.</p>		
11	JPF-9/2018	<p>BE / B.Tech in Mechatronics / Mechanical Engineering / Aerospace Engineering / Electronics or related areas.</p> <p>The candiadtes should be familiar with modelling and analysis packages (Autocad/Inventor/Solid Works/ ANSYS/ Abaqus, MATLAB/Simulink etc.).</p> <p>The candidate shall have basic understanding in Mechatronics/Electornics Systems (Microprocessors/Basic Electrical Systems)/ Control Systems. The candidate shall have knwoledge in manufacturing related activities.</p> <p>The candidates should be willing to work on design, facbrication for Nano Satellite Structures and Micro propulsion system and learn such systems/topics from open resources. The candidates should have a good academic background.</p> <p>Desirable: Atleast one year experience in R&D industry.</p>	Mirror Satellite for Autonomous Assembly of Reconfigurable Space Telescope.	1
Senior Project Fellow (SPF)				
12	SPF-04/2018	<p>ME / M.Tech / MS (by research) in Thermal Sciences / Propulsion or related areas.</p> <p>Basic degree should be in BE / B.Tech in Mechanical Engineering / Aerospace Engineering / Aeronautical Engineering or related areas.</p> <p>Desirable: Programing skills and experience in commercial packages dealing with computational fluid dynamics (CFD).</p>	Development of an in-house CFD code for the performance prediction of cryogenic and semi-cryogenic engines.	1
13	SPF-05/2018	<p>ME / M.Tech / MS degree in Image Processing / Signal Processing / Computer Vision / Machine Learning / Applied Maths or related areas.</p>	Development and Analysis of Image Fusion Techniques for Satellite Images	1
14	SPF-06/2018	<p>ME / M.Tech / MS in Mechanical / Aerospace Engineering or related areas</p> <p>Desirable: Experience in performing thermal engineering, basic simulations of thermal engineering problems using commercial CFD software. Exposure to optical and laser diagnostics experiments like Schlieren and Mie Scattering visualisation. Exposure to simulation of cold / reacting flow using softwares such as FLUENT / CFD++/OPENFOAM</p>	Experimental investigation of laminar burning velocity of pre-mixed Isrosene / air / Oxygen mixtures using freely expanding spherical flames.	1

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15	SPF-07/2018	ME / M.Tech / MS or equivalent in Mechanical/ Aerospace / Civil / Materials or related areas. Should have studied the following two subjects or equivalent at PG/UG level a) Mechanics of Composite Materials b) Fracture Mechanics Desirable:- Experience in Experimental Solid Mechanics.	Studies on Crack propagation in composites by Micro Raman spectroscopy	1
16	SPF-08/2018	ME/ M.Tech in Optics or related areas. Desirable:- 1. One year projects / research in experimental optics. 2. Exposure in interferometry, image processing techniques.	Optical interferometry based sensor for structural displacement/ deformation measurement of materials.	1
17	SPF-09/2018	BE / B.Tech in Avionics / Electronics and Communication / Electrical and Electronics or related areas. Atleast two years working experience in the area of spacecraft systems in reputed R&D centres. The candidates should be good with electronics circuit design, multilayer layout design, PCB fabrication and familiar with programming languages C/C++, modelling and analysis software Matlab/ Simulink and should have a good academic background.	Mirror Satellite for Autonomous Assembly of Reconfigurable Space Telescope.	1
18	SPF-10/2018	ME / M.Tech in Solid State Technology/ Nanotechnology or related areas. Desirable: Hands on experience in material characterisation techniques. Experience with material synthesis and characterisation	Development of surface discharge sparkplugs	1
19	SPF-11/2018	ME / M.Tech in Optical Engineering /Laser / Aerospace Engineering/ Aeronautical Engineering / Applied Electronics / Instrumentation / Mechanical Engineering or related areas. Desired: Prior hands-on experience in ignition systems. Exposure to experiments with high power lasers	Development of Laser ignition systems.	1

Age limit: 35 years as on 16.07.2018(Age relaxation as per Government of India rules).

Remuneration per month (Consolidated):

Catogory Code	Remuneration
SRF-02/2018	Rs. 28,000/- + HRA
JRF-07/2018	Rs. 20,000/- + HRA
JPF-01/2018 to 9/2018	Rs. 20,000/-
SPF-04/2018 to 11/2018	Rs. 22,000/-

General Conditions/ Instructions:

- 1) Only Indian Nationals need apply.
- 2) All degrees mentioned above should be in FIRST CLASS. Candidates should possess the required qualification as on the last date for receipt of application.
- 3) Candidates are advised to upload the relevant mark sheets and the Degree/ PG certificate at the time of registering the online application.
- 4) The tenure of the position is for a period of One year or co-terminus with the project whichever is earlier. The tenure is extendable on performance and need basis subject to availability of funds.
- 5) The Institute reserves the right to terminate the appointment at any time before completion of the tenure / project, if it so decides.
- 6) Application received online only will be considered for processing under any circumstances.
- 7) 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.
- 8) Facility for **online submission** of application will be **available from 25.06.2018 (1600hrs onwards) to 16.07.2018 (upto1700hrs)**.
- 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) Only short listed candidates will be called for written test/interview, as the case may be, based on merit.
- 11) Candidates shortlisted for written test / interview will be intimated through e-mail id mentioned in their online application.
- 12) Shortlisted candidates belonging to SC/ST/OBC/PWD should produce copies of the relevant certificates issued by the Competent Authority to that effect.
- 13) 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.
- 14) No interim correspondence will be entertained.
- 15) Canvassing in any form will be a disqualification.
- 16) Government strives to have a work force which reflects gender balance and women candidates are encouraged to apply.
- 17) Candidates who are selected for the positions have to join IIST by the specified date.
- 18) Project Fellows are not entitled for hostel facility at IIST.
- 19) Candidates are advised to refer the IIST website <https://www.iist.ac.in/career/3> for any updates.