



**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE
INDIAN SPACE RESEARCH ORGANISATION
ISRO SATELLITE CENTRE
BANGALORE**

Advt. NO.ISAC:01:2018

January 13, 2018

**Applications are invited for engaging / offering Junior Research Fellow at ISRO Satellite Centre Bengaluru,
with Post Graduate Degree in Engineering/Post Graduate in Science.**

ISRO Satellite Centre (ISAC) is the lead centre of ISRO for satellite technology. ISAC is in the forefront of spacecraft technology towards conceptualization, design, development, fabrication, testing, launch and in-orbit management of spacecraft. As a sequel to its mandate of spacecraft development, the centre is engaged in development of cutting edge technologies of relevance to its activities and infrastructures set-up for design, development, fabrication and testing of spacecraft. Over a period of four decades, ISAC has successfully established Indian National Satellite (INSAT) system, which is one of the largest domestic communication satellite systems in Asia-Pacific region and Indian Remote Sensing (IRS) system which is one of the largest constellations of earth observation satellites in operation. NAVigation with Indian Constellation (NAVIC) an independent Indian Satellite based regional positioning system with a constellation of seven satellites for critical national applications will be operational shortly. Mars Orbiter Mission, Chandrayaan- I, Astrosat are some of the scientific and exploration missions which have garnered the attention internationally. The future missions being undertaken by ISAC is highly challenging and provides opportunity to undertake development of innovative technologies and establish the advanced infrastructure needed for space exploration and beyond.

Position No.	No. Of Vacancy(ies)	Essential minimum Qualification	Area of Work/ Job Specification	Mode of Selection
JUNIOR RESEARCH FELLOW				
JRF01	02	M.E / M.Tech / M.Sc (Engg.) or equivalent post graduate degree in Applied Optics/ Optics/ Optical Engineering / Laser & Electro-Optical Engineering / Photonics. The candidates who are qualified in NET or NET equivalent examinations are only eligible to apply.	<ul style="list-style-type: none"> Geometrical / Physical optics, optical design, opto-mechanical design, Fourier optics, optical fabrication and testing Area of optical / opto-mechanical design Fabrication and testing of high precision optics Development of telescope / camera optics assemblies meant for space applications. 	Interview
JRF02	03	M.E / M.Tech/ M.Sc (Engg.) or equivalent post graduate degree in Opto Electronics/ Optics & Opto Electronics/ Opto Electronics & Optical Communication. The candidates who are qualified in NET or NET equivalent examinations are only eligible to apply.	<ul style="list-style-type: none"> Design, development of electro – optical devices and their characterization. Optoelectronic devices, MOEMS and infrared detectors. Development of THz detectors for space applications. MOEMS sensors for micro-satellites. Development of un-cooled IR detectors for passive and active detection systems. 	Interview
JRF03	01	M.E / M.Tech / M.sc (Engg.) or equivalent post graduate degree in Digital Electronics / Micro Electronics / Signal Processing / VLSI / Embedded systems / VLSI and Embedded systems. The candidates who are qualified in NET or NET equivalent examinations are only eligible to apply.	<ul style="list-style-type: none"> Design, development and testing of digital circuits FPGA & ASIC development and testing Analog and Mixed-signal ASIC Design and Testing. 	Interview
JRF04	01	M.E / M.Tech / M.sc (Engg.) or equivalent post graduate degree in Thermal Engineering / Thermal Science & Engineering / Thermal Science & Energy Systems / Heat Transfer in Energy Systems. The candidates who are qualified in NET or NET equivalent examinations are only eligible to apply.	PCB Thermal design / analysis with reference to: <ul style="list-style-type: none"> Board level modeling Trace level modeling Package level modeling Algorithm coding / FEA Optimization & Parametric studies Virtual thermography 	Interview
JRF05	03	M.E / M.Tech / M.Sc (Engg.) or equivalent post graduate degree in Computer Science / Computer Engineering / Computer science & Engineering / Computer Networks/ Distributed Computing / Information Technology. The candidates who are qualified in NET or NET equivalent examinations are only eligible to apply.	<ul style="list-style-type: none"> LINUX and other operating systems Database management and administration Object oriented techniques High Performance Computing Systems Skills required in C++, QT, JAVA, MySQL / SQL Server Software Testing and Documentation 	Interview
JRF06	02	M.E / M.Tech / M.Sc (Engg.) or equivalent post graduate degree in Materials Engineering / Materials science/ Metallurgical Engineering / Nano Technology. The candidates who are qualified in NET or NET equivalent examinations are only eligible to apply.	<ul style="list-style-type: none"> Thin film functional coatings / PVD and CVD methods / materials characterization and analysis. 	Interview
JRF07	04	M.Sc or equivalent post graduate degree in Physics / Applied Physics. With specialization / subject in Solid State Physics or Solid State Electronics. The candidates who are qualified in NET or NET equivalent examinations are only eligible to apply.	<ul style="list-style-type: none"> Thin films / detectors systems design and development. Spacecraft solar panel/ Battery development which includes design, fabrication, testing of photovoltaic solar panels/ batteries Process Development of solar panels/ Batteries Knowledge in Software development is desirable. 	Interview
JRF08	01	M.Sc or equivalent post graduate degree in Physics. The candidates who are qualified in NET or NET equivalent examinations are only eligible to apply.	<ul style="list-style-type: none"> X ray instrumentation. Planetary X ray spectroscopy. Astrophysical data analysis. 	Interview
JRF09	01	M.Sc or equivalent post graduate degree in Physics. The candidates who are qualified in NET or NET equivalent examinations are only eligible to apply.	<ul style="list-style-type: none"> Develop suitable models for assessing contamination on spacecraft. Quantitatively assess contamination using different instrumental methods. Assess the impact of contamination on optical payloads through modeling Identify the potential sources of contamination from ground as well as spacecraft. Evaluate and test materials. 	Interview
JRF10	02	M.Sc or equivalent post graduate degree in Chemistry. The candidates who are qualified in NET or NET equivalent examinations are only eligible to apply.	Electrochemical coatings / Electroplating / conversion coatings / materials characterization and analysis.	Interview

Educational Qualification:

For Position No 1 To 6: M.E./M.Tech/ M.Sc or equivalent post graduate degree in First Class with an aggregate minimum of 60% or CGPA/CPI grading of 6.5 on a 10 point scale with pre-eligibility qualification of B.E/B.Tech/B.Sc (Engg) or equivalent qualification with an aggregate minimum of 65% (average of all Semester) or CGPA/CPI grading of 6.84 on a 10 point scale. The candidates who are qualified in NET or NET equivalent examinations are only eligible to apply.

For Position No 7 To 10: M.Sc or equivalent Degree in First Class with an aggregate minimum of 65% average of all Semesters or 6.5 CGPA/CPI on a 10 point scale. The candidates who are qualified in NET or NET equivalent examinations are only eligible to apply.

NET/NET Equivalent qualifications:

Any national level examinations conducted by the Central Government departments / agencies for admission to Ph.D. programme are considered equivalent to NET. The following are the list of examinations, which can be equated to NET for the above positions:

- CSIR-UGC National Eligibility Test including NET-Lecturership
- Graduate Aptitude Test in Engineering (GATE) conducted by MHRD
- Joint Admission Test (JAM) conducted by MHRD
- Joint Entrance Screening Test (JEST).

Age Limit:

Junior Research Fellows: Maximum Age 28 years as on 02.02.2018 on the closing date of receipt of online applications but relaxable by 5 years in case of SC / ST and 3 years in case of OBC candidates. Persons with Disabilities are eligible for age relaxation as per Government of India orders. Age relaxations as per Government of India orders are applicable to Ex-Servicemen, Persons with Disabilities (PWD), Widows, Divorced Women and Women judicially separated from their husbands and who are not remarried.

Fellowship & Stipend for JRFs:

The Fellowship will be initially for TWO YEARS. ISAC will review the performance after two years and decide whether the Fellowship should be continued for the third year. JRF with aptitude to pursue research in the respective areas will be encouraged to pursue Ph.D with an external university registration. Fellowship stipend will be Rs.25,000/- and HRA at the prescribed rates in force at the place of posting will be paid and Medical benefits for self only will be allowed as per extant rules. The fellowship amount shall be taken as Basic pay for this purpose. JRFs are eligible only for casual leave. Maternity leave as per Govt. Of India instructions would be available to all female JRFs. Apart from this, the candidates selected will not be entitled to any benefits or concessions admissible to regular employees. In addition, JRFs are eligible to get free transport, subsidised canteen facilities.

Emoluments & Other benefits for the above post:

Position Name	Gross Emoluments *
JRF	Rs.25000/- per month. In addition, HRA at the prescribed rates in force at the place of posting will be paid.

Selection Process:

The qualification prescribed is the minimum requirement and possession of the same does not automatically make the candidates eligible to be called for interview. There will be an initial screening based on the academic performance and other parameters given in the on-line applications and only those who screened-in, will be called for interview. The call letters for the interview to the short-listed candidates will be sent only by e-mail. The result of the interview will be announced at the ISRO website subsequently.

Note: The on-line application has to be invariably followed-up with a 'No Objection Certificate (NOC)' from the employer concerned by those who are already in employments under Central/State Government, Public Sector Undertaking or Autonomous Body, duly indicating the name, the post for which applied/Post No. and Registration No. on the reverse of the NOC.

How to apply:

* The application for on-line registration will be hosted in the ISRO web-site www.isro.gov.in during the period from 13.01.2018 to 02.02.2018. Candidates may visit our website to register their applications on-line between 13.01.2018 and 02.02.2018. Applications will be received through on-line only. Upon on-line registration, applicants will be provided with an on-line Registration Number, which should be carefully preserved for future reference. E-mail ID of the applicant will have to be provided in the application correctly and compulsorily (Hall tickets will be sent by email only).

Note: No other mode of receiving applications is entertained for the positions and all further communications will be made to the applicants through mail/ISRO website only. For detailed advertisement and submission of applications, please visit ISRO website <http://www.isro.gov.in>