

**SELECTION OF JUNIOR RESEARCH FELLOWS****NO. OF FELLOWSHIPS: 40 (Indicative)**

Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam is a premier research institute dedicated to the development of robust fast reactor technology based on intense multi-disciplinary research. IGCAR is empowering young, talented and motivated students to contribute to path-breaking discoveries in frontier areas of engineering/scientific research and cutting-edge technologies by offering **Junior Research Fellowships** in the areas of physical, chemical and engineering sciences.

At IGCAR, we believe in 'EXCELLENCE WITH RELEVANCE'.

Our strengths are the highly stimulating and scholarly environment, knowledge and motivating faculty, excellent library and state-of-the-art facilities.

Applications are invited from interested students for the award of **Junior Research Fellowships** of the Department of Atomic Energy tenable at the Centre. The selected candidates will be eligible to register for Ph.D. (those who join with M.Sc. or M.Tech.) / Integrated Ph.D. (those who join with B.E./B.Tech./B.Sc. Engg./B.Sc. [Tech.]) in **Homi Bhabha National Institute** (HBNI, a deemed to be university of Department of Atomic Energy) or University of Madras or other reputed universities.

CALENDAR WITH IMPORTANT DEADLINES

Particulars	Science Disciplines (including Nuclear & Atmospheric Science)	Engineering Disciplines
Last date for receipt of applications	06-06-2016	
Written Test	12-06-2016	No Written Exam
Interview (tentative date)	04-11 July, 2016	

1. AREAS OF RESEARCH PROJECTS:

Physical Sciences	Investigations on behaviour of materials at low temperatures, high pressures and magnetic fields to explore novel properties of materials, Investigations of defect properties of solids using ion beams and positrons, Computer simulations of material properties; Studies on surfaces and nanomaterials, and exploration of materials for sensors and detectors. Investigating phase transitions and dynamics in soft matter
Chemical Sciences	Chemical thermodynamics, Solid state and high temperature chemistry, Electrochemistry, Spectroscopy and laser, Radiochemistry, Advanced separation techniques, Actinide Chemistry, Trace / ultra-trace analytical techniques synthesis and characterization of nano-ceramics and Chemical sensors
Engineering Sciences	Robotics and Development of Intelligent machines, Thermal Hydraulics and Structural Mechanics, Design of critical components, Modeling studies, Safety Analysis, Wireless networking, Parallel computing, Embedded and Simulator systems, Non-destructive Evaluation and Reliability, Development of new engineering materials, Experimental and computational studies in (i) novel processing and fabrication methods, (ii) mechanical behaviour, (iii) damage tolerance and crack growth and (iv) structure and properties

The Centre also encourages high quality inter-disciplinary research in areas relevant to its programmes

2. Age Limit:

The candidate must be an Indian national. The candidate should be less than 28 years of age as on 07-06-2016. A relaxation of up to 3 years in case of Other Backward Class applicants, 5 years in age can be given in case of Scheduled Caste and Scheduled Tribe applicants and 10 years in case of Physically Challenged applicants.

NOTE: ONLY SSC/MATRICULATION/HSC CERTIFICATE OR BIRTH CERTIFICATE WILL BE ACCEPTED AS PROOF OF DATE OF BIRTH, NO SUBSEQUENT REQUEST FOR CHANGE SHALL BE ENTERTAINED.

3. QUALIFICATIONS:

For all the categories listed below:

1. Candidates should have consistently good academic record and should have secured minimum of 60% aggregate at graduation and post graduation levels from a recognized University
2. Candidates those who have completed or pursuing (in final year/semester) the qualifying degrees are eligible to apply
3. Candidates in the final year/semester should have scored marks above 60% aggregate until the previous semester/year and minimum aggregate of 60% in B.Sc./B.E./B.Tech. level [in the case of M.Sc./ M.Tech. candidates]. In case such candidates eventually join the Centre, they shall have acquired aggregate marks of 60% in the qualifying degrees. Relevant certificates to this effect should be submitted at the time of joining the Centre.

Category – A:

Masters in Science/ Integrated M. Sc is the eligible qualification for the following subjects

S. No	Main Subject	Additional Requirements
1	Physics	Mathematics/Numerical Methods must be one of the subject at M.Sc. level <u>and</u> Chemistry as ancillary at B.Sc. Level
2	Materials Science/ Materials Science and Engineering	Physics, Mathematics and Chemistry at B. Sc. Level <u>or</u> B.Sc. in Materials Science
3	Chemistry * (General, Applied, Organic, Inorganic, Physical, Analytical and Industrial)	Physics and Mathematics as ancillary subjects at B.Sc. Level
4	Applied Physics	
5	Applied Electronics	
6	Medical Physics/ Radiation Physics	Physics, Mathematics and Chemistry as ancillary subjects at B.Sc. Level

*** Candidates with M.Sc/ Integrated M. Sc in Polymer, Medicinal, Pharmaceutical, Bio chemistry are not eligible to apply**

Category – B:

a) M.Sc/ M.Tech/ M.E in Atmospheric Science/Meteorology

M.Sc in Atmospheric Science/ Meteorology and Physics, Mathematics as one of the subjects at B.Sc Level

or

M.Tech / M.E in Atmospheric Science

b) M.Tech / M.E in Nuclear Engineering / Nuclear Science & Technology

Category – C:

B.Tech./B.Tech./B.Sc. Engg./ B.Sc. [Tech.]. in any one of the following disciplines with a valid GATE score

- Metallurgical Engineering
- Mechanical Engineering
- Materials Science & Engineering
- Materials Technology
- Engineering Physics

Category – D:

Candidates with M.Tech

- (i) Admission to M.Tech on the basis of GATE score.
- (ii) The GATE Score should be in any one of the disciplines mentioned in Category C
- (iii) Should have their B.E./B.Tech./B.Sc. Engg./ B.Sc. [Tech.] degree in any one of the discipline listed in **Category C**

Candidates with the following qualifications are not eligible to apply

- (i) Bachelors degree in Aerospace, Automobile, Industrial Production, Reliability, Ceramics, Architecture, Geology, Mining, Bio-Medical Electronics / Instruments, Communication, Information Technology, Dyes & Dye Intermediates, Electrochemical, Energy Systems, Oils & Fats, Paints & Varnishes, Petrochemicals, Plastics, Paper, Sugar Technology, Textiles, Mechatronics need not apply
- (ii) Master of Computer Applications, M.Sc. in Computer Science.
- (iii) M.Sc in Polymer, Medicinal, Pharmaceutical, Bio chemistry

At the time of application candidates should clearly indicate the details qualifying examinations (GATE/UGC-CSIR-NET/JEST) listed as above for consideration of application and submit the proofs at the time of interviews

4. SELECTION PROCEDURE:

Applications will be scrutinized and suitability of candidates will be decided on the basis of their academic performance.

Suitable candidates under the **Category A & B** will be selected based on **WRITTEN EXAMINATION and INTERVIEW**. Written Examination will be held at **Chennai Centre** only.

A summary scrutiny of the application would be made for short-listing of candidates for the written examination and detailed scrutiny of the eligibility of the candidate would be done at the time of interview. Candidate fulfilling the eligibility criteria can plan to attend the written examination.

Candidates from **Category A, satisfying any of the following** conditions:

- (a)** With valid UGC-CSIR-NET Fellowship (SLET/Lecturership is not eligible)
- (b)** With valid JEST score of 90 percentile and above
- (c)** With a valid GATE score after Master's degree

are exempted from written examination.

There will be no written examination for all the candidates in **Category C & D** and candidates would be shortlisted based on GATE score.

5. SELECTION INTERVIEWS:

The Selection Interview for all short listed candidates will be conducted at **KALPAKKAM**. The recommendation / decision of the Selection Committee will be final and binding.

How to apply:

- i) Candidates should apply only through online in our website www.igcar.gov.in under the tab "Recruitment". The relevant link for submitting the application through online will be made available from 18-05-2016 at 10.30 hrs and will be closed on 06-06-2016 at 17.00 hrs.
- ii) Applications will be accepted online only. Before filling application online, candidates should keep ready all the required and necessary documents / certificates. Candidates should also keep ready their passport size photograph in JPEG format with size not exceeding 200 KB and their signature in JPEG format with size not exceeding 50 KB. Online application form should be filled with all the relevant details. Photograph and signature should be uploaded in the application form.
- iii) A valid e-mail ID, Mobile Number, Passport size photograph in JPEG format and Signature in JPEG in requisite size is mandatory for registration and email ID should be kept active till the declaration of results. Admit Card / Hall Ticket will be sent to respective e-mail ID.
- iv) All the particulars mentioned in the online application including Name of the Candidate, Position Applied, Communal Category, Educational qualification, Date of birth, Address, e-mail ID, etc. will be considered as final and no modifications will be allowed after the final submission of the application. Candidates are requested to fill in the online application form with the utmost care as no correspondence regarding change of details will be entertained.
- v) Only those candidates who are shortlisted for interview will be required to submit Application form along with self-attested copies of certificates at the time of interview and also produce the original certificates for verification. Hence, candidates are advised to take the print out of the application form and preserve it for submission at the time of Interview.

Candidates will not be allowed to appear for the Written Examination if they fail to bring the hall ticket and a valid photo identity card (such as Voter ID, Driving License, Aadhaar Card, Passport, College ID) in original at the time of Written Examination.

Persons working under the Central/State Govt./Public Sector Undertakings should submit "NO OBJECTION CERTIFICATE" at the time of interview.

The candidate is responsible for the correctness of the information provided in the application. If it is found at later date that any information given into application is incorrect/false the candidature is liable to be cancelled.

6. GENERAL INFORMATION:

The list of candidates selected for the award of Junior Research Fellowship will be displayed on the IGCAR website. The selected candidates will also be informed by post. The final induction of the selected candidates as JRFs will be subject to production of all necessary documents in original (Proof of Date of Birth/Caste certificate/ physically challenged certificate if applicable, B.Sc./M.Sc./MLIS/ B.E./B.Tech./ M.E./M.Tech. degree and Marks sheets) on the dates intimated to the candidates by the Department.

The number of fellowships indicated in this advertisement is approximate and may vary as per the requirement at the time of final selection. The Centre reserves the right not to fill up the fellowships if it so desires. IGCAR reserves the right to screen and call only such candidate as are found prima – facie suitable for being considered by the selection committee. Thus, just fulfilling the prescribed conditions should not

entitle one to be called for interview. The fellowship shall not confer any claim or right for regular employment in the Centre or any Unit of Department of Atomic Energy. Opportunity for meritorious candidates exists for the position of Visiting Scientist under KSKRA scheme.

Candidates who are NOT meeting the mentioned qualification NEED NOT apply

- The period of service rendered as research fellow will not be counted in any post of DAE / Other Government Department
- Admission shall not be claimed by any candidate as a matter of right. The admission shall be entirely at the discretion of the selection committee, which may refuse to admit any candidate without assigning any reason thereof.
- No correspondence whatsoever form will be entertained from candidates regarding reason for not being called for interview/out come of interview

Medical

The selected candidates are eligible to join the Contributory Health Service Scheme of this Centre as applicable.

Accommodation

The Selected candidates will be provided with subsidized bachelor Hostel Accommodation during the tenure.

FELLOWSHIP AND TENURE

The selected candidates will be initially taken as **Junior Research Fellows (JRF)** and will be paid a stipend of **Rs. 25,000/- per month**. The fellowship will be provided initially for a period of **two years**. Continuation of the fellowship is subject to satisfactory performance and review at the end of each year. On satisfactory performance, the tenure of Fellowship will be further extended and upgraded to **Senior Research Fellowship (SRF)** from the **third year** onwards with a stipend of **Rs.28,000/- per month (consolidated)**. The total period of the fellowship shall in no case exceed **five years**. They are entitled for contingency grant including book allowance of **Rs.32,000/- per year**.

Candidates are advised to visit the website <http://www.igcar.gov.in/> periodically for further information and updates in this regard.

CANVASSING IN ANY FORM WILL BE A DISQUALIFICATION.

RECORD OF THE NON-SELECTED CANDIDATES SHALL NOT BE PRESERVED BEYOND 6 MONTHS FROM THE DATE OF PUBLICATION OF SELECT LIST.