



ADVERTISEMENT NO. 01/2017

## 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. Among the selected candidates, those who join with M.Sc./M.Tech. will be eligible to register for Ph.D. Those who join with B.E./B.Tech./B.Sc. Engg./B.Sc. [Tech.] will be considered for integrated Ph.D. with an option to have single degree(Integrated Ph.D. only) or a dual degree(M.Sc.(Engg.)+ integrated Ph.D.). Candidates can register 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 Science)	Engineering Disciplines
Last date for receipt of applications	01-05-2017	
Written Test	14-05-2017	No Written Exam
Interview (tentative date)	05-06-2017 to 09-06-2017	

### 1. AREAS OF RESEARCH PROJECTS:

<b>Physical Sciences</b>	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
<b>Chemical Sciences</b>	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
<b>Engineering Sciences</b>	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 last date for receipt of application. 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/MATRICATION/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:**

- i. 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.
- ii. Candidates those who have completed or pursuing (in final year/semester) the qualifying degrees are eligible to apply
- iii. 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. Wherever the results are declared as CGPA/GPA, it may be converted to percentage and entered. (The formula prescribed by the institute for conversion to be indicated at the time of verification)

### **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 <b><i>and</i></b> Chemistry as ancillary at B.Sc. Level
2	Materials Science/ Materials Science and Engineering	Physics, Mathematics and Chemistry at B. Sc. Level <b><i>or</i></b> 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

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

### **Category – B:**

**M.Tech / M.E in Nuclear Engineering / Nuclear Science & Technology**

### **Category – C:**

**B.E./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. should be on the basis of GATE score (A certificate from institution to the effect that admission to M.Tech. was based on GATE score should be submitted at the time of interview)
- 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 disciplines 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
- 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 on 14-05-2017 at **Bhubaneswar, Chennai, Hyderabad, Kochi, Kolkata, and Visakhapatnam Centers**. Examination Centers in places other than Chennai is subject to sufficient number of candidates choosing that particular center.

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 are exempted from written examination:

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

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** during second or third week of June 2017. The recommendation / decision of the Selection Committee will be final and binding.

## 6. GENERAL INSTRUCTIONS

- i. Before applying, the candidate should ensure that he/she fulfills all the eligibility conditions mentioned in the advertisement. Candidates should ensure that they fill in the correct information. Furnishing of incomplete, false or misleading information shall render the application liable to be rejected. The candidate would be admitted to various stages of the recruitment process based on the information furnished by the candidate in his/her application. Only a summary scrutiny of the application would be made before the final stage of the recruitment process and detailed scrutiny of the eligibility of the candidate would be done only at the final stage of the recruitment process. As such, the candidature of the applicant shall remain provisional till detailed scrutiny is undertaken and the candidate is found eligible in all respect. IGCAR would be at liberty to reject any application at any stage of the recruitment process if the candidate is found ineligible for the post or if it comes to notice that the candidate has furnished false information. The decision of IGCAR shall be final in deciding the eligibility of the candidate. The mere fact that a call letter has been issued to the candidate and allowed to appear in the written exam/skill test will not imply that his/her candidature has been finally cleared or that entries made by the candidate in his/her application have been accepted as true and correct.
- ii. Age, qualification, experience, community status, creamy layer status will be reckoned as on the closing date for submission of application online.
- iii. Those who are in employment under any Central/State Govt./Public Sector Undertakings/Corporations/ Local Govt. etc. should submit a No Objection Certificate from the employer at the time of verification of the documents.
- iv. Candidates are required to take a printout of the application form generated by the system.
- v. Candidates need not submit printout of their online applications or any other document either by post or by hand. They will be required to bring the printouts of their online applications at the final stage of recruitment process if they reach that stage.
- vi. SC/ST/OBC (clearly indicating Creamy Layer status) certificate should be as per the format prescribed for employment in Government of India which are available in IGCAR website.
- vii. The original certificates / documents of the candidates will be verified at the final stage of the recruitment process. The shortlisted candidates must bring all original certificates of educational qualifications, experience, date of birth, caste certificate in the prescribed format, disability certificate in respect of PWD candidates, No Objection Certificate if in regular employment under any Central/State Govt./Public Sector Undertakings/Corporations/Local Govt. etc.
- viii. 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.
- ix. 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.

- x. Candidates who are NOT meeting the mentioned qualification NEED NOT apply
- xi. The period of service rendered as research fellow will not be counted in any post of DAE / Other Government Department
- xii. 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.
- xiii. No correspondence whatsoever form will be entertained from candidates regarding reason for not being called for interview/out come of interview

## 7. MEDICAL

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

## 8. ACCOMMODATION

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

## 9. 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.**

## 10. CANCELLATION OF THE CANDIDATURE

Candidate is cautioned not to furnish any incomplete, false or misleading information or submit any document which is defective, forged or fabricated or otherwise not admissible or claim fraudulently SC/ST/OBC/Person with Disability/Ex-Serviceman status etc. or resort to any sort of malpractice during the selection process. Notwithstanding verification of original documents during various stages of the selection process, if any such case is detected at any stage of the selection process or later on, this Centre reserves the right to withdraw/cancel candidature or selection apart from taking other appropriate legal action.

## 11. HOW TO APPLY ONLINE:

- i. Facility for submission of online application will be available from 18-04-2017 at 10:00 am to 01-05-2017 05:00 pm on website of IGCAR i.e. ***www.igcar.gov.in*** under the tab "Recruitment".
- ii. Applications will be accepted only through online mode. Only one application should be submitted for one post. Candidates should submit separate application for each post, if they intend to apply for more than one post.
- iii. Candidate should read the instructions in the advertisement and online application form carefully before making any entry or selecting any option.
- iv. Before filling application form, candidates should keep ready the necessary documents / certificates required. Candidate is required to fill up personal details and details of post applied for etc. and upload recently taken front facing passport size photograph in JPEG format with size not exceeding 50 KB and signature in JPEG format with size not exceeding 20 KB. Photograph not in conformity with the specification shall render the application liable to be rejected. While filling up the online application form candidates should ensure that all the required details are entered.

- v. A valid e-mail ID and Mobile Number is mandatory for submitting application online and email ID should be kept active till the declaration of results. IGCAR will send call letter for Written Examination/Skill Test/Trade Test to the registered / given e-mail ID or candidates may be required to download from the website of IGCAR. No correspondence will be sent through post/courier.
- vi. The candidate must ensure that their photo and signature is clearly visible in preview at the time of filling application in online mode. If photo / signature displayed is small or not visible in preview on website, that means photo / signature is not as per the required format and in that case the application will be rejected. Therefore candidates must ensure that photo and signature are clearly visible.
- vii. Before clicking the submit button, the candidate is advised to check that all the details filled in are correct. Candidate may also ensure that name, date of birth, etc. are entered correctly in the application form as per Secondary School Certificate (SSC). Any incorrect information may disqualify candidature. After final submission of application no request for change / correction in any of the information in the application form shall be entertained under any circumstances.

***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.***

**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.***