

THE INSTITUTE OF MATHEMATICAL SCIENCES

(An Autonomous Institution, under Dept.of Atomic Energy, Govt.of India)

CIT CAMPUS,THARAMANI, CHENNAI 600 113.

Advt No./07- R/IMSc 2012

10/01/12

The Institute of Mathematical Sciences (IMSc), Chennai is a National Institute of higher learning which fosters high quality fundamental research in frontier disciplines of Mathematical Sciences. Applications are invited for filling up of the following temporary positions from the eligible candidates who fulfill requisite qualifications/specifications mentioned therein. The positions are proposed to be filled purely on contract basis under ongoing plan projects of the Institute initially for a period of one year and may be continued further. IMSc is home to a growing community of computational scientists working on problems in computational biology, complex systems and other interdisciplinary fields.

Sl. No	Name of the Project	Position and Code No.	No. of Positions	Selection Mode	Minimal Qualifications	Consolidated Salary
1	Project of Inter-disciplinary Science and Modelling (PRISM)	Project Assistant – (PA 1 PA -2)	2	Written test followed by interview	Minimum qualification are a BE/B.Tech/M.Sc from a reputed institution, and good computational skills, in addition to the specific requirements described below.	Rs. 16,000/- p.m. + HRA @ 30% on Consolidated Salary.
2		Project Assistant - (PA - 3)	1	Written Test followed by Interview	Minimum qualifications are a M.Sc/M.Tech/MS Degree in Computer Science from a reputed institution, and good computational skills,	Rs. 16,000/- p.m. + HRA @ 30% on Consolidated Salary
3	IMSc Complex Systems	Research Associate (RA)	1	Direct Interview	Minimum qualification for Research Associate - 2A is a PhD from a reputed institution, and good computational skills. Candidates who have submitted their thesis but have not yet been awarded the PhD degree will also be considered.	The salary will be as per the IMSc PDF norms: Rs.21,000/Rs.22,000 /Rs. 23,000/Rs.24,000 p.m. + HRA @ 30% for PhD thesis submitted/degree awarded/+1 years PDF experience/+2 years PDF experience.
4	DBT Project	Senior Research Fellow - (SRF)	1	Direct Interview	Minimum qualification is a BE/B.Tech/M.Sc from a reputed institution and 2 years research experience after completing their BE/BTEch/MSc degree.	Rs. 23,000 per month Nett.

SPECIFIC REQUIREMENTS FOR EACH POSITION:

POSITION NO. (PA - 1)

The selected candidate will work on a project in collaboration with the Ecology, Behaviour and Conservation Group of the National Institute of Advanced Studies (NIAS), Bangalore, on theoretical approaches to understand the network of social interactions in nonhuman primates. This involves (i) using complex network techniques to reconstruct primate social networks from field-observation data, and (ii) developing agent-based models of "strategy"-following individuals to reproduce the observed features of the empirical networks. Such a study will show how primate groups work as a cohesive society, and also shed light on the formation of complex societies with hierarchical organization. The candidate should necessarily have a background in quantitative/mathematical sciences or engineering, have some experience in using analytical and computational techniques, and have a strong interest in biological systems. Knowledge of MATLAB or equivalent scientific software is desirable but not essential.

POSITION NO. (PA -2)

The selected candidate will work on computer modeling of the dynamics of the heart. In particular, the project will focus on investigating the genesis of cardiac arrhythmias (such as ventricular tachycardia, fibrillation etc.), the role of inhomogeneities in the evolution of cardiac dynamics and on devising improved methods for treatment of arrhythmias using electrical shocks and/or pharmaceutical drugs. The candidate should necessarily have a good background either in physical/mathematical sciences or engineering or in biology, have some experience in using analytical & computational techniques, and have a strong interest in biological systems. Knowledge of MATLAB or equivalent scientific software is desirable but not essential.

POSITION NO. (RA)

The selected candidate will work on computer modeling of the dynamics of the heart. In particular, the project will focus on investigating the genesis of cardiac arrhythmias (such as ventricular tachycardia, fibrillation etc.), the role of inhomogeneities in the evolution of cardiac dynamics and on devising improved methods for treatment of arrhythmias using electrical shocks and/or pharmaceutical drugs. The RA candidate should necessarily have a good background either in physical/mathematical sciences or engineering, have significant experience in using analytical & computational techniques, and have a strong interest in biological systems. Previous experience in working on cardiac modeling and/or computer simulation in massively parallel high-performance computer systems will be extremely desirable. Knowledge of MATLAB or equivalent scientific software is desirable but not essential.

POSITION NO. (SRF)

A Senior Research Fellow (SRF) position (with a consolidated salary of Rs 23,000 per month) is open in the DBT-sponsored project on "Developing tools for dynamical modelling of *C. elegans* neuronal network activity" in the Institute of Mathematical Sciences. The selected candidate will work on developing a computational model of nervous system activity in the nematode, *Caenorhabditis elegans*, the only organism whose entire neuronal network has been mapped in detail. The candidate should necessarily have a background (MSc/BE/BTech) in quantitative/mathematical sciences or engineering, AND, 2 years research experience after completing their MSc/BE/BTech degree. The candidate should be skilled in computational techniques/programming and have a strong interest in biological systems. Knowledge of MATLAB or equivalent scientific software is desirable but not essential.

POSITION NO. (PA – 3) The candidate should have immense knowledge in theory[Computer Science] and should possess the skill of implementing the same in the project work.

Interested candidates are requested to confirm their interest through e-mail to the following mail id besides forwarding their resume by January 25, 2012:

- 1) imscpa@imsc.res.in for the position of Project Assistant – PA – 1, PA - 2 & PA - 3 mentioning the code number in the subject.
- 2) imscra@imsc.res.in for the position of Research Associate - RA mentioning the code number in the subject.
- 3) imscsrf@imsc.res.in for the position of Senior Research Fellow - SRF mentioning the code number in the subject.

The Candidates are requested to note the following:

Sl.No	Positions and Code No.	Mode of Selection	Date & Timings	Venue
1	Project Assistant (PA 1 PA 2)	Written Test and Interview	1. Written Test: 02/02/12 - 0930 hrs 2. Interview: 02/02/12 – 1400 hrs	1. Written Test: Ramanujan Auditorium IMSc 2. Interview: 3 rd floor Lounge - New Institute Building
2	Project Assistant (PA - 3)	Written Test followed by Interview	03/02/12 – 09.30 hrs	1. Written Test: Ramanujan Auditorium IMSc 2. Interview: 3 rd floor Lounge - New Institute Building
3	Research Associate [RA]	Direct Interview	02/02/12 – 09.30 hrs	3 rd floor Lounge - New Institute Building
4	Senior Research Fellow[SRF]	Direct Interview	02/02/12 – 09.30 hrs	3 rd floor Lounge - New Institute Building

1. No separate letter/confirmation will be sent by this Institute in response to those mails through which the candidates have expressed their interest on or before **January 25, 2012**.
2. All those candidates who have applied for the position of "Project Assistant" (or) "Senior Research Fellow" (or) "Research Associate" are requested to report sharp as per details mentioned above with one copy of resume already submitted with photo pasted on it, all original certificates and one set of copies of all certificates as to proof of age, educational qualifications and experience.
3. The duration of the written test is one hour from 1000 hrs to 1100 hrs.
4. The list of successful candidates of the written test[for the Code No. PA -1, PA -2 PA -3 will be displayed on the notice board at about 1300 hrs at the test venue. Only those candidates who clear the written test are required to appear for Interview which commences at about 1400 hrs on the same day.
5. Those candidates who applied for the positions with Codes RA, SRF can appear for Direct Interview as per the venue and timings mentioned in the above table.
6. **Those candidates who possess Ph.D. Degree or submitted the Ph.D. Thesis will not be considered for the position of "Project Assistant"/"Senior Research Fellow".**

General Conditions:

1. The prescribed qualifications are minimum and mere possession of the same does not entitle the candidate to be considered for the advertised position. The decision of the Director of this Institute in all matters will be final and no enquiry or correspondence will be entertained in this matter.
2. Only outstation candidates belonging to SC/ST appearing for the written test and selected for interview only will be reimbursed to and from Second Class Railway Fare/Bus Fare by the shortest route from the station of residence/work place to Chennai on production of tickets.
3. Please visit Careers Page of our website www.imsc.res.in for further information and location guidance.
4. **The e-mails conveying the confirmation received beyond January 25, 2012 will not be considered under any circumstances.**

S/D
ADMINISTRATIVE OFFICER