

THE INSTITUTE OF MATHEMATICAL SCIENCES

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

CIT CAMPUS, THARAMANI, CHENNAI 600 113.

Advt No./04-R/IMSc 2013

16th April 2013

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 only for a limited period and there is no scope of continuation / regularization / absorption. 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
1	Project of Inter-disciplinary Science and Modelling (PRISM)	Project Assistant Code No:1	ONE	Written test followed by interview	B.E/B.Tech./M.Sc from a reputed institution, and good computational skills, in addition to the specific requirements described below.
2	IMSc Complex Systems	Project Assistant Code No: 2	ONE	Written test followed by interview	B.E/B.Tech./M.Sc from a reputed Institute with 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.
3	Project Glaciers in the Upper Alakananda-Saraswati Basin and Climate Change”	Project Assistant Code No: 3	ONE	Personal Interview Only	A Graduate [B.A/B.Com/ B.Sc] with experience as a mountain guide in the upper Alkananda valley including the Satopanth and Bhagirath Kharak Glaciers. Experience in taking glaciological data & familiarity with basic computer operation including the use of e-mail preferred.
		Project Assistant Code No: 3A	ONE	Personal Interview Only	VIII Std., with experience as a mountain guide in the upper Alkananda valley including the Satopnath and Bhagirath Kharak Glaciers. Experience in taking glaciological data. Experience at high altitude work with advanced mountaineering certificate from a reputed mountaineering institute.
4	Project: Computer Modelling and Analysis of Economic/Financial Data & Networks”	Project Assistant Code No:4	ONE	Written test followed by interview	BE/B.Tech/M.Sc from a reputed institution with a good background either in physical / mathematical sciences or engineering, have some experience in using analytical & computational techniques. Knowledge of MATLAB or equivalent scientific software is desirable.

SPECIFIC REQUIREMENTS FOR EACH POSITION:

POSITION NO. 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. 2

Brief summary of the project: Computer Modeling of Biological Systems. The Project will focus on investigating how waves of activity occur in different biological systems [ranging from spiral waves and chaos in the electrical activity of heart muscle during life-threatening episodes of cardiac arrhythmia to waves of epidemic spreading seen during the propagation of different kinds of diseases over a geographical region].

POSITION NO. 3

The selected candidate will be expected to do the following tasks:

- a] Organize the logistics of the biannual field trips to the Satopanth and Bhagirath Kharak Glaciers.
- b] Act as a caretaker for the automatic weather stations [AWS] to be installed on the glacier and near Mana Village.
- c] Help in acquiring glaciological and hydrological data
- d] Recover data from the AWS and send it to the headquarters.

POSITION NO. 3A

The selected candidate will be expected to do the following tasks:

- a] Organize the logistics of the biannual field trips to the Satopanth and Bhagirath Kharak Glaciers.
- b] Act as a caretaker for the automatic weather stations [AWS] to be installed on the glacier and near Mana Village.
- c] Help in acquiring glaciological and hydrological data including high altitude work.
- d] Recover data from the AWS and send it to the headquarters.

POSITION NO. 4

The Project will focus on investigating the distribution of fluctuations of difference economic variables [such as stock price, commodity price, exchange rates, interest rates, etc.] in time and their cross-correlations with each other. While the characterized distributions will be used to motivate detailed models of economic & financial transactions, the cross-correlations will be used for reconstructing networks of interactions between important economic variables that will give us important insights on how markets respond to various signals.

Interested candidates are requested to confirm their interest through e-mail to the following mail id besides attaching their resume by 30th April 2013:

- 1) <adv04pa1@imsc.res.in> for the position of Project Assistant 1- mentioning the code number.
- 2) <adv04pa2@imsc.res.in> for the position of Project Assistant 2 - mentioning the code number.
- 3) <adv04pa3@imsc.res.in> for the position of Project Assistant 3 - mentioning the code number.
- 4) <adv04pa3A@imsc.res.in> for the position of Project Assistant 3A - mentioning the code number.
- 5) <adv04pa4@imsc.res.in> for the position of Project Assistant 4 – mentioning the code number.

The Candidates are requested to note the following:

Sl.No	Positions and Code No.	Mode of Selection	Date & Timings	Venue
1	Project Assistants 1, 2 & 4	Written Test and Interview	1. Written Test: 20.05.13 - 0930 hrs 2. Interview: - 1400 hrs onwards	1. Written Test: Ramanujan Auditorium IMSc 2. Interview:

				3 rd floor Lounge - New Institute Building
2	Project Assistant 3 & 3A	Only Interview	06.05.13 – 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 **April 30, 2013**.
2. All those candidates who have applied for the position of "Project Assistant" are requested to report sharp as per details mentioned above with one copy of their email & resume already submitted to us 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 1130 hrs.
4. The list of successful candidates of the written test [for the Code No. 1, 2 & 4] 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 i.e. **May 20, 2013**.
5. Those candidates who applied for **code No. 3 & 3A** should appear for only Direct Interview as per the venue and timings mentioned in the above table.

General Conditions:

1. Consolidated salary : 1] Position 1,2,3 & 4 : Rs. 16,000/- p.m. Plus HRA @ 30% on consolidated salary.
2] Position 3-A : Salary commensurate with experience.
2. 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.
3. Only outstation candidates belonging to SC/ST appearing for the written test and selected for interview only will be reimbursed to and fro Second Class Railway Fare/Bus Fare by the shortest route from the station of residence/work place to Chennai on production of tickets.
4. Please visit Careers Page of our website www.imsc.res.in for further information and location guidance.
5. **The e-mails / CV conveying the confirmation received beyond April 30, 2013 will not be considered under any circumstances.**

DIRECTOR

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The Institute of Mathematical Sciences(IMSc), Chennai is a National Institute of higher learning. Applications are invited [**Only through email**] for filling up of **four** temporary positions of **PROJECT ASSISTANTS**, [with Qualification B.E/B.Tech/M.Sc/Any Degree/VIII Std.] purely on contract basis. For more details, please visit careers page of IMSc website "www.imsc.res.in."

Sd/-

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