THE INSTITUTE OF MATHEMATICAL SCIENCES

(An Autonomous Institution under Dept. of Atomic Energy, Govt. of India) 4th Cross Road, CIT Campus, Taramani, Chennai – 600 113

Advt No. 06-R/IMSc/2019, April 11, 2019

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. IMSc has intensive teaching programme for award of M.Sc (by Research) and Ph.D. Degree.

Applications are invited for filling up the following Project positions under the new Scientific / Academic Apex Projects of the Institute on consolidated salary from the eligible candidates who fulfill requisite qualifications/ specifications mentioned therein. The positions indicated under the projects concerned, are proposed to be filled purely on contract basis only initially for a period of one year from the date of appointment but extendable subject to performance & subject to approval of the competent authority up to 3 years & not beyond and there is no scope of continuation / regularization / absorption under any circumstances.

A] PROJECT POSITIONS:

Table - I

SI No	Title of the Apex Project & Sub Project	Name of the Project Positions	Number of positions	Selection Method	Minimum Educational Qualifications & Experience	Consolidated Salary (all inclusive & no other allowances are allowed)	Unique email id to which soft copy of the application to be sent for each position separately (Only through email & no hard copies of applications are considered)	Last date for submission of applications for each position through email to unique email id shown under column (8)	Date of written test/ interview
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I]	Advanced Res	earch and I	Education	in Mather	natical Sciences at IM	Sc			
1	Computational Systems Toxicology: Application of Network Biology towards Health Risk Assessment of Environmental Chemicals	Research Associate (Toxicology)	01	Written test followed by Interview for short listed candidates on the same day. [or] Direct interview in case the no. of candidates appeared is less than five	Candidate should have PhD in Bioinformatics or Computational Biology with at least two publications in reputed scientific journals. Specific Requirements: Prior experience in the area of computational systems toxicology is essential. It is desirable that candidate has training in network and systems biology as evidenced by research publication in reputed international journals.	Consolidated salary will be fixed based on the experience as below: PhD – Rs. 55,800/- PhD with 1 yr experience – Rs. 58,280/- PhD with 2 yrs experience – Rs. 60,760 /-	toxra@imsc.res.in	By 1700 hrs on 24.04.2019 (Wednesday)	29.4.19 (Monday)
2	Computational Systems Toxicology : Application of Network Biology towards Health Risk Assessment of Environmental Chemicals	Project Assistant (Toxicology)	01	Written test followed by Interview for short listed candidates on the same day. [or] Direct interview in case the no. of candidates appeared is less than five	Candidate should have M.Sc. or B.Tech. in Bioinformatics or Computational Biology with at least 2 years of research experience and at least one publication in reputed scientific journals.	Rs. 43,400/-	toxpa@imsc.res.in	By 1700 hrs on 24.04.2019 (Wednesday)	30.4.2019 (Tuesday)
3	Center of Excellence in Complex Systems and Data Science	Project Scientific Officer "D" (CECD)	01	Only through Direct Interview for short listed candidates on the same day.	Candidate should have PhD with 4 years research experience in Applied Mathematics.	Rs. 90,000/-	apply_csds@imsc.res.in	By 1700 hrs on 22.4.2019 (Monday)	2.5.2019 (Thursday)
4	Center of Excellence in Complex Systems	Project Assistant Level-I	01	Written test followed by Interview	Candidate should have MSc in Physics with 5 years research experience	Rs. 46,004/-	apply_csds@imsc.res.in	By 1700 hrs on 22.4.2019 (Monday)	2.5.2019 (Thursday)

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	and Data Science	(CECD)		for short listed candidates on the same day. [or] Direct interview in case the no. of candidates appeared is less than five	(or) BTech in Computer Science with 5 years research experience.				
	Center of Excellence in Complex Systems and Data Science	Project Assistant Level-II (CECD)	01	Written test followed by Interview for short listed candidates on the same day. [or] Direct interview in case the no. of candidates appeared is less than five	Candidate should have MSc in Physics with 5 years research experience (or) BTech in Computer Science with 5 years research experience.	Rs. 48,608/-	apply_csds@imsc.res.in	By 1700 hrs on 22.4.2019 (Monday)	2.5.2019 (Thursday)
II]	Advanced Researc	h and Educati	on in Mathe	matical Scien	ces at IMSc - II				
5	I] Computational Sciences: Computational Epigraphy Lab (CEL)	Research Associate (CEL)	01	Only through Direct Interview for short listed candidates on the same day.	Candidate should have qualification of PhD thesis submitted in the disciplines of Computer Science / Computer Applications / Computational Linguistics / Bioinformatics	Rs. 41,500/- (under upward revision)	apply_cel@imsc.res.in	By 1700 hrs on 22.4.2019 (Monday)	2.5.2019 (Thursday)
6	III] Condensed Matter Physics Physics of Debris covered Glaciers	Project Assistant (Glaciers)	02	Practical test followed by interview for shortlisted candidates on the same day. (or) Direct interview in case the number of candidates appeared is less than five.	1. Graduate or Certificate in Mountaineering from a reputed institute. and 2. Five years experience in the field of glaciological measurements including (a) Stake installation and monitoring (b) DGPS surveys on glaciers. and 3. With good knowledge of the area and conditions in the upper Alakananda valley, including the glaciated region upstream of Mana. and 4. With reasonable experience in organising camping trips in the above region.	Rs. 20,500/-	shankar@imsc.res.in	By 1700 hrs on 22.4.2019 (Monday)	29.4.2019 (Monday)
7	VJ Media & Information Management Systems (i) Management of IMSc IT Infrastructure: Computing Media, Web 2019-2022.	Project Scientific Officer "C" (IT Management)	01	Written test followed by Interview for short listed candidates on the same day. [or] Direct interview in case the no. of candidates appeared is less than five	Candidates should have completed one of the Master Degree in Science (Physics / Mathematics / Computer Science / IT/ Computer Applications / Commuter Applications / Commuter Applications / Commuter Applications / Commuter Science / ECE / EEE / IT) from a reputed College / Institution AND with the specified experience of minimum 10 years as described for the position. Desirable : Completed I.T. courses covering Linux/Unix O/S. Experience in programming using C, MySQL, Perl, PHP, Python, Shell Scripting under LINUX O/S, work exposure in ERP / Open ERP and having background of accounting	Rs. 75,500/-	https://www.imsc.res.in/apply_ta/	By 1700 hrs on 22.4.2019 (Monday)	25.4.2019 (Thursday)

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					are added advantage. Candidates possess work experience in maintaining LINUX / UNIX systems in the LAN environment are preferred. Attended workshops on HPC. Exposure in computational physics, MPI/GPU coding etc. Completed IT Projects including design / implementation. Exposure of handling IT projects in the net environments is added advantage. Specific Requirements of				
					specific Requirements of the candidate: Expected to assist System Administration work under heterogeneous (Linux/ Solaris/ Windows/Mac) O/S in the LAN environment, Cluster – Topology, installation / configuration (Linux, Warwulf/ Rocks/xCat,Puppet,Slurm/ PBSPro) and Updates; Management, Monitoring, Job scheduler & Performance tuning, HA servers, hybrid clusters, etc.; Cluster Storage – I/O nodes with Parallel/Lustre File System, MDS, MDT etc., Disk array/Enclosures, Configured with Fat-Tree & multi-path topology, Multi-volume configuration, Volumes mounted on Compute/Master cluster nodes; Cluster application monitoring / packaging / version controls; running benchmarking; virtualisation of servers (LXC, KVM, DOCKER); Day-to-day maintenances of data-center UPS, AC, various sensors & BMS, etc.; Trouble shooting of				
					etc.; Irouble shooting or systems H/Ws, O/Ss, & S/Ws problems and fixing of the same; Implementing and handling the multimedia projection, Video-conferencing, webcasting, etc.; Monitoring the quality of LAN/Internet bandwidth in liaison with System Administrators of the Institute;				
8		Project Technical Assistant (Systems) – Level-I	01	Written test followed by Interview for short listed candidates on the same day. [or] Direct interview in case the no. of candidates appeared is less than five	Candidates should have completed one of the Masters Degree in Science (Physics / Mathematics / Computer Science / IT / Computer Science / IT / Computer Applications / Commerce) (OR) Graduate Degree in Engineering (Computer Science / ECE / EEE / IT) from a reputed College / Institution AND with the specified experience of minimum 8 years as described for the position. Specific requirements of candidate: Expected to assist System Administration work under heterogeneous (Linux/ Solaris/ Windows/Mac) O/S in the LAN environment Day-to-day maintenance of computer system components, printers, scanners, modems, switches, WiFi, O/S installation, configuration; KVM, LXC, DOCKER; Tender processing and inventory management; Customization of desktops,	Rs. 58,500/-	https://www.imsc.res.in/apply_ta/	By 1700 hrs on 22.4.2019 (Monday)	25.4.2019 (Thursday)

				first level of trouble shooting of system H/Ws, O/Ss and S/W problems and fixing of the same; Setting up for multimedia projection, Video-conferencing, web-casting, etc.; Monitoring the quality of LAN/Internet bandwidth in liaison with System Administrators of the Institute; Customisation of various modules of Open ERP(ODOO) as required using Python/PHP programming skills for IMSc office automation; IMSc is looking for bright candidates who are expected to work in the team environment to customise the various modules of Open ERP(ODOO) as required to implement the IMSc office automation; The candidates who are expected to work in the team environment to customise the various modules of Open ERP(ODOO) as required to implement the IMSc office automation; The candidate should have work experience in PHP and Python coding under Linux O/S in the LAN environment; Customisation requirements of various web applications and drupal content management for the activity of IMSc Desirable: Completed LT. courses covering Linux/Unix O/S. Experience in programming using C, MySQL, Perl, PHP, Python, Shell Scripting under LINUX O/S are added advantage. Candidates possess work experience in maintaining LINUX / UNIX systems in the LAN environment are preferred. Attended workshops/seminars on HPC/ERP. Cluster designbuild & management of HPC Data-center. Exposure in computational skills, MPI/GPU coding etc.				
9	Project Technical Assistant (Systems) – Level-II	01	Written test followed by Interview for short listed candidates on the same day. [or] Direct interview in case the no. of candidates appeared is less than five	Candidates should have completed one of the Masters Degree in Science (Physics / Mathematics / Computer Science / IT / Computer Applications / Computer Applications / Computer Applications / Computer Science / IT / Computer Applications / Commerce) (OR) Graduate Degree in Engineering (Computer Science / ECE / EEE / IT) from a reputed College / Institution AND with the specified experience of minimum 6 years as described for the position. Specific requirements of candidate: Expected to assist System Administration work under heterogeneous (Linux/ Solaris/ Windows/Mac) O/S in the LAN environment Day-to-day maintenance of computer system components, printers, scanners,modems, switches, WiFi, O/S installation, configuration; Tender processing and inventory management; Customization of desktops, first level of trouble shooting of system H/Ws, O/Ss and S/W problems and fixing of the same; Setting up for multimedia projection, Videoconferencing, web-casting, etc.; Monitoring the	Rs. 50,500/-	https://www.imsc.res.in/apply_ta/	By 1700 hrs on 22.4.2019 (Monday)	25.4.2019 (Thursday)

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					quality of LAN/Internet bandwidth in liaison with System Administrators of the Institute; Customisation of various modules of Open ERP(ODOO) as required using Python/PHP programming skills for IMSc office automation; IMSc is looking for bright candidates who are expected to work in the team environment to customise the various modules of Open ERP(ODOO) as required to implement the IMSc office automation; The candidate should have work experience in PHP and Python coding under Linux O/S in the LAN environment; Customisation requirements of various web applications and drupal content management for the activity of IMSc Desirable: Completed I.T. courses covering Linux/Unix O/S. Experience in programming using C, MySQL, Perl, PHP, Python, Shell Scripting under Linux O/S are added advantage. Candidates possess work experience in maintaining LINUX / UNIX systems in the LAN environment are preferred. Attended workshops/seminars on HPC/ERP. Cluster designbuild & management of HPC Data-center. Exposure in computational skills,				
10		Project Technical Assistant (Media) - Level-I	01	Written test followed by Interview for short listed candidates on the same day. [or] Direct interview in case the no. of candidates appeared is less than five	MPI/GPU coding etc. Completed 3/4 year regular Diploma in Film & Television editing(other equivalent diploma) from a reputed College / Institution and with specified experience of minimum 5 years as required for the position. AND Must proficient in handling professional video cameras, mixers, AV equipments. Experience with filming and editing video content (Online / Recorded). Must have proficient editing skills in online and off-line video/multi-media productions. Must have non-linear hands-on editing experience using various video editing software Final Cut Pro, Avid. Highly organized, excellent data management and entry skills Completed short films of interest Specific requirement of the candidate: Interest in outreach activity of physical sciences; Graphic design skills; Experience in web scripting in PHP; Hands on experience in online course management software like moodle; Handling on-line video-conferencing/skype/hangout etc.; Should be comfortable with the OpenSource S/W environments Desirable: Candidates for this position need at least 3	Rs. 46,500/-	https://www.imsc.res.in/apply_ta/	By 1700 hrs on 22.4.2019 (Monday)	26.4.2019 (Friday)

				year digital editing experience and must be				
				proficient in Adobe Photoshop, Apple Final Cut Pro & Avid or equivalent.				
	Project Technical Assistant (Media) - Level-II	01	Written test followed by Interview for short listed candidates on the same day. [or] Direct interview in case the no. of candidates appeared is less than five	Completed 4 year Bachelor Degree of Visual Arts/ Equivalent other Bachelor Degree/Bachelor Degree with Engineering from a reputed College/ Institution with specified experience of minimum 3 years as required for the position (OR) Completed 3 year any Bachelor Degree from a reputed College / Institution with specified experience of minimum 4 years as required for the position. AND Must proficient in handling professional video cameras, mixers, AV equipments. Experience with filming and editing video content (Online / Recorded). Must have proficient editing skills in online and off-line video/multi-media productions. Must have non-linear hands-on editing experience using various video editing software Final Cut Pro, Avid. Highly organized, excellent data management and entry skills Completed short films of interest Specific requirement of the candidate: Interest in outreach activity of physical sciences; Graphic design skills; Experience in web scripting in PHP; Hands on experience in online course management software like moodle; Handling on-line video-conferencing/skype/hangout etc.; Should be comfortable with the OpenSource S/W environments Desirable: Candidates for this position need at least 3 year digital editing experience and must be proficient in Adobe Photoshop, Apple Final Cut	Rs. 41,500/-	https://www.imsc.res.in/apply_ta/	By 1700 hrs on 22.4.2019 (Monday)	26.4.2019 (Friday)
12	Project Technical Assistant (ERP) -Level-I	01	Written test followed by Interview for short listed candidates on the same day. [or] Direct interview in case the no. of candidates appeared is less than five	Pro & Avid or equivalent. Candidates should have completed one of the Masters Degree in Science (Physics / Mathematics / Computer Science / IT / Computer Science / IT / Computer Applications / Commerce AND with experience of minimum 1 year as described for the position. Desirable: Completed I.T. courses covering Linux/Unix O/S. Experience in programming using C, MySQL, Perl, PHP, Python, Shell Scripting under LINUX O/S are added advantage. Candidates possess work experience in maintaining LINUX / UNIX systems in the LAN environment are preferred. Attended workshops on LINUX network & security. Specific requirements of the candidate: Customisation of various modules of Open ERP(ODOO) as required	Rs. 35,400/-	https://www.imsc.res.in/apply_ta/	By 1700 hrs on 22.4.2019 (Monday)	26.4.2019 (Friday)

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					using Python/PHP programming skills for IMSc office automation; IMSc is looking for bright candidates who are expected to work in the team environment to customise the various modules of Open ERP(ODOO) as required to implement the IMSc office automation; The candidate should have work experience in PHP and Python coding under Linux O/S in the LAN environment; Customisation requirements of various web applications for the activity of IMSc				
13	(ii) Design and Development of integrated online Information resource Management System (Library, Alumni, Annual Report and Publications)	Project Scientific Assistant (Library)	03	Written test followed by Interview for short listed candidates on the same day. [or] Direct interview in case the no. of candidates appeared is less than five	Educational Qualifications: Masters in library and information science Experience: Minimum 2 years experience in academic / research libraries in handling acquisition, circulation, journal subscriptions and technical processing (cataloging and classification etc). Desirable: Working knowledge of basic computer applications and library management software (Koha/Libsys etc), institutional repository software (DSpace/Eprints etc).	Rs. 46,500/-	libasst@imsc.res.in	By 1700 hrs on 29.4.2019 (Monday)	10.5.2019 (Friday)
14	Biophysics of Axonal Cargo Transport	Project Assistant (Biophysics)	01	Written test followed by Interview for short listed candidates on the same day. [or] Direct interview in case the no. of candidates appeared is less than five	Educational Qualifcations: MSc/MTech or equivalent degree Expereicne: In computational modeling, especially of biophysical problems. Desirable: Knowledge of C++/Java programming is essential.	Rs. 38,400/-	axonproject@imsc.res.in	By 1700 hrs on 22/04/2019 (Monday)	29.4.2019 (Monday)
15	A Centre for Science Communication and Education at IMSc	Research Associate (Outreach)	01	Only through Direct Interview	Minimum: PhD in mathematics or the sciences or in education Essential experience: Strong scientific background Desirable experience: Outreach / educational activity Specific Requirements: The selected candidate will provide support to the outreach and education efforts of IMSc, in particular in the conceptualization and organization of workshops, schools and similar events at the school, college and university level. The institute has a strong tradition of educational outreach among students, teachers and the general public, and the candidate will be expected to carry this forward as well as provide the lead in new directions for such effort. The candidate will be expected to interact with	Rs. 58,280/-	apply_cell@imsc.res.in	By 1700 hrs on 22.4.2019 (Monday)	26.4.2019 (Friday)

					scientists at IMSc in the four areas of Physics, Mathematics, Theoretical Computer Science and Computer Science and Computational Biology. Essential skills for this position are fluency in language use, good writing and communication skills, familiarity with computer use and a sufficiently good scientific training so as to be able to contribute intellectually to the outreach effort in at least some of the areas above. A prior background in scientific outreach is highly desirable.				
16	A Centre for Science Communication and Education at IMSc	Project Assistant (Outreach)	02	Only through Direct Interview	Minimum: Masters in Mathematics or the Sciences, or Bachelors in Technology Essential experience: Good scientific background Desirable experience: Outreach / educational activity Specific requirements: The selected candidates will provide support to the resource generation efforts of IMSc in education and outreach. They will help in organizing the outreach events. They will also be involved in the compilation and organization of educational material generated by IMSc outreach workshops and events, in the form of publications and online resources, in a manner that is accessible to teachers and students. Essential skills for this position are fluency in Tamil and English, good writing and communication skills, and strong technical ability to creatively use online platforms for educational purposes. A prior background in scientific outreach is desirable.	Rs. 38,440/-	apply_cell@imsc.res.in	By 1700 hrs on 22.4.2019 (Monday)	26.4.2019 (Friday)

B] GENERAL INFORMATION:

Interested candidates are requested to send a brief e-mail about their interest by attaching therewith their latest resume to <u>unique e-mail id</u> as mentioned at <u>Col (8)</u> against each Project position in the above table **on or before 1700 hrs on the date mentioned at Col (9)** against each project position mentioning the position details in the **subject** of the e-mail as "Application for the Project Position at Sl.No. () (Name of the Project Position in Capital Letters) of Advt. No: 4-R/IMSc/2019 dated 11.4.2019."

Note:

- 1) Mails sent on or after the above time & date will not be considered under any circumstances.
- 2) Indicating subject in the e-mail as explained above under General Information of the Project Position is very important.
- 3) Depending on the number of candidates respond to this advertisement, the Institute will decide whether to conduct a brief objective type written test of about one and half hours [1000hrs to 1130 hrs] or to go with direct interview.
- 4) Only those candidates who are meeting the minimum educational qualifications & experience mentioned in the advertisement will be eligible to appear for Written test / interview. Hence screened list of candidates will be displayed by us after verifying their candidature on the "Opportunities page" of the Institute's website [www.imsc.res.in] immediately after the last date but within two working days. Therefore, short listed candidates whose names are displayed by us on Opportunities page only need to come and appear for Written Test / Interview as per the Project position wise date already fixed by us as shown at Column (10) against each Project positions in the above Table-I.
- 5) However, the Institute will arrange to send call letters to respective emails to those candidates who submit applications against the Project Positions shown at Sl. Nos. (7), (8), (9), (10), (11) & (12) and shortlisted for written

- test / interview. The candidates should bring the call letters along with them when they appear for written test / interview on respective date without fail.
- 6) The candidates who have applied for the Project positions against this advertisement and whose names are shortlisted for written test/ interview and displayed by us on the opportunities page of IMSc website will only be allowed to appear for Written Test / Interview and they should bring one copy of valid proof of ID card with original (like AADHAR/Driving License/ Passport / VoterID).
- 7) Except displaying the shortlisted candidates on our website, no separate call letter / confirmation requesting the candidates to attend for Written Test (or) Interview will be sent by this Institute to those candidates who have submitted their applications in response to this advertisement for the Project Positions at Sl.No. (1), (2), (3), (4), (5), (6), (13), (14), (15) & (16).
- 8) The candidates who have applied for the Project positions against this advertisement and whose names are displayed in the screened list should bring one copy of e-mail sent by them with photo pasted on it with clear header showing time and date of e-mail & Resume already sent by them at the time of reporting for Written Test/Interview. The candidates without e-mail or carrying the copies of e-mails without header or copy of e-mail sent after the last time and date (as indicated under column (9)) will not be allowed to appear for Written Test or Interview under any circumstances.

Table – II:

Venue of Written test / Interview as per dates mentioned against each Project position under Column (10) in the Table -I above.					
To report for Written Test at 0930 hrs at	Interview on the same day of written test (if written test is not prescribed interview will be held on the same day)				
Ramanujan Auditorium	Venue for Interview will be announced at the time of written test (or) at Ramanujan Auditorium while we take attendance of the candidates [only for those who clear the Written Test, if conducted]				

IMPORTANT:

- 1. The candidates submitting e-mails for the above positions are requested to note the day and date of written test followed by interview shown at **column (10) of the above table I.**
- 2. The candidates should on their own attend for written test on the date mentioned.
- 3. All those candidates who have been short listed for the Project positions are requested to **report sharp at 0930 hrs on the dates of written test** / **interview as indicated against each Project positions at column (10) at Ramanujan Auditorium, IMSc and sign the attendance statement without fail**. The candidates also should bring along with them all original certificates and one set of copies of all certificates as to proof of age, educational qualification, and experience etc.
- 4. The list of successful candidates of the written test wherever conducted will be displayed on the notice board on the same day for which venue location will be announced at the time of written test. Only those candidates who clear the written test are required to appear for Interview time for which will be announced at the written test venue. Wherever only interview is prescribed the candidates will be guided accordingly at Ramanujan Auditorium while signing the attendance statement.
- 5. Hard copies of applications/ resume received by hand/ post/ courier will not be considered under any circumstances.
- 6. E-mail received by us without attaching resume will not be considered under any circumstances.

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 fro second class railway fare/ bus fare or actual fare incurred which ever is less by the shortest route form the station of residence/ work place to Chennai & back on production of tickets.
- 3. Please visit <u>"Opportunities Page"</u> of our website <u>www.imsc.res.in</u> for full details of advertisement, screened list of candidates and visit "Getting here" page to know location information of our Institute.

REGISTRAR