



## C R RAO

**Advanced Institute of Mathematics, Statistics and Computer Science**  
**University of Hyderabad Campus, Prof CR Rao Road, Gachibowli**  
**Hyderabad – 500046**

**Phone: +91 40 23013118, Website: [www.crraoaimscs.org](http://www.crraoaimscs.org)**

Advertisement No: CRR/1/2019

Dated: 25-04-2019

### ADVERTISEMENT

Applications are invited in the prescribed format for positions of Senior Research Scientist/Research Scientist, Research Associates and Junior & Senior Research Fellows, Project Assistants in the projects funded by Government of India. Candidates satisfying the under mentioned qualification and experience may send their signed application with bio-data to Director, CR Rao AIMSCS, University of Hyderabad Campus, Prof CR Rao Road, Gachibowli, Hyderabad – 500046 by registered or speed post on or before 25<sup>th</sup> May, 2019 and email to [jobs@crraoaimscs.res.in](mailto:jobs@crraoaimscs.res.in) in the prescribed application format available on website. The advertisement number, Specialization and the post applied for should be mentioned on the envelope.

Designation	Specialization	Eligibility
<b>Senior Research Scientist/Research Scientist</b>	High Performance Computing and Cryptology	<ul style="list-style-type: none"> <li>• <b>Qualification:</b> Ph.D. in High Performance Computing/Computer Science/ Applied Mathematics <b>or</b> M.Tech with 10 year relevant experience.</li> <li>• <b>Experience:</b> Minimum of 5 Years Teaching / Research/Professional experience in Research Organization/ Industry and should have publications in reputed Journals / Conferences.</li> <li>• <b>Desirable:</b> Experience in handling High Performance Computing (HPC) and Parallel Computing, Knowledge in Cryptography and Cryptanalysis is preferred.</li> </ul>
	Quantum Computing	<ul style="list-style-type: none"> <li>• <b>Qualification:</b> Ph.D. in Computer Science/Electronics Engineering/Mathematics/ Physics <b>or</b> M.Tech with 10 year relevant experience.</li> <li>• <b>Experience:</b> Minimum of 5 Years Teaching / Research/Professional Experience in Research Organization/ Industry and should have publications in reputed Journals / Conferences.</li> <li>• <b>Desirable:</b> Candidates having programming knowledge in Python / Mathematica/ Matlab.</li> </ul>
	Network & Mobile Security	<ul style="list-style-type: none"> <li>• <b>Qualification:</b> Ph.D. in Computer Science/IT <b>or</b> M.Tech with 10 year relevant experience.</li> <li>• <b>Experience:</b> Minimum of 5 Years Teaching / Research/Professional Experience in Research Organization/ Industry and should have publications in reputed Journals / Conferences.</li> <li>• <b>Desirable:</b> Hands-on experience in advanced network security protocols like SSL/TLS, IPsec/VPN, SSH, development or operational experience on mobile platform like Android &amp; iOS, Cryptographic concepts, certification in CCNP/CCIE.</li> </ul>
<b>Research Associate</b>	Mathematics and Statistics	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience:</b> Ph.D. in Mathematics/Statistics <b>or</b> Candidates with M.Sc mathematics/Statistics must have minimum 3 years of experience in teaching/R&amp;D with NET qualification with one SCI publication in reputed Journal.</li> <li>• <b>Desirable:</b> Experience in Cryptography, Number Theory, Linear Algebra, Data Analysis, Field theory, Combinatorial mathematics,</li> </ul>

		Coding theory, Graphs and Networks, Probability theory, Inference, Statistical tests, Data analytics versus knowledge generation and applications to sciences.
	High Performance Computing and Cryptology	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience:</b> Ph.D. in Computer Science/Mathematics/Applied Mathematics <b>or</b> M.Tech/ME/MS in the Minimum of 3 years Teaching /Research/Design &amp; Development for M.Tech/ME/MS with one SCI publication in reputed Journal.</li> <li>• <b>Desirable:</b> Experience in Cryptography and Cryptanalysis, Hands-on experience in C++, OPENMPI, OPENCL, and CUDA programming, High Performance Computing.</li> </ul>
	Quantum Computing	<ul style="list-style-type: none"> <li>• <b>Qualification:</b> Ph.D. in Computer Science/Electronics Engineering/Mathematics/Physics or candidates who have recently submitted their Ph.D. thesis <b>or</b> candidates having master degree and minimum 3 years of Teaching/Research/ Industry experience and should have at least one publication in SCI indexed journal.</li> <li>• <b>Desirable:</b> Candidates having programming knowledge in Python/ Mathematica/ Matlab.</li> </ul>
	Network & Mobile Security	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience:</b> Ph.D. in Computer Science/IT or candidates who have recently submitted their Ph.D. thesis <b>or</b> candidates having master degree and minimum 3 years of Teaching/Research/ Industry experience and should have at least one publication in SCI indexed journal.</li> <li>• <b>Desirable:</b> Expertise in computer networking concepts, Hands-on experience in advanced network security protocols like SSL/TLS, IPSec/VPN, SSH, development or operational experience on mobile platform like Android &amp; iOS, Proficiency in programming languages.</li> </ul>
	Wireless Communication Systems (WCS)	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience:</b> Ph.D. in ECE or candidate who have recently submitted their Ph.D. thesis/ pursuing <b>or</b> having 3 years of experience in research/teaching/ Industry with one SCI Indexed Journal with B. E/ B. Tech in ECE and M. E/ M. Tech in Electronics and Communication/Signal Processing with minimum of 70% marks</li> <li>• <b>Desirable:</b> Candidate should have prior knowledge in wireless communication technology, signal processing and also have hands-on experience in MATLAB, Programming in Python/C/C++. Candidate having publications in reputed peer-reviewed journals and GATE/NET qualified will be preferred.</li> </ul>
	Natural Language Processing (NLP) & Machine Learning (ML)	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience:</b> Qualification: Ph.D. in Computer Science or candidates who have recently submitted their Ph.D. thesis <b>or</b> candidates having master degree and minimum 3 years of Teaching/Research/ Industry experience and should have at least one publication in SCI indexed journal.</li> </ul>
<b>Senior Research Fellow</b>	Mathematics and Statistics	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience:</b> Post Graduate degree in Mathematics with valid NET qualification and Minimum of 2 years Research experience as JRF is essential.</li> <li>• <b>Desirable:</b> Candidate should have prior knowledge in Group, Field theory, Combinatorial mathematics, Coding theory, Quantum theory, Graphs and Networks, Probability theory, Inference, Statistical tests, Data analytics versus knowledge generation and applications to sciences.</li> </ul>
	High Performance Computing and	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience:</b> Minimum of 2 years Research experience as JRF is essential.</li> <li>• <b>Desirable:</b> Experience in Cryptography, Algorithm Implementation, Knowledge in C++, OPENMPI, OPENCL, and CUDA programming,</li> </ul>

	Cryptology	Parallel computing, High performance computing.
	Quantum Computing	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience:</b> Minimum of 2 years Research experience as JRF is essential.</li> <li>• <b>Desirable:</b> Candidates having programming knowledge in Python/ Mathematica/ Matlab.</li> </ul>
	Network & Mobile Security	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience:</b> Minimum of 2 years Research experience as JRF is essential.</li> <li>• <b>Desirable:</b> Proficiency in computer networks &amp; network security concepts including cryptography, network traffic analysis &amp; penetration testing, familiarity with tools like wireshark, tcpdump, proficiency in programming languages like c and python.</li> </ul>
	Wireless Communication Systems (WCS)	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience :</b> Minimum of 2 years Research experience as JRF is essential</li> <li>• <b>Desirable:</b> Candidate should have prior knowledge in wireless communication technology/signal processing and also have hands-on experience in MATLAB, Programming in Python/C/C++. GATE/NET qualified candidate will be preferred.</li> </ul>
	Natural Language Processing (NLP) & Machine Learning (ML)	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience :</b> prescribed for JRF and Minimum of 2 years Research experience as JRF is essential</li> <li>• <b>Desirable:</b> Hands-on experience in Python and should be able to develop GUIs.</li> </ul>
<b>Junior Research Fellow</b>	Mathematics and Statistics	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience :</b> Post Graduate degree in Mathematics/Applied Mathematics and Statistics with valid NET qualification</li> <li>• <b>Desirable:</b> Candidate should have prior knowledge in Group, Field theory, Combinatorial mathematics, coding theory, Quantum theory, Graphs and Networks, Probability theory, Inference, Statistical tests, Data analytics versus knowledge generation and applications to sciences.</li> </ul>
	High Performance Computing and Cryptology	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience :</b> Post Graduate degree in Mathematics/Applied Mathematics with valid NET qualification or B.Tech/B.E. in Computer Science/IT with NET qualification or M.Tech/ME/MS with GATE in Computer Science/IT.</li> <li>• <b>Desirable:</b> Knowledge in C, C++, OPENMPI, OPENCL, and CUDA programming, Parallel computing, High performance computing and Knowledge in Cryptography.</li> </ul>
	Quantum Computing	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience:</b> B.E/B.Tech in Computer Science/Electronics and Telecommunication Engineering/ Electrical Engineering and ME/M.Tech/MS in Computer Science/Mathematics/ Physics with minimum 70% marks or equivalent from an AICTE/MHRD recognized University/Institute.</li> <li>• <b>Desirable:</b> GATE/NET qualified, having programming knowledge in Python/ Mathematica/ Matlab.</li> </ul>
	Network & Mobile Security	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience:</b> B.E/B.Tech in Computer Science/IT and ME/M.Tech/MS in Computer Science/IT with minimum 70% marks or equivalent from an AICTE/MHRD recognized University/Institute.</li> <li>• <b>Desirable:</b> Excellent knowledge in basic networking concepts, TCP/IP protocol suite, OSI layered architecture, C, C++, python, scapy, dpkt, hands-on experience in Linux operating system, Linux shell scripting.</li> </ul>

	Wireless Communication Systems (WCS)	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience</b> : B. E/ B. Tech in Electronics and Communication and M. E/ M. Tech in Electronics and Communication/Signal Processing with minimum of 70% marks or 7.5 CGPA (First Class/Distinction) from an AICTE/MHRD recognized University/Institute.</li> <li>• <b>Desirable</b>: Candidate should have prior knowledge in wireless communication technology/signal processing and also have hands-on experience in MATLAB, Programming in Python/C/C++. GATE/NET qualified candidate will be preferred.</li> </ul>
	Natural Language Processing (NLP) & Machine Learning (ML)	<ul style="list-style-type: none"> <li>• <b>Qualification and Experience</b> : B.E/B.Tech in Computer Science and ME/M.Tech/MS in Computer Science/Artificial Intelligence with minimum 70% marks or equivalent from an AICTE/MHRD recognized University/Institute and should be GATE/ NET qualified.</li> <li>• <b>Desirable</b>: Hands-on experience in Python and should be able to develop GUIs.</li> </ul>
<b>Project Engineer/Assistant</b>		<ul style="list-style-type: none"> <li>• <b>Qualification</b>: M.Sc in Mathematics/Statistics/C.S or M.Tech/ME/MS in Computer Science/IT/AI/ ECE/Network Security with minimum 70% marks.</li> <li>• <b>Desirable</b>: Experience in Cryptography and Cryptanalysis, Parallel Computing, High Performance Computing, Cyber Security, Quantum Cryptography, Artificial Intelligence, Wireless Communication/NLP and ML, Programming in CUDA and OPENMP.</li> </ul>
<b>Consultant/ Senior Consultant (Part-time)</b>	Professors/Retired Professors from various reputed institutions/ R&D/industrial experts in relevant fields	<ul style="list-style-type: none"> <li>• High Performance Computing/Parallel Computing</li> <li>• Cryptology</li> <li>• Quantum Computing</li> <li>• Computer &amp; Network Security, Mobile OS</li> <li>• Wireless Communication Systems (WCS)</li> <li>• Natural Language Processing (NLP)</li> <li>• Artificial Intelligence (AI)/Machine Learning (ML)</li> </ul>

**Note:**

- 1) The salary and emoluments Senior Research Scientist /Research Scientist will be vary from 80,000/- to 1,50,000/- as per qualifications and experience. Emoluments of JRF/SRF/RA and Project Assistants are as per revised DST norms.
- 2) Appointment of Senior Research Scientist /Research Scientist, Fellowships of JRF/SRF/RA and Project Assistants are initially for two years and to be extendable for further on performance of the candidates.
- 3) Eligible and shortlisted candidates will be called for interview. No TA/DA will be paid for the journey to attend the interview.
- 4) The final year M.Tech/M.E/M.Sc. students are eligible to apply and they need to produce the qualifying certificates at the time of interview.
- 5) Institute reserves the right to fill or not to fill the positions according to the suitability of the candidates and subject to funding by Govt. of India.

**Sd/-**  
**Director**  
**CR Rao AIMSCS**