



Strategy and Synergy for Security

SOCIETY FOR ELECTRONIC TRANSACTIONS AND SECURITY (SETS)
(Under O/o Principal Scientific Adviser to the Government of India)

**MGR Knowledge City, CIT Campus, Taramani,
 Chennai - 600 113, Tamil Nadu, India**

Advertisement No. SETS/Chn/Rec/2023-24/18 Date: 9th November 2023

Society for Electronic Transactions and Security [SETS] is a Society under Societies Registration Act, XXI of 1860, dedicated to carry-out Research and Development in the field of Information Security focusing on the key verticals, namely, Cryptology and Computing, Hardware Security, Quantum Security and Network Security.

On-line applications are invited from enthusiastic Indian researchers having excellent academic record and proven scientific achievements along with requisite experience and a high degree of motivation and desire to take up research and development as a career in the field of Information Security focusing on the key verticals, namely, Cryptology and Computing, Hardware Security, Quantum Security and Network Security to fill up the posts of **Senior Scientists on Direct Recruitment Mode** as detailed below:

Sl. No.	Post Code, No. of position and Age Limit	Essential Educational qualification	Desirable Qualification	Required Experience	Desirable Experience / Skill sets
1	2023-12-001 Senior Scientist (1 Post) Stage-12 (Equivalent to Level-13A of 7 CPC Pay) 50 years Total Remuneration : Rs. 2,38,361/- Approximate in the basic of Rs. 1,31,100/-	BE./ B.Tech. with 60% or above marks or equivalent CGPA in Electronics and Communication/ Computer Science and Engineering/ Information Technology/ Information Systems OR Master's Degree in Science Subjects in Computer Science or Mathematics or Statistics with 60% or above marks.	M. E. / M. Tech. / Ph. D. (Engineering) in Electronics and Communication/ Computer Science and Engineering/ Embedded Systems / VLSI Design/ Information Security/ Signal Processing OR Ph.D. in Mathematics/ Statistics/ Electronics and Communication/ Computer Science/ Information Security/ Quantum Computing and Communication	16 years' experience in Research & Development experience and Solid foundations in cryptography and cyber security. (and) Must have Lead R&D projects as Chief/Principal Investigator; product development, designed and field deployed cyber security solutions/ products; Prepared and Implemented R&D Proposals; (and) Knowledge in cryptographic algorithms, standards, communication protocols, security standards and vulnerability analysis, API security Development & testing, design & Coding experience for Hardware/ Software solutions and field deployment of R&D outcomes in Cyber Security.	Programming in C / C++ / Python / VHDL / Verilog/ MATLAB Parallel programming using OPENMP / MPI / CUDA Programming models Strong analytical and problem-solving skills: •FPGA implementation flow; related tools; Knowledge of FPGA realization and control software •Cryptographic Algorithms, Security protocols, Post Quantum Cryptography •Knowledge in Side Channel Analysis and fault injection attacks •Recognized industry certifications like CISSP, CEH, OSCP, CSSLP, GIAC etc. are added advantage, •Machine Learning/ Deep Learning algorithms and implementation •Cyber Security Standards, secure coding, security auditing, Vulnerability analysis •Knowledge in using Cyber Security tools such as

				<p>(and)</p> <p>Publications in reputed journals or conferences) in the one or more of the following areas:</p> <ul style="list-style-type: none"> • Cryptology and Post Quantum Cryptography -- (Discrete Mathematics, Hands on experience with crypto systems implementation: encryption and decryption Algorithms like AES, 3DES, GRE, IKE, MD5, SHA, 3DES, NIST short-listed PQC Algorithms, Zero Knowledge proof etc.) • Hardware Security (Side Channel Analysis, Physically Unclonable Functions, hardware security modules and testing. • Quantum Network Security (with focus on Key distillation Engines for QKD, QRNG, Quantum Optics etc.) • AI for Cyber Security (Machine Learning and Cyber Security Interplay, AI based cyber security solutions for detecting zero-day attacks, Malware/Ransomware detection) • Network Security (Embedded Systems/ IOT/ IIOT security, 5G/6G Security, Blockchain for cyber security, CA Software, Web application security, Identity management, Security Assurance, Zero Trust systems) 	<p>Wireshark, Metasploit, TCPDump, NMap, Burp Suite, Splunk, Tor, Snort, NAGIOS, ACUNETEX, Antivirus tools</p> <ul style="list-style-type: none"> • Product development and management including version control, release management, testing & evaluation, project planning & budgeting and lab design and implementation experience. • Candidates involved in Product Development / Technology Innovation / Applied Technology etc. • Experience in preparation of Technology foresight and Roadmap
2	<p>2023-11-001</p> <p>Senior Scientist (2 Posts)</p> <p>Stage-11 (Equivalent to Level-13 of 7 CPC Pay)</p> <p>45 years</p> <p>Total Remuneration : Rs. 2,24,414/- Approximate in the basic of Rs. 1,23,100/-</p>	<p>B.E./ B.Tech. with 60% or above marks or equivalent CGPA in Electronics and Communication/ Computer Science and Engineering/ Information Technology/ Information Systems</p> <p>(OR)</p> <p>Master's Degree in Science</p>	<p>M. E. / M. Tech. / Ph. D. (Engineering) in Electronics and Communication/ Computer Science and Engineering/ Embedded Systems / VLSI Design/ Information Security/ Signal Processing</p> <p>(OR)</p> <p>Ph.D. in Mathematics/ Statistics/</p>	<p>12 years' experience in Research & Development experience and Solid foundations in cryptography and cyber security.</p> <p>(and)</p> <p>Must have Lead R&D projects as Investigator; product development, designed and field deployed cyber security solutions/ products; Prepared and Implemented R&D Proposals;</p> <p>(and)</p>	<p>Programming in C / C++ / Python / VHDL / Verilog/ MATLAB Parallel programming using OPENMP / MPI / CUDA Programming models Strong analytical and problem-solving skills:</p> <ul style="list-style-type: none"> • FPGA implementation flow; related tools; Knowledge of FPGA realization and control software • Cryptographic Algorithms, Security protocols, Post Quantum Cryptography • Knowledge in Side Channel Analysis and fault injection attacks

		<p>Subjects in Computer Science or Mathematics or Statistics with 60% or above marks.</p>	<p>Electronics and Communication/ Computer Science/ Information Security/ Quantum Computing and Communication</p>	<p>Knowledge in cryptographic algorithms, standards, communication protocols, security standards and vulnerability analysis, API security Development & testing, design & Coding experience for Hardware/ Software solutions and field deployment of R&D outcomes in Cyber Security.</p> <p>(and)</p> <p>Publications in reputed journals or conferences) in the one or more of the following areas:</p> <ul style="list-style-type: none"> • Cryptology and Post Quantum Cryptography -- (Discrete Mathematics, Hands on experience with crypto systems implementation: encryption and decryption Algorithms like AES, 3DES, GRE, IKE, MD5, SHA, 3DES, NIST short-listed PQC Algorithms, Zero Knowledge proof etc.) • Hardware Security (Side Channel Analysis, Physically Unclonable Functions, hardware security modules and testing. • Quantum Network Security (with focus on Key distillation Engines for QKD, QRNG, Quantum Optics etc.) • AI for Cyber Security (Machine Learning and Cyber Security Interplay, AI based cyber security solutions for detecting zero-day attacks, Malware/ Ransomware detection) • Network Security (Embedded Systems/ IOT/ IIOT security, 5G/6G Security, Blockchain for cyber security, CA Software, Web application security, Identity management, Security Assurance, Zero Trust systems) 	<ul style="list-style-type: none"> • Recognized industry certifications like CISSP, CEH, OSCP, CSSLP, GIAC etc. are added advantage, • Machine Learning/ Deep Learning algorithms and implementation • Cyber Security Standards, secure coding, security auditing, Vulnerability analysis • Knowledge in using Cyber Security tools such as Wireshark, Metasploit, TCPDump, NMap, Burp Suite, Splunk, Tor, Snort, NAGIOS, ACUNETEX, Antivirus tools • Product development and management including version control, release management, testing & evaluation, project planning & budgeting and lab design and implementation experience. • Candidates involved in Product Development / Technology Innovation / Applied Technology etc. • Experience in preparation of Technology foresight and Roadmap
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Equivalent Work Experience for Higher Qualifications

In case of candidates with higher qualification, equivalent work experience in lieu of higher degree is as follows:

- 2 years for Master's degree in Engineering & Technology
- 3 years for Doctorate in Mathematics/Statistics/Computer Science
- 4 years for Doctorate in Engineering & Technology

These posts carry Pay and allowances as per SETS Recruitment and Assessment Rules (RAR), 2017.

The initial appointment will be made for a period of five years, on contract basis, with probation of one year.

General Conditions.

- a) The applicant must be a citizen of India.
- b) All applicants must fulfil the essential requirements of the post and other conditions stipulated in the advertisement as on the closing date of on-line application. They are advised to satisfy themselves before applying that they possess the essential qualifications laid down for various posts as on the closing date of on-line application. No communication in regard to eligibility will not be entertained.
- c) The prescribed essential qualifications are minimum and mere possession of the same does not entitle candidates to be called for interview. The duly constituted screening committee will adopt its own criteria for short-listing the candidates. The candidate should therefore, mention in the application all the qualifications and experiences in the relevant area over and above the minimum prescribed qualification, supported with documents. Completion of Ph.D degree will be reckoned from the date of issue of provisional certificate/notification.
- d) The application should be accompanied by self-attested copies of the relevant educational qualification, experience etc. The prescribed qualifications should have been obtained from recognized Universities/Institutions etc. Incomplete applications (or) applications not accompanied with the required certificates/documents are liable to be rejected.
- e) In respect of equivalent clause in essential qualification, if a candidate is claiming a particular qualification as equivalent qualification as per the requirement of advertisement, then the candidate is required to produce supporting documents in this regard, indicating the authority (with number and date) under which it has been so treated otherwise the application is liable to be rejected.
- f) The period of experience rendered by a candidate on part time basis, daily wages, (visiting/guest faculty) will not be counted while calculating the valid experience for short listing the candidates for interview.
- g) The date for determining the upper age limit, qualifications and /or experience will be the closing date of on-line application i.e. 15.12.2023.

- h) The period of experience in a discipline/area of work, wherever prescribed, shall be counted after the date of acquiring the minimum educational qualifications prescribed for that Grade.
- i) Only outstation candidates called and found eligible for interview will be paid/restricted to and fro single second AC class rail fare from the actual place of undertaking the journey or from the normal place of his/her residence whichever is nearer to Chennai on production of Rail Ticket Numbers or any other proof of journey.
- j) Any discrepancy found between the information given in application and as evident in original documents will make the candidate ineligible for appearing in interview. Such candidate will not be paid any fare.
- k) The decision of the SETS in all matters relating to eligibility, acceptance or rejection of applications, mode of selection, conduct of examination/interview will be final and binding on the candidates.
- l) Canvassing in any form and/or bringing any influence political or otherwise will be treated as a disqualification for the post.
- m) NO INTERIM ENQUIRY OR CORRESPONDENCE WILL BE ENTERTAINED

Application Procedure:

1. Candidates are advised to go through this advertisement carefully in detail for determining their eligibility as per laid down criteria for the post.
2. **Only applications received through ONLINE submission by visiting SETS website www.setsindia.in/careers will be considered.** Submission of online applications will open at **10:00 AM on 10.11.2023 and close at 6:00 PM on 15.12. 2023.**
3. A non-refundable application fee of Rs. 700/- (Rupees Seven Hundred Only) through the on-line payment mode to be remitted to the SETS bank account, details given below:
Name of Beneficiary/ Account holder: SETS, Chennai
Beneficiary Bank: Indian Bank
Branch Name: Lattice Bridge Road, Chennai 600 041
Account No.: 430969098 IFSC: IDIB000L006
Transaction details towards proof of payment to be furnished in the application form (screenshot of payment of the application fee to be uploaded i.e., UTR No. & date).
4. Candidates belonging to SC/ST/PWD Category & Female applicants are exempted from the application fee.
5. Candidates may please note that application fee paid through any other mode like cheque, DD or cash will not be accepted towards payment of application fee.
6. SETS will not be responsible in case of incomplete transactions during the online payment process. Only those applications with proper fee payment/exemption details will be considered.
7. Application fee once paid shall not be refunded under any circumstances.

8. Candidates who apply for more than one position, should submit separate applications for each position and remit the application fee for each position separately.
9. Candidates are requested to attach the following supporting documents:
 - a) Scanned copy of Personal Particulars form (pdf format) duly filled and signed. The Personal Particulars form is available at SETS homepage <https://setsindia.in/careers>
 - b) [Scanned copies of academic certificates \(PDF document\)](#)
 - c) Proof of payment
10. The last date for submitting the applications via Online submission is **15th December, 2023 (6 PM)**.
11. Shortlisted candidates would be required to attend a written test and/ or Interview as decided by SETS, Chennai. The venue, date and time of written test/interview will be intimated to the shortlisted candidates by email.
12. Applicants working in Central Government or State Government, or Autonomous Institutions or Public Sector Organizations must send their applications through proper channel or produce No Objection Certificate (NOC) for attending Interview from their respective organization.
13. SETS reserves the right to restrict the number of candidates to be invited for the interview based on qualification and working experience or reject any or all the applications.
14. In case of any difficulty with regard to online submission of form, candidate can send their queries to the email id : rec23-01-sp@setsindia.net.

Executive Director