Dr. Sajaad Ahmed Lone
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PROFESSIONAL SUMMARY

Dedicated academician with over 18 years of experience in teaching, research, academic leadership, and institution building in Computer Science and Engineering. Passionate about teaching programming and software development, with particular focus on Object-Oriented Programming**,** problem-solving, and experiential learning. Actively engaged in multidisciplinary research in IoT**,** Machine Learning**,** and Information Security, with experience in leading and contributing to externally funded research projects. At the Islamic University of Science and Technology (IUST), have contributed to strengthening the technological and innovation ecosystem through the establishment of advanced facilities, including the e-Yantra Embedded Systems and Robotics Lab in collaboration with the Indian Institute of Technology Bombay, AICTE IDEA Lab under All India Council for Technical Education, Centre for Drone Technology**,** and Centre for Cybersecurity. Committed to student mentoring, innovation, collaborative research, and contributing meaningfully to academic excellence and societal impact.

EDUCATION

- Ph.D. from Department of Electronics and Communication Engineering, National Institute of Technology Srinagar, Jammu and Kashmir, India ;**2024.**
- M.Tech in Information Technology from Guru Gobind Singh Indraprastha University, New Delhi; **2006**.

P.HD THESIS

- ***"A Novel OTP-Based Tripartite Authentication Scheme"*** under the supervision of Prof. A.H. Mir, Department of Electronics and Communication Engineering, National Institute of Technology Srinagar.

WORK EXPERIENCE

- Senior Assistant Professor, Department of Computer Science and Engineering, Islamic University of Science and Technology from 2008
- Senior Technical Consultant, HCL Infosystems Ltd, Noida from 2007-2008.
- Lecturer in the Department of Computer Science, JSS Academy of Technical Education, Noida UP India (2006-2007).

ADMINISTRATIVE POSITIONS HELD

- Head, Department of Computer Science and Engineering, IUST, Kashmir (2022-2025).
- Coordinator, Technology Business Incubation, CIED, IUST Kashmir (2021-Till date)

- Coordinator AICTE-IDEA Lab, IUST (2023 –Till date)
- Coordinator e-Yantra IIT Bombay Embedded Systems and Robotics Lab, IUST Kashmir (2016-2025)
- Coordinator Network Support Services, DIT& SS, IUST Kashmir (2020-till date).

RESEARCH PROJECTS

- **CIED IUST Foundation Inclusive Technology Business Incubator (iTBI)**
  Role: : Co-Principal Investigator (Co-PI)
  Funding Agency: Department of Science and Technology (NIDHI-DST)
  Project Budget: **₹5.0 Crore**
- **A Multiversity Alliance on Health and Energy Through Engineered Biomolecular Systems**
  Role: Co-Principal Investigator (Co-PI)
  Funding Agency: Anusandhan National Research Foundation (ANRF), under the Indian Institute of Science Education and Research Pune PAIR Project
  Project Budget: ₹**2.3 Crore**
- **Smart High-Density Apple Orchards Monitoring using IoT and Machine Learning**
  Role: Principal Investigator (PI)
  Funding Agency: Jammu and Kashmir Science, Technology and Innovation Council (JKSTIC)
  Project Budget: **₹10.30 Lakhs**
- **Authenticating J&K Domicile Certificates Using Biometric-Based QR Codes**
  Role: Co-Principal Investigator (Co-PI)
  Funding Agency: Jammu and Kashmir Science, Technology and Innovation Council (JKSTIC)
  Project Budget: **₹10.30 Lakhs**
- **Detection of Duplicate Medicine using Secure QR Codes and Machine Learning**
  Role: Co-Principal Investigator (Co-PI)
  Funding Agency: Jammu and Kashmir Science, Technology and Innovation Council (JKSTIC)
  Project Budget: **₹10.80 Lakhs**
- **Conceptualizing SEaaS-based Unified IoT Architectural Framework for Futuristic IoT Applications**
  Role: : Co-Principal Investigator (Co-PI)
  Funding Agency: INTI International University, Malaysia
  Project Budget: **RM 50,000**
- **A Lightweight Security Mechanism for IoT-based Healthcare Systems**
  Role: Co-Principal Investigator (Co-PI)
  Funding Agency: Jammu and Kashmir Department of Science and Technology (JKDST)
  Project Budget: **₹7.0 Lakhs**
- **Biometric-Based QR Codes for Document Security**
  Role: Co-Principal Investigator (Co-PI)
  Funding Agency: Technical Education Quality Improvement Programme
  Project Budget: **₹2.0 Lakhs**

PATENTS

- **Smart Tash Naer** – An IoT-enabled intelligent handwashing system inspired by the traditional Kashmiri "Tash Naer," designed for weddings and social events. The system automatically detects hand presence, dispenses water, filters and recycles used water, counts user interactions, and transmits usage data to the cloud for monitoring and analytics. Patent Filed, ***Application No. TEMP/E-1/119740/2024-DEL (2024).***

- **Smart Anti-Hail Netting System** – A technology-driven protective system designed to safeguard high-density orchards from hailstorm damage and adverse weather conditions. *Patent Filed, **Application No. TEMP/E-1/113586/2024-DEL (2024).***

STARTUP

- **Founder & Director, Dynaapple Labs LLP** — Incubated by CIED IUST Foundation; leading commercialization-focused R&D in AI, IoT, computer vision, and drone-based smart orchard technologies for precision agriculture in Jammu and Kashmir.

PUBLICATIONS (JOURNALS/CONFERENCES/BOOK CHAPTERS)

- Zahoor, Irwa, and Sajaad Ahmed Lone. **"Child Computer Interactions: Cognitive development and segmenting unsafe video contents: A review."** Entertainment Computing 53 (2025): 100931 **(SCI)**.
- Nissar, G., Khan, R.A., Mushtaq, Sajaad A. Lone, Ayaz Hassan Moon **" IoT in healthcare: a review of services, applications, key technologies, security concerns, and emerging trends"**. Multimedia Tools Appl (2024). https://doi.org/10.1007/s11042-024-18580-7 **(SCI)**
- Dar, J.A., Srivastava, K.K. & Lone, S.A. "**Optimization Based Deep Learning for COVID-19 Detection Using Respiratory Sound Signals".** Cognitive Computation 16, 1927–1946 (2024). https://doi.org/10.1007/s12559-024-10300-5 **(SCI)**
- Dar, J.A., Srivastava, K.K. and Lone, S.A. (2022), "**Jaya Honey Badger optimization-based deep neuro-fuzzy network structure for detection of (SARS-CoV) Covid-19 disease by using respiratory sound signals"**, International Journal of Intelligent Computing and Cybernetics, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/IJICC-03-2022-0062 **(Scopus/ESCI)**
- Dar, J.A., Srivastava, K.K. and Lone, S.A., (2022)**, "Fr-WCSO-DRN: Fractional Water Cycle Swarm Optimizer-Based Deep Residual Network for Pulmonary Abnormality Detection from Respiratory Sound Signals",** SN Computer Science, 3(5), pp.1-21**. (SCI)**
- Dar, J.A., Srivastava, K.K. and Lone, S.A., (2022)," **Design and development of hybrid optimization enabled deep learning model for COVID-19 detection with comparative analysis with DCNN, BIAT-GRU, XGBoost"**, Computers in Biology and Medicine, p.106123. **(SCI)**
- Lone, S.A. and Mir, A.H. (2021), **A novel OTP based tripartite authentication scheme**, International Journal of Pervasive Computing and Communications. **(Scopus/ESCI)**
- Khan, R.A., Lone, S.A. (2021), **A comprehensive study of document security system, open issues and challenges**. Multimedia Tools Applications 80, 7039–7061. **(SCI)**
- Lone, S.A. and Mir, A.H.,(2019) ,**A Stable and Secure One-Time-Password Generation Mechanism Using Fingerprint,** International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278- 3075, Volume-8 Issue-9, **(Scopus)**
- Lone, S.A., Mir, A.H. (2019) **A stable and secure one-time-password generation mechanism**, Journal of Advanced Research in Dynamical and Control Systems, 11 (6 Special Issue),pp.1187-1196 **(Scopus)**
- Mehraj, T., Sheheryar, M.A., Lone, S.A., Mir, A.H. (2019) **A critical insight into the identity authentication systems on smartphones**, Indonesian Journal of Electrical Engineering and Computer Science, 13 (3), pp. 982-989. DOI: 10.11591/ijeecs.v13.i3.pp982-989 **(Scopus)**
- Khan, B. U. I., Olanrewaju, R. F., Mattoo, M. U., Aziz, A. A., & Lone, S. A. (2017). **Modeling malicious multi-attacker node collusion in MANETs via game theory**. *Middle-East Journal of Scientific*

Research, *25*(3), 568-579. **(Scopus)**

- Lone, S. A., & Mir, A. H. (2022). "**Smartphone-based biometric authentication scheme for access control management in client-server environment"**. International. Journal of. Information. Technology and Computer. Science, 14(4), 34-47.
- Lone, S.A., Mir, A.H**. "User Authentication Mechanism for Access Control Management: A Comprehensive Study**" (2022), International Journal of Communication and Computer Technologies, 10(2): 54-63.
- Zahoor, Irwa, and Sajaad Ahmed Lone**. "Designing an Educational Model with Non-Intrusive Sensing and Multimodal Interactions: Integrating Technology with Education in Learning Environments."** Proceedings of the International Conference on Innovative Computing & Communication (ICICC 2024) .
- Zahoor, Irwa, and Sajaad Ahmed Lone **"Interactive Design For Child-Centric Learning: Bridging Technology And Education In In Learning Environments** " Proceedings of 3rd International Conference On Sustainable Cities And Urban Landscapes (ICSULA 2024) pp 44.
- Khan, R.A., Mushtaq, S., Lone, S.A. et al. "**Integrating ABHA for authentication and key exchange: A hybrid security framework for smart healthcare in India"**. Peer-to-Peer Netw. Appl. 18, 130 (2025). https://doi.org/10.1007/s12083-024-01868-8.
- Nissar, G., Khan, R.A., Mushtaq, S., Lone, S.A., Moon, A.H. (2023**). "A Lightweight Authentication Scheme and Security Key Establishment for Internet of Medical Things"**. Proceedings of Fourth International Conference on Computing, Communications, and Cyber-Security. CCCS 2022. Lecture Notes in Networks and Systems, vol 664. Springer, Singapore. https://doi.org/10.1007/978-981-99-1479-1_59
- Mushtaq, S., Khan, R.A., Lone, S.A., Moon, A.H., Qadri, M. (2023**)." Improved Complexity in Localization of Copy-Move Forgery Using DWT"** . Proceedings of Fourth International Conference on Computing, Communications, and Cyber-Security. CCCS 2022. Lecture Notes in Networks and Systems, vol 664. Springer, Singapore. https://doi.org/10.1007/978-981-99-1479-1_61
- Olanrewaju, R. F., Khan, B. U. I., Baba, A., Mir, R. N., & Lone, S. A. (2016, July**). RFDA: Reliable framework for data administration based on split-merge policy**. In *2016 SAI Computing Conference (SAI)* (pp. 545-552). IEEE.
- Khan, B. U. I., Baba, A. M., Olanrewaju, R. F., Lone, S. A., & Zulkurnain, N. F. (2015, August). **SSM: Secure-Split-Merge data distribution in cloud infrastructure**. In *2015 IEEE Conference on Open Systems (ICOS)* (pp. 40-45). IEEE.
- Khan, B. U. I., Olanrewaju, R. F., Baba, A. M., Mir, R. N., & Lone, S. A. (2016). **DTASR: dual threshold-based authentication for secure routing in mobile adhoc network**. *World Eng. Appl. Sci. J*, *7*(2), 68-73.
- Khan, B. U. I., Olanrewaju, R. F., Baba, A. M., Zulkarnain, N. F., & Lone, S. A. (2017**). STCM: Secured Trust-Based Communication Method in Vulnerable Mobile Adhoc Network**. In *9th International Conference on Robotic, Vision, Signal Processing and Power Applications* (pp. 149-161). Springer, Singapore.
- Khan, B. U. I., Zulkurnain, N. F., Olanrewaju, R. F., Nissar, G., Baba, A. M., & Lone, S. A. (2016, September). **JIR2TA: Joint Invocation of Resource-Based Thresholding and Trust-Oriented Authentication in Mobile Adhoc Network**. In *Proceedings of SAI Intelligent Systems Conference* (pp. 689-701). Springer, Cham.
- Dar, S. A., & Lone, S. A. (2015). **An application of morphological image processing to**

forensics. *International Journal of Computer Engineering and Technology*, *6*(8).

- Maqbool, S., & Lone, S. A. (2015**). Monitoring system using GSM**. *International Journal of Computer Applications*, *117*(10).
- Maqbool, S., & Lone, S. A. (2015). **"GSM based Monitoring and Control of Systems** "I.J. Wireless and Microwave Technologies, 2015, 4, 15-23
- Lone, S. A. (2012). "**Critical Insight into Design of Routing Metrics in Wireless Mesh Networks** "International Journal of Engineering and Technical Research (IJETR)
- Lone, S. A., Mir,F.A (2015) "**Multimedia Stream Transmission in Mobile Adhoc Networks**", International Conference on Advances in Computers, Communication and Electronic Engineering, University of Kashmir

WORKSHOPS AND CONFERENCES

- One-week Online Faculty Development Programme on "**Quantum Computing Foundations and Applications**" held during October 27 – November 2, 2025, organized by the Faculty of Computer Technology (FoCT) of Assam down town University, Guwahati, Assam.
- One Week Faculty Development Program on **"Generative AI "** from 03-02-2025 to 08-02-2025 Organized by E & ICT Academy, IIT Kanpur.
- One Week AICTE–VAANI Workshop, **"*Kashmiri Language in the Digital Era: Leveraging AI & Deep Learning for Preservation and Promotion in Urdu Language",*** Islamic University of Science and Technology, **13–15 Oct 2025**.
- One week Faculty Development Program on **"Internet of Flexible Things (IoFT): Smart, Stretchable, and Sustainable Devices"** organized by MNNIT Allahabad under the "Scheme of financial assistance for setting up of Electronics and ICT Academies (Phase-II)" by the Ministry of Electronics and Information Technology (MeitY), Government of India from 11th August, 2025 to 17th August, 2025.
- One Week International Faculty Development Program on "**Cutting Edge Technologies in Computer Science "from** 23-09-24 to 29-09-2024 Organized by Department of Computer Science Engineering**,** Eswari Engineering Collage Chennai.
- One Week Workshop on **" Design and Modelling of IOT ,AI&ML Systems"** Organized by – All India Council for Technical Education (AICTE), ATAL Academy, Arm Education and STMicroelectronics from August 1st to 5th 2022"
- AICTE sponsored two weeks online Faculty Development Program on "**Artificial Intelligence and Ambient Intelligence**" from 25th Jan 2021 to 6th Feb 2021 organized by School of Computing Science , Hindustan Institute of Technology and Science Chennai.
- One week Faculty Development Program on **"Machine Learning using Python"** conducted by the Electronics and ICT academy, IIT Roorkee at Islamic University of Science and Technology Kashmir from 01 July to 05 July,2019.
- One week workshop on **"Data Science and Information Security Boot camp"** organized by Department of Computer Science and Engineering and Department of Electronics and Communication Engineering, Islamic University of Science and Technology, Jammu and Kashmir in collaboration with MAKUAT,West Bangal from 11th to 15th June 2019.
- One week National Faculty Development Program on **"Research Trends in Information Technology(RTIT-2018) "** organized by Department of Computer Science and Department of Computer Science and Engineering, Islamic University of Science and Technology ,Jammu and Kashmir from 25th to 29th September 2019.
- One Day **"Entrepreneurship Awareness Camp (EAC) "** organized by Entrepreneurship Development

Cell,Islamic University of Science and Technology ,Jammu and Kashmir in collaboration with EDC/ESC/ and NIMAT-DST under ambit of TEQIP-III on 10th October, 2018.

- One Week workshop on **"FPGA Programming in Power and Control Applications "** organized by Department of Electrical Engineering, Islamic University of Science and Technology ,Jammu and Kashmir from 10th to 14th September 2018.
- Workshop on **"Outcome Based Education "** organized by School of Engineering and Technology **,**Islamic University of Science and Technology ,Jammu and Kashmir from 26th to 27th March, 2018.
- Four Days workshop on **"Instructional Excellence in Intelligent Systems"** under Intel College Excellence Programme organized by Department of Computer Science and Engineering , Islamic University of Science and Technology ,Jammu and Kashmir in Collaboration with FICE-Intel from 14th to 17th November 2017.
- Workshop on **"Preparation of Research Proposal for Funding Agencies"** organized by Islamic University of Science and Technology, Jammu and Kashmir in Collaboration with Engineering Staff College of India from 26th to 28th September 2017.
- Workshop on **"Scientific and Technical Documentation using LATEX "** organized by Department of Electrical Engineering**,**Islamic University of Science and Technology ,Jammu and Kashmir in Collaboration with Engineering Staff College of India from 21 to 22 December 2017.
- Workshop on **"Technical Paper Writing ,Patent Drafting and Filling "** organized by Department of Electronics and Communication Engineering**,**Islamic University of Science and Technology ,Jammu and Kashmir from 12th to 14th December 2017.
- International Workshop on **"Cyber Communication Security and Laws "** organized by Department of Electronics and Communication Engineering**,**Islamic University of Science and Technology ,Jammu and Kashmir on 8th May, 2017.
- Workshop on **"How to Write and Publish Scientific Articles and Manuscripts "** organized by Islamic University of Science and Technology ,Jammu and Kashmir and Springer Nature on 15th December,2017.
- Workshop on **"Introduction to Robotics "** organized by Department of Computer Science and Engineering **,**Islamic University of Science and Technology ,Jammu and Kashmir in collaboration with e-Yantra IIT Bombay from 25th to 26th April 2016.
- Three Weeks **"Special Winter School Refresher Course"** organized by UGC Academic Staff College ,University of Kashmir from 10th February 2015 to 03 March 2015.
- Participated in **"2015 International Conference on Advances in Computers, Communication and Electronic Engineering"** (COMMUNE 2015) organized by Postgraduate Department of Electronics and Instrumentation Technology, University of Kashmir from 16th to 18th March,2015.
- Faculty Development Program on **"Networking and Security"** organized by Department of Computer Science and Engineering, Islamic University of Science and Technology, Jammu and Kashmir in collaboration with Network Bulls Gurgaon from 21st to 23rd November 2013.
- International Workshop on **"Optimization Techniques and Software's"** organized by Department of Statistics, University of Kashmir in collaboration 46th Annual Convention of Operation Research Society of India(ORSI) from 19th to 23 October 2013.
- Workshop on **"Embedded System and VLSI Design in Robotics"** organized by **School** of Interdisciplinary Science and Technology I2IT Pune from 6th to 10th February 2012.
- Workshop on **"DreamSpark Yatra-2012"** organized by Department of Computer Science and Engineering, Islamic University of Science and Technology, Jammu and Kashmir in collaboration Microsoft Student Partners on 24th June, 2012.

- Workshop on **"Embedded System and Robotics"** organized by I3India Technologies New Delhi from 15th to 22 February ,2012.
- Workshop on **"Mission 10X"** organized by School of Technology, Islamic University of Science and Technology, Jammu and Kashmir in collaboration Wipro from 24th to 28th October 2011.
- International Seminar on "**Envisioning Quality: Academic Professionalization in Higher Education Based on Indo-British Experiences"** organized by UGC Academic Staff College, AMU Aligarh from 6th to 7th February 2010.
- Three weeks UGC Sponsored "**Orientation Program"** at UGC Academic Staff College, AMU Aligarh from 20-Januray-2010 to 18th February ,2010.

AWARDS AND ACHIVEMENTS

- Best Tech-Based Startup Award by CIED –IUST Foundation at National –Academia Industry Conclave 4.0 Organized by Islamic University of Science and Technology, Kashmir in 2024.

DOCTORAL RESEARCH SUPERVISION

- **Scholar Name:** Irwa Zahoor
  Research Topic: Enhanced Multimodal Framework for YouTube Video Classification to Safeguard Children's Digital Spaces
  Status: Ongoing (2024–Present)
- **Scholar Name:** Tufail Irshad
  Research Topic: Not Assigned Yet
  Status: Ongoing (2025–Present)
- **Scholar Name:** Rabiya Majeed
  Research Topic: Not Assigned Yet
  Status: Ongoing (2025–Present)
- **Scholar Name:** Nasreena Ali
  Research Topic : Not Assigned Yet
  Status: Ongoing (2026–Present)

COURSES TAUGHT

- Object Oriented Programming using C++
- Java Programming
- Advanced Java Programming
- Programming for Problem Solving
- Web Technologies
- Advanced JavaScript
- Operating System

CO-ACADEMIC ACTIVITIES

- Academic Coordinator, Department of Computer Science and Engineering, IUST
- Member Doctoral Research Committee, Department of Computer Science and Engineering, IUST
- SRAC Member in the Department of Computer Science Engineering and the Department of Computer Science at IUST,
- Member Departmental Monitoring Committee, Department of Computer Science and Engineering, Islamic University of Science and Technology, Jammu and Kashmir.

- Member Departmental Purchasing Cum-Technical Committee (DPTC), CSE, IUST
- Member DPTC, Directorate of Information Technology and Support Services.
- Nodal Officer, Directorate of Internal Quality Assurance, Islamic University of Science and Technology, Jammu and Kashmir.
- Coordinator, Technology Business Incubation, CIED, IUST, Kashmir.
- IUST Campus Coordinator, ICT Academy Tamil Nadu.
- Coordinator Network Support Services, Directorate of Information Technology and Support Services, Islamic University of Science and Technology, Jammu and Kashmir.

ACADEMIC LEADERSHIP & INSTITUTIONAL RESPONSIBILITIES

- Developed the Institutional Development Plan (IDP) for the Department of Computer Science and Engineering at the Islamic University of Science and Technology.
- Nominated as University Resource Person for mentoring other departments in preparation of Institutional Development Plans and strategic academic planning.
- Contributed to the development of the Cyber Security Policy at Islamic University of Science and Technology, focusing on institutional information security, network protection, data privacy, access control, and cyber risk management.

INNOVATION LABS ESTABLISHED

- Established the first **e-Yantra Embedded Systems and Robotics Lab** in Jammu & Kashmir at Islamic University of Science and Technology in collaboration with Indian Institute of Technology Bombay under the Ministry of Education, Government of India (2016).
- Established the first **AICTE IDEA Lab in Jammu & Kashmir** at the Islamic University of Science and Technology with support from All India Council for Technical Education to promote innovation, prototyping, interdisciplinary research, and startup development.
- Established the **Centre for Drone Technology** at Islamic University of Science and Technology in association with DroneVerse, Gurugram, Haryana to facilitate DGCA-approved drone training**,** skill development, certification, applied research, and innovation in UAV technologies

PERSONAL DETIALS

- Father's Name -Mr Mohd. Abdullah Lone
- Date of Birth - 15-04-1980
- Place of Birth – Poshkreedy, Anantnag, Kashmir
- Nationality - Indian
- Marital Status - Married
- Languages Known - English, Urdu, Kashmiri,