

Dr. Manju Kumari

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At Present

SPOC, SWAYAM Nodal Officer

IndiaAI Fellowship Nodal Officer

J. C. Bose University of Science and Technology, YMCA, Faridabad 121006 INDIA.

Work Experience (14 years)

- Working as Assistant Professor in the Department of Electronics Engineering from 21/03/2012 – Till date
- Worked as Assistant Professor in Manav Rachna College of Engineering, Faridabad from 28/09/2011-28/02/2012

Education

Course	Board/University	Year	Division
Ph.D. (Electronics and Communication Engineering/ Image Processing)	Ph.D. Title: Design and Analysis of an Efficient Secured Mechanism for Preserving Image Confidentiality		
	J.C. Bose University of Science and Technology, Y.M.C.A, Faridabad	July 2023	SCI/SCOPUS: 4 Conference: 2
M.Tech. (Electronics and Communication Engineering)	Deenbandhu Chhotu Ram University of Science and Technology, Murthal (Sonipat)	2011	First
B.E. (Electronics and Communication Engineering)	M.D.U., Rohtak	2009	First
12th (non-medical)	C.B.S.E	2005	First
10th	C.B.S.E	2003	First

Publications

- Total Publications: 11
- Citations/H-Index/ i-10 index: 293/7/5
- Article Under Processing: 02

Research: Publications/Conferences/Workshop	
Particulars	Total
Papers Published in SCI/SCIE indexed journals	02
Papers Published in ESCI/SCOPUS indexed journals	05
Papers (Under Review) SCI	02
Conference Proceedings	03
Papers presented in National/International Conferences	12
Workshop/ Short Term Course Attended	18

LIST OF PUBLISHED PAPERS

1. Manju Kumari, Shailender Gupta " Performance Comparison between Chaos and Quantum-chaos based image encryption Techniques", *Multimedia Tools and Applications, Springer Nature* 2021, vol. 80, Issue 24, 33213–33255, **August 2021**, <https://doi.org/10.1007/s11042-021-11178-3>. **SCIE/SCI**.
2. Manju Kumari, Shailender Gupta, Anjali Malik "A Superlative Image Encryption Technique Based on Bit Plane using key-based Electronic Code Book", *Multimedia Tools and Applications, SpringerNature*, vol. 79, Issue 11, 33161–33191, **August 2020**. <https://doi.org/10.1007/s11042-020-0962>. **SCIE/SCI**.
3. Manju Kumari, Shailender Gupta "A novel image encryption scheme based on intertwining chaotic maps and RC4 stream cipher", *3D research, Springer Nature*, Vol. 9, Issue 1, 10, SpringerNature, **March, 2018**, <https://doi.org/10.1007/s13319-018-0162-2>. **ESCI/SCOPUS**.
4. Manju Kumari, Shailender Gupta, Pranshul Sardana "A survey of Image encryption algorithms", *3D Research, Springer Nature*, vol. 8, Issue 37, **November 2017**, <https://doi.org/10.1007/s13319-017-0148-5>. **ESCI/SCOPUS**.
5. Manju Kumari, Vipin Pawar, Pawan Kumar, "A novel image encryption scheme with Huffman encoding and steganography technique" *International Journal of network security and its applications (IJNSA)*, Vol. 11, No.4, pp. 49–73, **July 2019**, <https://doi.org/10.5121/ijnsa.2019.11404>. **UGC listed**.
6. Divya Chaudhary, Shailender Gupta, and Manju Kumari, "A novel hybrid security mechanism for data communication networks," *International Journal of Information Privacy, Security and Integrity*, vol. 2, no. 3, pp. 216-231, **October 2016**, <https://doi.org/10.1504/ijipsi.2016.078592>. **SCOPUS**.
7. Neha Verma, Rakhi Rani, Manju Kumari, "Optimum Sensor Node Localization in Wireless Sensor Networks", *International Journal of Recent Research in Electrical and Electronics Engineering (IJRREEE)*, ISSN No.2349-7815, Vol.2, Issue4, pp.30-39, <https://www.paperpublications.org/upload/book/Optimum%20Sensor%20Node-499.pdf> **December 2015, SCOPUS**.
8. Neha Verma, Manju Kumari, "Energy Efficient Distributed Data Compression in wireless Sensor Networks", *International Journal of Engineering Development and Research (IJEDR)*, ISSN:2321-9939, Vol. 3 Issue 1, pp. 231-236, <https://www.rjwave.org/ijedr/papers/IJEDR1501043.pdf> **February 2014, UGC listed**.
9. Lalit Rai, Manju Kumari, Madhu Nimesh "AI-Enhanced Adaptive Fractional-Order PID Control for Robust Liquid Level Regulation in Interacting Tank Systems," *International Journal of Emerging Technologies and Innovative Research (JETIR)*, vol. 12, no. 9, pp. F698–F704, ISSN: 2349-5162, <http://dx.doi.org/10.56975/jetir.v12i9.573414>, **September 2025, Peer Reviewed**.
10. Manju Kumari, Lalit Rai, and Madhu Nimesh, "Performance Analysis of a Cryptographically-Agile Authentication Framework for 6G Network Slices," *Advanced International Journal for Research (AIJFR)*, E-ISSN: 3048-7641, <http://dx.doi.org/10.63363/aijfr.2025.v06i06.2670> **December 2025, Peer Reviewed**.
11. Manju Kumari, Madhu Nimesh, Lalit Rai, "Soil Productivity Estimation for Environment Health Management Using Machine Learning and IOT," *International Journal of Scientific Research in Engineering and Management*, vol. 9, no. 10, <https://doi.org/10.55041/IJSREM53028>, **October 2025, Peer Reviewed**.

INTERNATIONAL CONFERENCES

1. Manju Kumari, Shailender Gupta, "Performance Comparison of Quantum Chaos based image encryption Techniques", presented in online International Conference on "Smart Modernistic in Electronics and Communication" - ICSMEC – 2020, organised by St. Martin's Engineering College, Dhulapally, Secunderabad, Telangana State, India, held on 29-30th June 2020. in Proc. Kala Sarovar (UGC Care Group-1 Journal) ISSN:0975-4520, Vol-32 No.02(V) **July-September 2020**.
2. Manju Kumari, Shailender Gupta, "Comparison of Chaotic and Quantum Chaotic Image Encryption Techniques", presented in International Conference on Applied Mathematics and Computational Sciences 2019, ICAMCS-2019, organised by Dehradun Institute of Technology, Dehradun (Uttarakhand), **17-19th October, 2019**.
3. Gaurav Sharma, Shailender Gupta and Manju Kumari, "A Survey of Image Encryption Schemes based on Chaos Theory", is presented in 11th INDIACOM-2017 / 4th International Conference on computing for sustainable Global Development, organized by Bharti Vidyapeeth's Institute of Computer Applications and Management, New Delhi, IEEE conference ID:40353, **1-3rd march, 2017**
4. Lalit Negi, Manju Kumari and Ramanpreet Kaur, "Comparative Analysis of Octave and Band Pass Filter for Improving Hearing Capability of Deaf People," *2023 3rd International Conference on Innovative Sustainable Computational Technologies (CISCT)*, Dehradun, India, Corpus ID: 266480122, **8 September 2023**, pp. 1-6, doi: 10.1109/CISCT57197.2023.10351312.
5. Manju Kumari, Anubha Gautam, Kalpana Sheokand and Keshav, "An Improved Water Level Fuzzy Controller for the Drum Boiler System," *2025 IEEE DELCON - International Conference on Recent Smart Technologies in Engineering for Sustainable Development*, New Delhi, India, 2025, pp. 1-8, **31 October 2025 - 02 November 2025**, doi: 10.1109/DELCON68055.2025.11400274.

M.TECH. THESIS GUIDED (6) MEMBERSHIPS

Life Member of Indian Science Congress, India 270551

WORKSHOP/FDP/SEMINAR ATTENDED (19)

S. No.	Activity Attended	Title	Date From	Date To	Broad area	Funded by	N/I	Venue	Brief Report
1	Workshop Attended	One day SWAYAM NPTEL SPOC Felicitation Workshop North Zone	17.01.2026	17.01.2026	SWAYAM / NPTEL	Ministry of Education	National	IIT Kanpur	Strengthened understanding of SWAYAM-NPTEL initiatives and effective implementation of online technical education
2	FDP/STC Attended	One Week STC on Advances in Signal Processing, Communication and VLSI Design (ASPCV-2024)	22.04.2024	27.04.2024	Signal Processing, Communication and VLSI Design	University	National	National Institute of Technology, New Delhi	Recent advancements in signal processing, communication system and VLSI design
3	Workshop Attended	One Week Workshop on Electronics Materials and Devices fabrication and Characterization	29.01.2024	02.02.2024	Materials and Devices fabrication	University	National	J.C. Bose University of Science and Technology, YMCA, Faridabad	Enhanced knowledge of advanced electronics materials, device fabrication techniques

S. No.	Activity Attended	Title	Date From	Date To	Broad area	Funded by	N/I	Venue	Brief Report
4	Workshop Attended	TEQIP -III Sponsored one week workshop on MATLAB and Simulink with Hands on Practice	22/07/2019	26/07/2019	Electronics Engineering	TEQIP	National	J.C. Bose University of Science and Technology, YMCA, Faridabad	-
5	Workshop Attended	MOOCs and Digital Learning	29/07/2019	29/07/2019	Digital India	TEQIP	National	J.C. Bose University of Science and Technology, YMCA, Faridabad	-
6	Workshop Attended	Mainstreaming Gender in Higher Education	13/09/2017	15/09/2017	startup	AICTE	National	NIT, Kurukshetra	The three-day workshop highlights the gender gap narrowing in higher education
7	Workshop Attended	MATLAB ad Simulink with Handson practice	22/07/2019	26/07/2019	Technical	TEQIP	National	J.C. Bose University of Science and Technology, YMCA, Faridabad	The workshop provides basic knowledge of MATLAB software, and some projects were also implemented.
8	Workshop Attended	Internet of Things	20/09/2019	21/09/2019	Technical	TEQIP	National	J.C. Bose University of Science and Technology, YMCA, Faridabad	Two-day workshop organised by department of computer engg., jboseust,ymca, faridabad
9	Workshop Attended	System Design using IOT 2018	6/3/2018	8/3/2018	Technical	TEQIP	National	J.C. Bose University of Science and Technology, YMCA, Faridabad	The program provides basics and hands on training based on IOT
10	Workshop Attended	Women Health Awareness and Depression	7/4/2017	7/4/2017	Digital India	Others	National	YMCA University of Science and Technology, Faridabad	The workshop brings awareness and free check- ups of two most common cancers in women i.e. breast cancer and cervical cancer. Also highlights the key issues and symptoms of depression among women.
11	FDP/STC Attended	Real time data acquisition and analysis using Lab VIEW	8/5/2017	12/5/2017	Technical	University	National	YMCA University of Science and Technology, Faridabad	The course provided knowledge of Lab View software. Its procedure, practice and applications.

S. No.	Activity Attended	Title	Date From	Date To	Broad area	Funded by	N/I	Venue	Brief Report
12	FDP/STC Attended	Research Methodology	6/6/2016	17/06/2016	Technical	AICTE	National	YMCA University of Science and Technology, Faridabad	The course was based on types of research and various methods to achieve it
13	FDP/STC Attended	Recent Advances and Entrepreneurship in Renewable Energy	22/08/2016	27/08/2016	startup	Govt. Scholarship Scheme	National	YMCA University of Science and Technology, Faridabad	The course was based on technologies and related research in renewable energy
14	FDP/STC Attended	Recent developments in application-based technologies in engineering	30/11/2017	6/12/2017	Technical	TEQIP	National	J.C. Bose University of Science and Technology, YMCA, Faridabad	The program gives the overview application based latest research areas like IOT, machine learning and solar energy conservation etc.
15	FDP/STC Attended	Emerging Trends in Optical for all domain applications (ETO DA-19)	11/3/2019	15/03/2019	Technical	TEQIP	National	Deenbandhu Chhotu Ram University of Science and Technology, Murthal	The program gives the overview of upcoming optical based technologies in various engineering domain.
16	FDP/STC Attended	Intellectual Property Rights and Patenting	23/04/2018	27/04/2018	startup	AICTE	National	J.C. Bose University of Science and Technology, YMCA, Faridabad	The one-week course was based on detailed knowledge of benefits of IPR and patenting and how to file a patent.
17	FDP/STC Attended	Embedded World	26/11/2018	30/11/2018	Technical	AICTE	National	J.C. Bose University of Science and Technology, YMCA, Faridabad	The course was based on Embedded system design techniques and latest softwares of simulations
18	Technical Activity Attended	Rural and Swadeshi Startup Meet	2/12/2017	2/12/2017	startup	Govt. Scholarship Scheme	National	IIT, Delhi	-

RESPONSIBILITIES/POSITIONS AT UNIVERSITY LEVEL

Responsibilities	Duration
IndiaAI Fellowship Nodal Officer	20.11.2025 to till date
SPOC or MOOC/SWAYAM Nodal Officer (UCC & DA Cell)	01.01.2025 to till date
Hostel warden (Kasturba Hall)	01.02.2019 to 28.10.2022
Alumni and Corporate affair cell member	20.08.2020 to 31.05.2022
Website Updation committee member	23.12.2020 to 05.01.2021
R&D committee member in research information and dissemination	09.09.2022 to 09.09.2023
Co-coordinator of Samarpan Club	05.09.2020 to till now
MOOC Coordinator (UCC & DA Cell)	06.10.2020 to 31.12.2024
Committee member of Technical and Cultural events for NBA visit, Foundation Day, Convocation and orientation programs	-
Member of NAAC Committee	2017 and 2022
Member of Convocation Committee	2014, 2016, 2017 and 2023
B.tech/Mtech counseling, Invigilation duty in university exams, Antiragging duty	-

ORGANIZING SEMINARS/CONFERENCES/WORKSHOPS, OTHER COLLEGE/UNIVERSITY ACTIVITIES

S. No.	Title of the Seminars/ Conferences/ Workshops, other College/University activities	Organized by	Duration
1	Two week "Yoga Camp" as a part of International Yoga Day, 2022	University Girls Hostel in collaboration with DSW Office and Community College of Skill Development of J.C. Bose University of Science and Technology, YMCA, Faridabad	18 April 2022 to 1 May 2022
2	Value added Course on "Python Programming Language with Hands on Training"	Department of Electronics Engineering, J.C. Bose University of Science and Technology, YMCA, Faridabad	11 April 2022 to 4 May 2022
3	FDP on "Work-Life Balance for Technocrats"	Department of Management Studies and Department of Electronics Engineering, J.C. Bose University of Science and Technology, YMCA, Faridabad	20 May 2022 to 24 May 2022
4	Value added Course on "Industry Readiness Program"	Department of Electronics Engineering, J.C. Bose University of Science and Technology, YMCA, Faridabad	18 November 2022 to 15 December 2022
5	Basic Bootcamp Program on "US and Its Applications"	Department of Electronics Engineering in association with Center for Development of Advanced Computing (CDAC-Noida), J.C. Bose University of Science and Technology, YMCA, Faridabad	22 July 2024 to 26 July 2024
6	Seminar on the theme of "Flexible Electronics: Real World Applications"	Department of Electronics Engineering in collaboration with the " Institute of Engineers (India), J.C. Bose University of Science and Technology, YMCA, Faridabad	7 March 2025 to 8 March 2025
7	Complimentary Session for students as "Strategizing Your Path to Higher Education Seminar"	Carrier Launcher, Faridabad	07 February 2025
8	57th Foundation day	J.C. Bose University of Science and Technology, YMCA, Faridabad	16 September 2025
9	National Seminar on "Smart & Sustainable Agriculture for Atmanirbhar Bharat: Technologies, Policies and Practices-2026 (SSAAB-2026)"	Department of Electronics Engineering, J.C. Bose University of Science and Technology, YMCA, Faridabad	7 April 2026 to 8 April 2026