

Manav Rachna International Institute of Research & Studies
Department of Electronics & Communication Engineering

Faculty Publications in National and International Journals
Duration: Jan-Dec 2025 (Calender Year)

S.no.	Name of the authors	Paper Title	Journal Name	Year	Indexing	Quartile
1	Umesh Dutta, Sudesh Pahal, Saloni	A review of different strategies for vehicle collision avoidance	International Journal of Vehicle Information and Communication Systems	2025	SCI, Scopus	Q4
2	Vimlesh Singh, Priya Kapoor	IoT-enabled load power factor optimization in fast EV chargers	Journal of Umm Al-Qura University for Engineering and Architecture	2025	SCI, Scopus	Q1
3	Vimlesh Singh, Priyanka Bnasal, Ashish Sachdev	Multiband Self-Affine Fractal Antenna with Performance for 5G connectivity	Journal of Circuits, systems and Computers	2025	SCI, Scopus	Q3
4	Vimlesh Singh, Rashima Mahajan, Priyanka Bnasal, Neha Chaudhary	Transforming Digital Signal and Image Processing Education: An AI-Driven Approach to Pedagogical Advancements	MDPI(sustainability)	2025	SCI	Q1
5	Abhiruchi Passi	Enhancing Energy Efficiency and Data Reliability in Wireless Sensor Networks through adaptive Multi Hop Routing with integrated Machine Learning	Journal of Machine and Computing	2025	SCI	Q4
6	Raj Kumar, Parveen, Balwinder Singh	Parameter variation analysis of Perovskite (KGeCl ₃) based solar cell using SCAPS-1D simulations	Optoelectronics and Advanced Materials, Rapid Communications	2025	SCI, Scopus	Q4

OTHERS

S.no.	Name of the authors	Paper Title	Journal Name	Year	Indexing	Quartile
1	Ashu Gautam, Anita Venugopal, S. Suma, P. Anbarasu, Shailesh V. Kulkarni & Girisha Ramhari Bombale	An Adaptive Energy Detection Scheme using Estimation of Noise Uncertainty for Cognitive Radio	International Journal of Information Technology	2025	Springer	NA
2	Abhiruchi Passi, Wahid	Clustering an Energy Optimization Technique in Wireless Sensor Networks: Taxonomy and Review	International Journal of Current Engineering and Technology	2025	Google Scholar	NA
3	Namita Kathpal, Shradha Gola, Shobhit Mishra, and Kuricheti Dakshayini	Implementation of Smart Hydroponic Farming Using AI Controller with Mobile Application System	AIJR Proceedings	2025	Google Scholar	NA

Total Count	
Scopus Index	6
Others	3
Q1	2
Q2	0
Q3	1
Q4	3

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S.no.	Name of the authors	Paper Title	Journal Name	Year	Indexing	Quartile
1	Pratima Manhas, Monika	A multi-objective Hitch avoidance Algorithm using NSGA-II	International Journal of Industrial and Systems Engineering	2024	SCI & Scopus	Q3
2	Pratima Manhas, Monika	Vehicle's Movement Control by Fuzzy Inference System Controller for a Collision Avoidance system	International Journal of Intelligent Systems and Applications in Engineering (IJISAE)	2024	SCI & Scopus	Q4
3	Pratima Manhas, Monika	Optimizing Vehicle safety :Fuzzy Logic Controlled automatic braking systems	International Journal of Industrial and Systems Engineering	2024	SCI & Scopus	Q4
4	Dr. Neda Fatima	SARS-CoV-2 virus variant detection and mortality prediction through symptom analysis using machine learning	Engineering Applications of Artificial Intelligence	2024	SCI & Scopus	Q1
5	Umeh Dutta, Shaifali Ruhil, Vandana Khanna, Neeraj Kumar Shukla	Performance analysis of the novel Quad Gate Stacked nano-sheets FinFET device and its application in common source amplifier	International Journal of Nano Dimension	2024	Scopus	Q2
6	Jyoti Verma, Isha Rajput	Implementing advance control strategies to improve the performance of a microgrid	Bulletin of Electrical Engineering and Informatics	2024	SCI & Scopus	Q2
7	Namita Kathpal, Priyanka Goyal	Potential of photonic crystal fiber for designing optical devices for telecommunication networks	Optical and Quantum Electronics	2024	SCI & Scopus	Q2
8	Neda Fatima, Syed Afzal Murtaza Rizvi, Major Syed Bilal Abbas Rizvi	Dermatological disease prediction and diagnosis system using deep learning	Irish Journal of Medical Science	2024	SCI & Scopus	Q1
9	Dr. Yashu Swami	Performance Augmentation, Parameter Modeling and Analysis of Nano-DG-TFET	WSEAS Transactions on Electronics	2024	SCI & Scopus	Q4
10	Leena G., Pankaj Negi, Yash Pal	Performance analysis of grid-connected photovoltaic systems using grey wolf optimisation and genetic algorithm	International Journal of Power and Energy Conversion	2024	SCI & Scopus	Q4
OTHERS						
S.no.	Name of the authors	Paper Title	Journal Name	Year	Indexing	Quartile
1	Abhiruchi Passi, Simran Kaushik , Srinidhi Iyer	CardioEdge –AI Powered Exercise Companion	MR International Journal of Engineering and Technology	2024	Others	NA
2	Umesh Dutta, Shashank Gaur	A Comparative Analysis of VS-CNTFET and CMOS Based Inverter Circuit	MR International Journal of Engineering and Technology	2024	Others	NA

Total Count	
Scopus Index	10
Others	2
Q1	2
Q2	3
Q3	1
Q4	4

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S.no.	Name of the authors	Paper Title	Journal Name	Year	Indexing	Quartile
1	Jyoti Verma, Isha Rajput, Hemant Ahuja	Performance evaluation of microgrid with extreme learning machine based PID controller	Bulletin of Electrical Engineering and Informatics	2022	SCI & Scopus	Q2
2	Jyoti Verma, Sonu Rana, Anil Kumar Gautam	A Wideband Circularly Polarized CPW-Fed Diamond Shape Microstrip Antenna for WLAN/WiMAX Applications	Progress In Electromagnetics Research C (PIER)	2023	SCI	Q3
3	Umesh Dutta, Shaifali Ruhil, Vandana Khanna, Neeraj Kumar Shukla	A 7T high stable and low power SRAM cell design using QG-SNS FinFET	Elsevier AEU-International Journal of Electronics and Communication	2023	SCI & Scopus	Q1
4	Abhiruchi Passi, Somanchi Hari Krishna, Vinitha Kanaka, Ishwarya Kothandaraman	An Enhanced Time Series Analysis to Improve the Performance of 5G Communication Systems	mdpi (Engineering Proceedings)	2023	Scopus	Q3
5	Geeta Nijhawan, Owais Ahmad Shah and Imran Ahmed Khan	A glitch free variability resistant high speed and low power sense amplifier based flip flop for digital sequential circuits	Engineering Research Express	2023	SCOPUS	Q4
6	Y K Awasthi, Gaurav Saxena	Metasurface Instrumented High Gain and Low RCS X-Band Circularly Polarized MIMO Antenna for IoT Over Satellite Application	IEEE Transactions on Instrumentation and Measurement	2023	SCOPUS	Q1
7	Y K Awasthi, Gaurav Saxena	High Isolation Quad-Element SWB-MIMO Antenna with Dual Band-Notch for ISM and WLAN Band Wireless Applications	Advanced Electromagnetics	2023	SCI & Scopus	Q3
8	Y K Awasthi, Namita Kathpal	Design of 16 × 100 Gbps free-space optical system using advanced modulation techniques	Journal of Optics	2023	SCI	Q2
9	Y K Awasthi, Gaurav Saxena	CSRR loaded multiband THz MIMO antenna for nano-communications and bio-sensing applications	Nano Communication Networks	2023	SCI & Scopus	Q1
10	Geeta Nijhawan, Sudhir Dagar	A Hybrid Approach for Moving Object Detection Using TV-L1 Features and RPCA-MOG	International Journal of Sensors Wireless Communications and Control	2023	SCI & Scopus	Q3
11	Geeta Nijhawan, Owais Ahmad Shah and Imran Ahmed Khan	Improved Sense Amplifier Based Flip Flop Design For Low Power And High Data Activity Circuits	International Journal of Engineering Trends and Technology	2023	SCI & Scopus	Q2
12	Jyoti Verma, Sonu Rana, A.K. Gautam	Design and analysis of wideband stair step-shaped rectangular ring microstrip antenna with DGS for IoT applications	International Journal of Online Biomedical Engineering	2023	SCI & Scopus	Q2
13	Neda Fatima; Salman Ahmad Siddiqui; Anwar Ahmad	IoT-based disease prediction using machine learning	Computers and Electrical Engineering	2023	SCI & Scopus	Q1
14	Leena G., Pragati Shrivastava Deb	A New Technique of Reduction for the SISO and MIMO System Model for the Compensator Design	International Journal of Engineering Trends and Technology	2023	Scopus	Q3
15	Leena G., Pankaj Negi, Yash Pal	Grid-Connected Photovoltaic System Stability Enhancement Using Ant Lion Optimized Model Reference Adaptive Control Strategy	Differential Equations and Dynamical Systems	2023	Scopus	Q2
OTHERS						
S.no.	Name of the authors	Paper Title	Journal Name	Year	Indexing	Quartile

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1	Y K Awasthi, Kartik Shekhar Kachhawa, Tarun Pal Singh	Methods of detection of micro-plastic in environment with effect	International Journal of Information Communication and Computing Technology	2023	Others	NA
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Total Count	
Scopus Index	15
Others	1
Q1	4
Q2	5
Q3	5
Q4	1

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Faculty Publications in National and International Journals
Duration: Jan-Dec 2022 (Calender Year)

S.no.	Name of the authors	Paper Title	Journal Name	Year	Indexing	Quartile
1	Y K Awasthi, Priyanka Jain et.al	Quad-Band Circularly Polarized Super-Wideband MIMO Antenna for Wireless Applications	Wiley-International Journal of RF and Microwave Computer-Aided Engineering	2022	SCI & Scopus	Q2
2	Shruti Hathwalia and Naresh Grover	Novel Design of a Digital PLL for Power Reduction	International Journal of Online and Biomedical Engineering	2022	SCI & Scopus	Q2
3	Umesh Dutta, Shaifali Ruhil, Vandana Khanna & Neeraj Kumar Shukla	Design of a 30 Nm Novel 3-D Quad Gate Stacked Nano-Sheets FinFET	Springer Nature Link	2022	Scopus	NA
4	Kokane, D.N., Nijhawan, G., Vashist, S.	Power allocation to enhance non-orthogonal multiple access performance	International Journal of Wireless and Mobile Computing	2022	SCI & Scopus	Q4
5	Geeta Nijhawan, Sudhir Dagar	Area Efficient Moving Object Detection using Spatial and Temporal Method in FPGA	International Journal of Intelligent Engineering and Systems (IJIES)	2022	Scopus	Q3
6	Abhiruchi Passi, Monika, Dipali Bansal	Image Forgery Detection and Localization Using Block Based and Key-Point Based Feature Matching Forensic Investigation	Journal of Applied Science and Engineering (Taiwan)	2022	Scopus	NA
7	Geeta Nijhawan, Owais Ahmad Shah and Imran Ahmed Khan	Low power area efficient self-gated flip flop: Design, implementation and analysis in emerging devices	Engineering and Applied Science Research	2022	Scopus	Q2
8	Geeta Nijhawan, Suman Arora, Gourav Verma,	A solar, thermal, and Piezoelectric Based Hybrid Energy Harvesting for IoT and Underwater WSN Applications	International Journal of Sensors Wireless Communications and Control	2022	SCI & Scopus	Q3
9	Y.K Awasthi, Sonali kumari, Dipali Bansal	A Miniaturized circularly polarized multiband antenna for wi-max, c-band & X-band applications	Progress In Electromagnetics Research C (PIER)	2022	SCI	Q3
10	Y.K Awasthi, Sonali kumari, Dipali Bansal	Proposed multiband fractal monopole antenna for wlan and Wimax application	Progress In Electromagnetics Research C (PIER)	2022	SCI	Q3
11	Y K Awasthi, Sunita Joshi, Y K Awasthi*, Niharika Thakur, Yogita Khanna	Metasurface Inspired Wideband High Isolation THz MIMO Antenna for Nano Communication including 6G Applications and Liquid Sensors	<i>Elsevier-Nano Communication Networks</i>	2022	SCI & Scopus	Q1
12	Y. K Awasthi, Namita Kathpal, Amit Kumar Garg, Priyanka Goel	Design of 16x100Gbps Free-Space Optical System using Advanced Modulation Techniques	<i>Springer-Journal of Optics</i>	2022	SCI & Scopus	Q2
13	Y.K Awasthi and Yogita Khanna	A Single Layer Wideband Absorber for Electromagnetic Interference Minimization in Ku-Band Applications	Cambridge-International Journal of Microwave and Wireless Technologies	2022	Scopus & SCI	Q2
14	Y K Awasthi, Gaurav Saxena, Priyanka Jain	Four-Element Pentaband MIMO Antenna for Multiple Wireless Application Including Dual-Band Circular Polarization Characteristics	Cambridge-International Journal of Microwave and Wireless Technologies	2022	Scopus & SCI	Q2
15	Naresh Grover, Hitanshu Saluja	AMBA AHB Bus with Multiple Masters Using VHDL	ECS Transactions	2022	SCI & Scopus	Q3
16	Neda Fatima, Salman Ahmad Siddiqui, Anwar Ahmad	Chest X-ray and CT Scan Classification using Ensemble Learning through Transfer Learning	EAI Endorsed Transactions on Scalable Information Systems	2022	SCI & Scopus	Q3
17	Pardeep Kumar, Ali Al-Abyadh, Mohammed Hasan, Hani Abdel Hafeez Abdel Azeem, Mohamed Abdulamir	Deep Sentiment Analysis of Twitter Data Using a Hybrid Ghost Convolution Neural Network Model	Computational Intelligence and Neuroscience	2022	Scopus	Q1
18	Leena G., Jeevan V.K.J	Disrupting predatory journals	Current Science	2022	Scopus	Q2

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19	Leena G., Pragati Deb Shrivastava	Order reduction of linear time invariant large-scale system by preserving the impact of dominant poles in the reduced model	International Journal of Modelling and Simulation	2022	Scopus	Q2
20	Leena G., Geeta Yadav, M.K Soni, Dheeraj Joshi	Reliability and Availability Optimization of Smart Microgrid Using Specific Configuration of Renewable Resources and Considering Subcomponent Faults	Energies	2022	Scopus	Q2
21	Leena G., Pankaj Negi, Yash Pal	Performance enhancement of grid-connected photovoltaic systems using Ant Lion optimisation and Genetic Algorithm-based optimisation techniques	Cognitive Computation and Systems	2022	Scopus	Q3

Others						
S.no.	Name of the authors	Paper Title	Journal Name	Year	Indexing	Quartile
1	Rajshree Nahar and Abhiruchi Passi	Comparison of Nano Q plus Operating System with other operating systems in Wireless Sensor Networks with other operating systems in Wireless	SSRG International Journal of Electronics and Communication Engineering	2022	Others	NA
2	Jaya Kaushik, Y.K Awasthi, Naresh Grover	Study to develop Security Against Power Exhausting Attack and Intrusion Detection in Mobile Devices	IEEE Internet of Things Journal	2022	Others	NA
3	Geeta Nijhawan, Viney Malik, Tejbir Singh	A Review on Reconfigurable Antenna	Journal of Electromagnetics	2022	Google scholar	NA
4	Jyoti Verma, Sonu Rana, A.K. Gautam	Rectangular Microstrip Patch Antenna with Partial Ground Slot and Step for 5-6 GHz IoT Applications	I.J. Wireless and Microwave Technologies	2022	Google Scholar	NA
5	Vimlesh Singh	Ku band metamaterial absorber for stealth applications against Radar and Military Satcom	PriMera Scientific Engineering	2022	Google Scholar	NA
6	Jyoti Verma, Sonu Rana, A.K. Gautam	A Comprehensive Study with Challenges of Internet of Things (IoT) based Model for Smart Farming	International Journal of Engineering Trends and Technology	2022	Google scholar	NA

Total Count	
Scopus Index	21
Others	6
Q1	2
Q2	9
Q3	7
Q4	1

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Faculty Publications in National and International Journals
Duration: Jan-Dec 2021 (Calender Year)

S.no.	Name of the authors	Paper Title	Journal Name	Year	Indexing	Quartile
1	Y K Awasthi, Gaurav Saxena, Priyanka Jain	Design of metasurface absorber for low RCS and high isolation MIMO antenna	AEU - International Journal of Electronics and Communications	2021	Scopus & SCI	Q1
2	Thakur, N., Awasthi, Y.K., Siddiqui, A.S.	Reliability analysis and power quality improvement model using enthalpy based grey wolf optimizer	Springer-Energy Systems	2021	Scopus & SCI	Q2
3	Saxena, G., Jain, P., Awasthi, Y.K.	Design and analysis of a planar UWB bandpass filter with stopband characteristics using MMR technique	International Journal of Microwave and Wireless Technologies	2021	Scopus & SCI	Q2
4	Shaifali Ruhil, Vandana Khanna, Umesh Dutta, Neeraj Kumar Shukla	A study of Emerging Semi-Conductor Devices for Memory Application	International Journal of Nano Dimension	2021	Scopus	Q2
5	Monika, Dipali Bansal & Abhiruchi Passi	Image Forensic Investigation Using Discrete Cosine Transform-Based Approach	Wireless Personal Communications	2021	SCI	Q3
6	Vimlesh Singh, YK Awasthi	Design of THz Low Pass Filter Using Split-Ring Resonators	Optik	2021	SCI	Q2
7	Y K Awasthi, G. Saxena, Y. Khanna, P. Jain	Multi-Band Polarization Insensitive Ultra-Thin THz Metamaterial Absorber for Imaging and EMI Shielding Applications	Advanced Electromagnetics	2021	Scopus & SCI	Q3
8	Umesh Dutta, Shaifali Ruhil, Vandana Khanna, Neeraj Kumar Shukla	A study of emerging semi-conductor devices for memory applications	International Journal of Nano Dimension	2021	Scopus	Q2

OTHERS

S.no.	Name of the authors	Paper Title	Journal Name	Year	Indexing	Quartile
1	Mansi Varshney, Divyansh Dixit, Anish Raj, Jyoti Verma	Robotics Process Automation: The Future Digital Worker	Journal of Huazhong University of Science and Technology	2021	Others	NA
2	Suman Arora, Geeta Nijhawan, Gourav Verma	An investigation and Implementation of Solar-Thermal based hybrid Energy harvesting System for WSN	International Journal of Advanced Research in Engineering and Technology (IJARET)	2021	Others	NA
3	Abhinav kumar, Parv Kukreja, Aashutosh Vats, Geeta Nijhawan	Machine learning and its application in temperature monitoring	International Journal of Advanced Research in Engineering and Technology (IJARET)	2021	Others	NA
4	Shruti Hathwalia, Dr.Naresh Grover	A Review of Leakage Power Reduction Techniques for VLSI Applications	SSRG International Journal of Electronics and Communication Engineering	2021	Others	NA
5	Aditya Gajbhiye, Yuvansh, Jyoti Verma	Review Paper on Electronic Stability Control	International Research Journal of Management Sociology & Humanities	2021	Others	NA
6	Vimlesh	Monopole Antenna for Experimental Flight Applications	Aeronautical Society of India	2021	Others	NA
7	Abhiruchi Passi, Arshita Madan, Ishika, Yash Bhardwaj, Rajesh Thapa	Internet of things and its applications	Jxat- Journal of XI'AN university of architecture and technology	2021	Others	NA
8	Naresh Grover, Hitanshu Saluja	Comparative AHB AMBA 2.0 and AXI 4.0 Implementations in SOC Design	Design Engineering	2021	Others	NA
9	Naresh Grover, Shruti Hathwalia	Design of a Low Power PLL Using CS-VCO in 45nm CMOS Technology	Journal of Huazhong University of Science and Technology	2021	Others	NA

Total Count	
Scopus Index	8
Others	9
Q1	1

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Q2	5
Q3	2
Q4	0