

Faculty Publications in 2021-22

SCI JOURNALS

Sr. No.	Name of the Paper Published	Author (s) Name
1.	Speech Recognition using enhanced features with Deep Belief Network for Real Time application Wireless Personal Communication, June 2021	Gurpreet Kaur Mohit Srivastava Amod Kumar
2.	Analysis of Wrist Pulse Signal: Emotions and Physical Pain IRBM (Elsevier), June 2021	N. Garg A. Kumar H.S.Ryait
3.	Comparative Analysis of OFETs Materials and Devices for Sensor Applications Journal of Silicon, Springer, June 2021	Parminder Kaur Sandeep Singh Gill Balwinder Raj
4.	Design and simulation of Triple metal Double-gate Germanium on Insulator Vertical Tunnel Field Effect Transistor Microelectronics Journal, Elsevier	Tulika Chawla Mamta Khosla Balwinder Raj
5.	P-LUET: a prolong lines of uniformity based enhanced threshed algorithm for heterogeneous wireless Sensor Network enabled Internet of things framework Wireless Personal Communication	Tanvi Sood, Kanika Sharma
6.	Parametric Investigation and Design of Junctionless Nanowire Tunnel Field-effect Transistor Journal of Silicon, Springer	Parveen Kumar Balwinder Raj
7.	Speech-Based Vehicle Movement Control Solution Journal of Telecommunications and Information Technology https://doi.org/10.26636/jtit.2021.149820	Gurpreet Kaur Mohit Srivastava Amod Kumar
8.	Methods for Integration of III-V Compound and Silicon Multijunction Solar Cell Journal of Silicon, Springer	Divya Sharma Rajesh Mehra Balwinder Raj
9.	Design of Spintronics based MRAM and Comparative Analysis and MJT and Silicon MOSFET Journal of Silicon, Springer, Feb 2022	Parul Sharma Sandeep Singh Gill Balwinder Raj
10.	Design and Comparative Analysis of various Mixed Halide Perovskite Solar Cells involving different Hole Transport Materials to improve Efficiency Journal of Optical Materials, Elsevier	Divya Sharma Rajesh Mehra Balwinder Raj
11.	Mobile Phone Radiations Effect on the synchronization Between Heart and Brain, Wireless Personal Communications, 2022. https://doi.org/10.1007/s11277-022-09509-0	Suman Pattnaik Balwinder Singh Dhaliwal Shyam Sunder Pattnaik
12.	Low Area and High Performance 6-Bit MUX Based Flash ADC for Wide Band Applications Optical and Quantum Electronics, Springer, March 2022 DOI 10.1007/s11082-022-03652-5	Banoth Krishna Sandeep Singh Gill Amod Kumar
13.	Performance Enhancement and Comparison of Graphene Field Effect Transistor devices coated with HMDS layer Journal of Silicon, Springer, March 2022	M Arun Kumar Ramamany Jayavel Mukannan Arivanandhan Balwinder Raj N. Mohankumar

14.	Design and Analysis of Junctionless based Symmetric Nanogap-embedded TFET Biosensor IETE Journal of Research (2021), https://doi.org/10.1080/03772063.2021.1903347	Girish Wadhwa Balwinder Raj
15.	Comparative Analysis of Photovoltaic Technologies for High Efficiency Solar Cell Design Superlattices and Microstructures, Elsevier Vol. 153, pp. 106861, May 2021.	Divya Sharma Rajesh Mehra Balwinder Raj
16.	Comparative RF and Crosstalk Analysis of Carbon Based Nano Interconnects IET Circuits, Devices & Systems, Vol.15(6), pp. 493-503, 2021	Manjit Kaur Neena Gupta Sanjeev Kumar Balwinder Raj Arun Kumar Singh

INTERNATIONAL JOURNALS OTHER THAN SCI JOURNALS

Sr. No.	Name of the Paper Published	Author (s) Name
1	High Accuracy Face Recognition system for Biometric Security: A Review International Journal of Communication and Computer Technologies (IJCCTS), May 2021	Shiwani Vashist Sandeep Singh Gill Balwinder Raj
2	PAPR Reduction in Filter Bank Multi Carrier Scheme Comparative Analysis for 5G Technology International Journal of Communication Networks and Information Security (IJCNIS), June 2021	Jagriti Kumari Sandeep Singh Gill Balwinder Raj
3	Miniaturized Wearable Fractal Patch Antenna for Body Area Network Applications International Journal of Electronics and Telecommunications, Vol. 67, No.2.2021, pp.149-154. DOI:10.24425/ijet.2021.135957	Vikas Jain Balwinder Singh Dhaliwal
4	Low Area and High Bit Resolution Flash Analog to Digital Converter for Wide Band Applications: A Review Micro and Nanosystems, Volume 14, Number 3, 2022, pp. 191-197(7)	Krishna, Banoth Gill, Sandeep S. Kumar, Amod
5	Compact Flexible and Wearable Fractal Patch Antenna for Medical Body Area Network Applications International Journal of Microwave and Optical Technology, Vol.16, No. 5, September 2021, pp.432-440	Vikas Jain Balwinder S. Dhaliwal Jayant G. Joshi
6	Energy Efficient Clustering Protocols for Wireless Sensor Networks: A Review Webology, Vol. 18(4), 2021, pp. 391-404	Amandeep Kumar Balwinder Singh Dhaliwal Damanpreet Singh
7	Review of MIMO Antenna for 5G International Journal of Advanced Research in Engineering and Technology, Vol. 12, Issue 7, July 2021, pp. 13-24 doi.org/10.34218/IJARET.12.7.2021.002	Bhupender Singh Garima Saini

NATIONAL JOURNALS

Sr. No.	Name of the Paper Published	Author (s) Name
1	PSO based energy efficient clustering protocol for WSNs Journal of engineering & Technology Education, Vol.14, No. 2, pp. 46-50, July-December, 2020	Amandeep Kumar Balwidner Singh Dhaliwal Damanpreet Singh

2.	Design and Analysis of various Solar Cell Technologies for Improvements in Efficiencies Indian Journal of Engineering and Materials Sciences (IJEMS), Feb 2022	Divya Sharma Rajesh Mehra Balwinder Raj
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INTERNATIONAL CONFERENCES/SEMINARS

Sr. No.	Title of the Paper Presented/Accepted along with a Name of the Conference/Seminar (venue, with date)	Author (s) Name
1.	GSA-EEHC:GSA-based multi-hop routing scheme for EEHC 7th International Conference on Sensors and Electronics Instrumentation Advances (SEIA 2021), September 22-24, 2021	Tanvi Sood Kanika Sharma
2.	Quantification of Pain using EEG and Fuzzy logic International Conference on Emerging Technologies: AI, IoT and CPS for Science and Technology Applications, NITTTR Chandigarh, Sept. 6-7, 2021	Amit Kumar Amod Kumar Kanika Sharma
3.	Comparative Study of Biomedical based Physiological Signals for heart monitoring International Conference on Emerging Technologies: AI, IoT and CPS for Science and Technology Applications, NITTTR Chandigarh, Sept. 6-7, 2021	Pushparaj Amod Kumar Garima Saini
4.	Design and Crumpling analysis of a wearable antenna for WiMAX applications 6th IEEE International Conference on Communication and Communication and Electronics Systems (ICCES), Coimbatore, India, pp. 426-429, July 8-10, 2021 doi:10.1109/ICCES51350.2021.9489259 (IEEE Explore)	D. Mandal I. Bala S.S. Pattnaik Balwinder. S. Dhaliwal
5.	Design & Analysis of a flexible 3D printed ring resonator antenna for Bluetooth applications International Conference on Emerging Technologies: AI, IoT and CPS for Science and Technology Applications, NITTTR Chandigarh, Sept. 6-7, 2021	Chahat Jain Balwinder Singh Dhaliwal Rupinder Singh
6.	Characterization and Comparison of 3D Printed Substrate with Varying Infill Density for Antenna Design Applications International Conference on Emerging Technologies: AI, IoT and CPS for Science and Technology Applications, NITTTR Chandigarh, Sept. 6-7, 2021	Kush Singla Balwinder Singh Dhaliwal Garima Saini
7.	A Systematic Review on the Technique for object detection hidden behind the wall International Conference on Emerging Technologies: AI, IoT and CPS for Science and Technology Applications, NITTTR Chandigarh, Sept. 6-7, 2021	Ashima Kaplesh Amod Kumar Garima Saini
8.	Implementation of High-Speed Digital-to-Analog converter for High Bit Resolution two-step Flash Analog-to-Digital Converter Applications International Conference on Emerging Technologies: AI, IoT and CPS for Science and Technology Applications, NITTTR Chandigarh, Sept. 6-7, 2021	Banoth Krishna Sandeep Singh Gill Amod Kumar
9.	Applications of OLEDs for flexible electronics, Biophotonic, Chronic, Optogenetic applications & Different sensors	Bodage Sandip Vasudeo Sandeep Singh Gill Balwinder Raj

	International Conference on Emerging Technologies: AI, IoT and CPS for Science and Technology Applications, NITTTR Chandigarh, Sept. 6-7, 2021	
10.	Comparative Study of Spintronic Based STTMRAM International Conference on Emerging Technologies: AI, IoT and CPS for Science and Technology Applications, NITTTR Chandigarh, Sept. 6-7, 2021	Parul Sharma Sandeep Singh Gill Balwinder Raj
11.	Drain Current Analysis with Process Parameters Variations of Nanowire TFET International Conference on Emerging Technologies: AI, IoT and CPS for Science and Technology Applications, NITTTR Chandigarh, Sept. 6-7, 2021	Parveen Kumar Balwant Raj
12.	Investigation of Impact of Mobile Phone Radiations on EEG/ECG and Modeling of Their Coherence using ANN Ensemble 3rd International Conference on Sustainable and Innovative solutions for Current Challenges in Engineering & Technology (ICSISCET 2021), Madhav Institute of Technology & Science, Gwalior, India, November 13-14, 2021	Suman Pattnaik Balwinder Singh Dhaliwal S.S. Pattnaik
13.	Analysis of the effect of Infill Density of 3D Printed substrate on Rectangular Microstrip Antenna Performance IEEE Sponsored Indian Conference on Antennas and propagation (InCAP 2021), Malaviya National Institute of Technology, Jaipur, December 13-16, 2021	Balwinder Singh Dhaliwal Kush Singla Garima Saini
14.	Compact Z-Shaped Flexible Microstrip Antenna for UHF ISM Band Application International Conference on Recent Trends in Engineering Science, Technology and Management (IC-RTETM-2022), Guru Gobind Singh Polytechnic, Nashik	Mandar P. Joshi Jayant G. Joshi Balwinder Singh Dhaliwal

NATIONAL CONFERENCES/SEMINARS

Sr. No.	Title of the Paper Presented/Accepted along with a Name of the Conference/Seminar (venue, with date)	Author (s) Name
1.	Flexible Wearable Fractal Antennas: An Overview National Convention of Electronics and Telecommunication Engineers, The Institution of Engineers (India), Bathinda, pp.1-6, December 4-5, 2021	Puja Rani Balwinder S Dhaliwal Amod Kumar
2.	Compact Wearable Fractal Patch Antenna and its Performance Analysis for BAN National Convention of Electronics and Telecommunication Engineers, The Institution of Engineers (India), Bathinda, pp.1-6, December 4-5, 2021	Vikas Jain Shubhanshu Pattnaik Balwinder Singh Dhaliwal Jayant G Joshi
3.	Design and Analysis of Patch Antenna for Three Substrates Operating at 2.4 GHz National Conference on Recent Trends in Communication, Computing and IoT (RTCCI-2022), GES's R.H. Sapat College of Engineering, Management Studies and Research, Nashik, February 12, 2022	Shivam Bansal Sachin Maithani Balwinder Singh Dhaliwal Garima Saini

Faculty Publications in 2022-23

SCI JOURNALS

Sr. No.	Name of the Paper Published	Author (s) Name
1.	Design and comparative analysis of various planar perovskite solar cells through numerical simulation using different HTLs to improve efficiency <i>Optical Materials, Elsevier, Vol. 126, April 2022</i>	Divya Sharma, Rajesh Mehra Balwinder Raj
2.	Design and Performance Optimization of doping-less Vertical Nanowire TFET using Gate Stack Technique <i>Journal of Electronic Materials (JEMS) Springer, Vol. 51, Issue 7, pp. 4005-4013, May 2022</i>	Anjana Bhardwaj Pradeep Kumar Balwinder Raj Sunny Anand
3.	Comparative Analysis of Nanowire Tunnel Field Effect Transistor for Low Power Application <i>Journal of Silicon, Vol. 14, pp. 12075–12084, June 2022</i>	Faizan Ansari Tarun Chaudhary Mandeep Singh Balwinder Raj R K Sunkaria
4.	Performance Assessment and Optimization of Vertical Nanowire TFET for Biosensor Applications <i>Transactions on Electrical and Electronic Materials, Springer, Vol.23, pp. 685–692, June 2022</i>	Parveen Kumar Balwinder Raj
5.	Extended Gate to source overlap Heterojunction Vertical TFET: Design, Analysis, and optimization with Process parameter variations <i>Materials Science in Semiconductor Processing, Elsevier, Vol. 145, July 2022</i>	Tulika Mamta Khosla Balwinder Raj
6.	Design of Magnetic Tunnel Junction for Spintronic based STT-MRAM <i>SPIN - World Scientific, Vol. 12 (3), pp. 2250022-30, Aug 2022</i>	Parul Sharma Sandeep Singh Gill Balwinder Raj
7.	Design and Simulation Analysis of Silicon Germanium Nanowire FET for Low Power Applications <i>Journal of Silicon, Springer, Vol. 15, pp. 1491–1497, Sep 2022</i>	Mandeep Singh Tarun Chaudhary Balwinder Raj
8.	Design and Performance Analysis of Zinc Oxide Thin Film Transistor (ZnO ₂ TFT) with High-k dielectric Materials <i>WSPC Nano, Vol. 17, No. 11, pp. 2250083, September 2022</i>	Parminder Kaur Sandeep Singh Gill Balwinder Raj
9.	Investigations on the Design of Compact Flexible Wearable Fractal Patch Antenna for Body Area Networks Applications <i>Wireless Personal Communications, Vol. 126, No.2, September 2022.</i>	Vikas Jain Balwinder Singh Dhaliwal
10.	GeSn based Hetrojunction Double-Gate Tripple metal layer Vertical TFET with Enhanced DC and Analog/RF Performance <i>Micro and Nanostructures, Elsevier, Volume 170, pp. 207392, October 2022</i>	Tulika Mamta Khosla Balwinder Raj
11.	Analog Performance Analysis of High-K Spacer Dual Material Gate Graded Channel Nanotube", Journal of Electronic Materials Springer (SCIE), Vol. 52, pp. 422–428, October 2022	Ashima Rai Vaithiyanathan Dhandapani Balwinder Raj
12.	On 3D-Printed Acrylonitrile Butadiene Styrene- Based Sensors: Rheological, Mechanical, Morphological, Radio Frequency and 4D Capabilities <i>Journal of Materials Engineering and Performance, Vol. 31, No. 11, pp. 8760-74, Nov. 2022.</i>	Chahat Jain Balwinder Singh Dhaliwal Rupinder Singh

13.	Analytical Modeling and Performance Assessment of High Performance Split-Gate Dielectric Modulated InGaAs Gate All Around Junctionless MOSFET Biosensor	Pawandeep Kaur Avtar Singh Buttar Balwinder Raj
	<i>Micro and Nanostructures, Vol. 171, pp. 207395, November 2022</i>	
14.	Comparative study of Hole Transporting Layers Commonly used in High Efficiency Perovskite Solar Cells <i>Journal of Materials Science, Springer, Vol. 57, pp. 21172–21191, November 2022</i>	Divya Sharma Rajesh Mehra Balwinder Raj
15.	Optimization of Tin Based Perovskite Solar Cell Employing CuSbS ₂ as HTL: A Numerical Simulation Approach <i>Journal of Optical Materials, Elsevier, Vol. 134, pp. 113060, December 2022</i>	Divya Sharma Rajesh Mehra Balwinder Raj
16.	Artificial neural networkbased character recognition using SciLab <i>Multimedia Tools and Applications, Vol. 82, No. 2, January 2023.</i>	Priya Darshni Balwinder Singh Dhaliwal Raman Kumar Vincent Aizebeoje Balogun Sunpreet Singh and Catalin Lulian Pruncu
17.	Characterization of 3D printed meta-structure PLA substrate for patch antenna applications in S-band <i>International Journal of Electronics, pp. 1–15, Feb. 2023</i> https://doi.org/10.1080/00207217.2023.2173805	S. Bansal S. Maithani B. S. Dhaliwal G. Saini
18.	On Comparison of 3D-Printed ABS and PVDF-Based Sensors for Body-Centric Utility <i>Arabian Journal for Science and Engineering, February 06, 2023, https://doi.org/10.1007/s13369-023-07658-3.</i>	Chahat Jain Balwinder S. Dhaliwal Rupinder Singh Suman Pattnaik
19.	On 3D Printing of Primary Recycled Polyvinylidene-Fluoride-Based Miniaturized, Flexible, and Wearable Sensor <i>Journal of Materials Engineering and Performance, February 13, 2023</i> https://doi.org/10.1007/s11665-023-07911-8 .	Chahat Jain Balwinder Singh Dhaliwal Rupinder Singh
20.	CL-HPWSR: Cross-layer-based energy efficient cluster head selection using hybrid particle swarm wild horse optimizer and stable routing in IoT-enabled smart farming applications <i>Transactions on Emerging Telecommunications Technologies, Vol. 34, No. 3, March 2023; e4725.</i>	Amandeep Kumar, Balwinder Singh Dhaliwal Damanpreet Singh

INTERNATIONAL JOURNALS OTHER THAN SCI JOURNALS

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1.	Energy Efficient unequal clustering routing algorithm based on Neuro-Fuzzy logic for Wireless Sensor Network <i>Journal of Algebraic Statistics, Vol. 13, Issue 2, June 2022</i>	Swapnil Kapoor Kanika Sharma Balwinder S. Dhaliwal
2.	MOEES-Multi Objective Energy Efficient Clustering Scheme for Wireless Sensor Networks <i>International Journal of Intelligent Engineering and Systems, Vol.15, No.3, pp. 525-535, 2022</i>	Amandeep Kumar Balwinder Singh Dhaliwal Damanpreet Singh
3.	Cross-Layer based Energy Efficient Wireless Sensor Network for Large Farms <i>International Journal of Intelligent Engineering and Systems, Vol. 15, No. 5, pp. 483-493, 2022</i>	Amandeep Kumar Balwinder Singh Dhaliwal Damanpreet Singh

4.	Enhanced Approach for Image Edge Detection Using Histogram Equalization (BBHE) and Bacterial Foraging Optimization (BFO) <i>International Journal of Computer Applications in Technology, Inderscience, Vol. 68, No. 4, pp. 875-880, November 2022</i>	Tanvi Parveen Kumar Balwinder Raj
5.	Energy Efficient Multi-hop Multipath sub clustering routing protocol for Wireless Sensor networks <i>International Journal of Recent Technology and Engineering, Vol.11, Issue 6, March 2023</i>	Kirti Bazar Kanika Sharma
6.	Facial Paralysis Severity Assessment via Convolutional Neural Network <i>International Journal of Engineering Research in Computer Science and Engineering (IJERCSE), Vol.10, Issue 3, March 2023</i>	Sakshi Awasthi Amod Kumar Kanika Sharma
7.	Design and Analysis of Graphene Based Tunnel Field Effect Transistor with Various Ambipolar Reducing Techniques <i>International Journal of Computers, Materials & Continua (CMC) vol.76, no.1, 2023</i> DOI: 10.32604/cmc.2023.033828	Puneet Kumar Mishra Amrita Rai Nitin Sharma Kanika Sharma

NATIONAL JOURNALS

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1.	Design and Analysis of Various Solar Cell Technologies for Improvements in Efficiencies <i>Indian Journal of Engineering and Materials Sciences (IJEMS) Vol. 29, pp. 557-567, October 2022</i>	Divya Sharma Rajesh Mehra Balwinder Raj

INTERNATIONAL CONFERENCES/SEMINARS

Sr. No.	Title of the Paper Presented/Accepted along with the Name of the Conference/Seminar (venue, with date)	Author (s) Name
1.	Design of a Computer Stereo Vision Based Road Marking System <i>IEEE International IoT, Electronics and Mechatronics Conference (IEMTRONICS), June 1-4, 2022</i> DOI - 10.1109/IEMTRONICS55184.2022.9795778	Suryakant Amod Kumar Garima Saini
2.	Enhanced DV-HOP Node Localization Algorithm Based on Nearest Neighbor Distance and Hop-Count Evaluation in WSNs <i>IEEE International IOT, Electronics and Mechatronics Conference (IEMTRONICS), June 1-4, 2022</i>	Kanika Sood Kanika Sharma Amod Kumar
3.	Electrochemical Impedance Spectroscopy for the detection of degradation of edible oil <i>9th International Conference on Advances in Physical Sciences and Materials (ICAPSM), August 18-19, 2022</i>	Apurva Amod Kumar Kanika Sharma Sudeshna Bagchi
4.	Design of Mixed Halide Perovskite Solar Cells for High Efficiency <i>International Conference on Communication and Signal Processing (ICCS-2022), September 23-24, 2022</i>	Divya Sharma Rajesh Mehra Balwinder Raj
5.	Analysis of Thickness on the Dielectric Properties of PET Substrate for Antenna Design <i>International Conference on Communication and Signal Processing, September 27-28, pp.1-6, 2022</i>	Sachin Maithani Shivam Bansal Garima Saini Balwinder Singh Dhaliwal

6.	Study of State-of-the-art Optimized Routing methods in WSNs for Various Applications <i>IEEE 2nd International Conference on Technological Advancements in Computational Sciences (ICTACS), Uzbekistan, pp.180-184, October 2022</i>	V.K. Meena Kanika Sharma Amod Kumar
7.	Design and Parametric Analysis of Pentacene Organic Field Effect Transistor with Varying Dielectric Thickness <i>10th International Conference on Advancements in Engineering and Technology (ICAET-2022), November 11-12, 2022</i>	Yogesh Thakur Balwinder Raj Sandeep Singh Gill
8.	Hetero-junction Organic Solar Cell Design Materials and Structures <i>2nd International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME 2022), Maldives, November 16-18, 2022</i>	Divya Sharma Rajesh Mehra Balwinder Raj Lajwanti Singh
9.	Comparative Study of Materials for Low Voltage Organic and Inorganic Dielectric for OFET <i>8th International Conference on Nanoelectronics, Circuits, & Communication Systems (NCCS-2022) at ARTTC, BSNL Ranchi, November 19-20, 2022</i>	Akanksha Mishra Balwinder Raj S.S.Gill
10.	Comparative Analysis of Multiplier Design for High Performance Applications <i>9th IEEE UP Section Conference on Electrical, Computer and Electronics, IIT Allahabad, December 2-4, 2022</i>	Pankaj Balwinder Raj S S Gill
11.	Effect of Temperature Variations on the Linearity parameters of Graded Channel Nanotube Field Effect Transistor <i>Fourth International Conference on Recent Advances in Materials and Manufacturing (ICRAMM 2022), Velalar College of Engineering and Technology, Erode, Tamil Nadu, December 8-9, 2022</i>	Ashima D. Vaithiyanathan Balwinder Raj
12.	A Compact Flexible Crown Rectangular Fractal Antenna on low-cost PET substrate <i>2022 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON 2022), Bangalore, India, pp. 1886–1890, December 12-16, 2022</i>	Simranjit Kaur Josan Balwinder S. Dhaliwal Sachin Maithani
13.	Design of a 3D printed meta-structure biosourced PLA substrate based patch antenna <i>IEEE Microwaves, Antennas, and Propagation Conference (MAPCON 2022), Bangalore, India, pp. 520-524, December 12-16, 2022</i> https://doi.org/10.1109/MAPCON56011.2022.10047095	B. S. Dhaliwal S. Bansal G. Saini
14.	Design and Simulation of Tin-Halide Cs ₂ SnI ₆ -Based Perovskite Solar Cell for Enhanced Efficiency <i>International Conference on Sustainable Management Practices for Inclusive Growth: Issues, Challenges and Strategies, December 15-16, 2022</i>	Hemant Kumar Piush Verma Balwinder Raj
15.	Simulation Analysis of Energy-Optimized Routing Techniques for Wireless Sensor Networks <i>5th International Conference on Contemporary, Computing and Informatics, December 2022</i>	V.K. Meena Kanika Sharma Amod Kumar
16.	A Brief Review of State-of-the-art Routing Methods in Wireless Sensor Network <i>5th International Conference on Contemporary Computing and Informatics (IC3I), December 2022</i>	Manoj Kumar Meena Kanika Sharma

17.	Foam Based Flexible Z Shaped Microstrip Patch Antenna for 5G Applications <i>Proceedings of 3rd International Conference on Energy Control Computing and Electronic Systems (ICECCES 2022), Tirupati, Andhra Pradesh, December 29-31, 2022</i>	Yashica, Garima Saini Balwinder S. Dhaliwal Jayant G. Joshi
18.	Design and Analysis of Flexible Foam based Antenna for UWB Application <i>Proceedings of 3rd International Conference on Energy Control Computing and Electronic Systems (ICECCES 2022), Tirupati, Andhra Pradesh, December 29-31, 2022</i>	Kulbhaskar Singh Balwinder S. Dhaliwal Garima Saini
19.	AMC Loaded Modified Circular Shaped Antenna for 5G Sub-6 GHz Applications <i>Proceedings of 3rd International Conference on Energy Control Computing and Electronic Systems (ICECCES 2022), Tirupati, Andhra Pradesh, December 29-31, 2022</i>	Alka Yadav Garima Saini Balwinder S. Dhaliwal
20.	Design and Performance Analysis of InSb/InGaAs/InAlAs High Electron Mobility Transistor for High Frequency Applications <i>Congress on Control, Robotics, and Mechatronics (CRM 2023), Modi Institute of Technology, Kota, India, March 25-26, 2023</i>	Prajwal Sandeep Singh Gill Balwinder Raj

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1.	Design and Analysis of Patch Antenna for Three Substrate Operating at 2.4 GHz <i>Proceedings of National Conference on Recent Trends in Communication, Computing and IOT (RTCCI), Feb. 12, 2023, Nashik, India</i>	Shivam Bansal Sachin Maithani Balwinder Singh Dhaliwal Garima Saini

Faculty Publications in 2023-2024

SCI JOURNAL

Sr. No.	Name of the Paper Published	Author (s) Name
1.	Real time cloud based Fault Detection and Alert for Antenna Array using CNN IETE Journal of Research, Published online April 2023 DOI:10.1080/03772063.2023.2195848	Atul M. Kulkarni, Garima Saini, Shyam Sunder Pattnaik
2.	On 3D Printed Flexible and Wearable Sensors from Primary Recycled PVDF National Academy Science Letters, Published online: 30 June 2023 https://doi.org/10.1007/s40009-023-01322-y	Chahat Jain, Balwinder Singh Dhaliwal, Rupinder Singh, Suman Pattnaik
3.	"Design and Analysis of Graphene Based Tunnel Field Effect Transistor with Various Ambipolar Reducing Techniques" International Journal Computers, Materials & Continua (CMC) vol.76,no.1, June 2023	Puneet Kumar Mishra Amrita Rai, Nitin Sharma , Kanika Sharma

INTERNATIONAL JOURNAL OTHER THAN SCI JOURNALS

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1.	Contactless Methods to acquire Heart and Respiratory Signals Journal of Autonomous Intelligence, Vol. 6, Issue 1,2023, DOI 10.32629/Jai.V6i1.715	Pushparaj Pal,Amod Kumar, Garima Saini
2.	Multidisciplinary Research Approach in Advancement of Science and Technology Journal of Autonomous Intelligence, Vol. 6, Issue 2, 2023 DOI 10.32629/Jai.v6i2.742	Pushparaj Pal,Amod Kumar, Garima Saini

INTERNATIONAL CONFERENCES/SEMINARS

Sr. No.	Title of the Paper Presented/Accepted along with the Name of the Conference/Seminar (venue, with date)	Author (s) Name
1.	A Conformal, Planar Inverted F Antenna using Low-Cost Multilayer PET Sheet for Vehicular Application," Wireless, Antenna & Microwave Symposium, 07-10 June,2023, Gandhinagar, India	Sachin Maithani, Garima Saini, Balwinder Singh Dhaliwal, Ravi Kumar Gangwar
2.	Design and Analysis of Flexible Patch Antenna on Transparent PVC Material Substrate," 2nd International Conference on Advances in Computing, Communication and Security (13CS-2023) 01-03 June, 2023, NIT Kurukshetra, India. (Best Paper Award)	Puja Rani, Balwinder Singh Dhaliwal, Amod Kumar
3.	Genetic-CNN Based Fault Diagnosis in Antenna Array, 2023 IEEE International Symposium on Antennas and Propagation (ISAP2023), Kuala Lumpur, Malaysia, 30th October to 2nd November 2023	Atul Marutirao Kulkarni; Shyam Sundar Pattnaik; Garima Saini
4.	Antenna Array Fault Detection Using Logistic Regression Technique, International Conference on Artificial Intelligence of Things, NITTTR Chandigarh, DOI: 10.1007/978-3-031-48781-1_2,	Atul Marutirao Kulkarni Garima Saini, Shyam Sunda Pattnaik
5.	Antenna Array Fault Diagnosis Using Particle Swarm Optimized CNN, 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), 11 o 14 Dec 2023, Ahemdabad	Atul Marutirao Kulkarni Garima Saini, SS Pattnaik, Shubranshu Pattnaik
6.	Design of Miniaturized Antenna Array on 3D Printed PLA Substrate with Fractal Ground, 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), 11 o 14 Dec 2023, Ahemdabad	Atul M Kulkarni, Garima Saini, Shyam S Pattnai

Faculty Publications in 2024-2025

SCI JOURNAL

Sr. No.	Name of the Paper Published	Author (s) Name
1.	" An Improved Cluster Head Rotation approach for Sensor Networks", CINEFORUM Journal, ISSN: 0009-7039, Vol. 64, No. 2, pp. 84-88, June 2024	Birbal Kumar Rajak, Kanika Sharma
2.	"Fault and Location Detection in Planar Antenna Array Using Tuned Stacking Ensemble Machine Learning Approach", Wireless Personal Communications, Springer Nature, 1323- 1348 (2024), Accepted:7 March 2024, Published online- 8th April 2024 , https://doi.org/10.1007/s11277-024-10942-6	Atul M. Kulkarni, Garima Saini, Shyam S. Pattnaik, Shubhranshu Pattnaik,
3.	"Design of High-speed and 6-bit Flash ADC Module for Non-Contact Vital Sign Signal Processing in Biomedical Application", Biomedical Application. Analog Integr Circ Sig Process, 123, 25 (2025). https://doi.org/10.1007/s10470-025-02376-2 .	Pushparaj Pal, Banoth Krishna, Amod Kumar, Sandeep Singh Gill & Garima Saini,

INTERNATIONAL JOURNAL OTHER THAN SCI JOURNALS

Sr. No.	Name of the Paper Published	Author (s) Name
1.	"Enhanced DV-Hop Localization Algorithm for Wireless Sensor Networks" International Journal of Trend in Scientific Research and Development (IJTSRD), Vol. - 7, Issue - 3 (May-Jun 2023)	Jamal Kutty, Kanika Sharma
2.	"Contention Window based MAC Protocol in WSN", Journal of Harbin Engineering University, Vol.44, no. 11, pp.495-503, Nov.2023	A. Rana and K.Sharma
3.	"Energy Efficient Techniques of WSN: A review", Journal of Materials Engineering, Vol.5, no. 2, pp.709-716, July 2023	A. Rana and K.Sharma
4.	"Design of High Speed Low-Power SRAM cell using FinFET in the Stack Method for medical applications" WEAS transactions on Biology and Biomedicine (Special Issue in memoriam Stamatis Vassiliadis)	Monika Sharma, Sandeep S.Gill and Kanika Sharma, Banoth Krishna
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INTERNATIONAL CONFERENCES/ SEMINARS

Sr.No	Title of the Paper Presented/Accepted alongwith a Name of the Conference/Seminar	Author (s) Name
1.	"Design and Performance Analysis of a Polyimide Film Substrate-Based Flexible Microstrip Antenna With Different Thicknesses for 2.45 GHz ISM Band Applications," Proceedings of 5th IEEE International Conference on Recent Trends in Computer Science and Technology (ICRTCST 2024), pp. 371 – 375, 15-16 April, 2024, Jamshedpur, Jharkhand, India.	Rahul Singh, Balwinder S. Dhaliwal, Garima Saini
2.	"Performance of Rectangular Microstrip Antenna on Various Infill Density of 3D Printed ASA Substrate," Proceedings of Second International Conference on Networks, Multimedia and Information Technology (NMITCON), Bengaluru, India, 09 – 10 August, 2024, pp. 1-7, doi: 10.1109/NMITCON62075.2024.10699031.	Manoj Kumar, Garima Saini, Balwinder S. Dhaliwal
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5.	"Effect of Thickness on Dielectric Properties of 3D Printed TPU Substrate for Patch Antenna Design," Proceedings of International Conference on Electrical, Electronics and Computing Technologies (ICEECT), Greater Noida, India, 29 – 31 August 2024.	Manish Bijaraniya, Balwinder S. Dhaliwal, Garima Saini
6.	"Multilayer Flexible Substrate Antenna for Smart Wearable Electronics," 2024 International Conference on Smart Electronics and Communication Systems (ISENSE), Kottayam, India, 06 – 07 December 2024, pp. 1-5, doi: 10.1109/ISENSE63713.2024.10872120	A. Singh, B. S. Dhaliwal and G. Saini
7.	"Extraction of Signal in Noncontact Human Vital Signs Signal Using Machine Learning Approaches", International Conference on Signal, Machines, Automation, and Algorithm, SIGMAA 2023. Advances in Intelligent Systems and Computing, vol 1461, pp. 421-432, Springer, Online ISBN978-981-97-6352-8	Pushparaj Pal, Amod Kumar, Garima Saini, Nuzhat Fatema
8.	Parameter Estimation in Design of 5.2 GHz Rectangular U Slot Microstrip Patch Antenna with ANFIS", Proceedings of World Conference on Artificial Intelligence: Advances and Applications (WCAIAA 2024), 22-23 February, 2024, India, published In: A.K., Tripathi, D., Anand, A.K. Nagar, (eds) Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-97-4496-1_35 (Published on 01 October, 2024)	H. Kaur, and B.S. Dhaliwal
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	and Communication Systems (ISENSE), Kottayam, India, 06 – 07 December 2024, pp. 1-5, doi: 10.1109/ISENSE63713.2024.10872120.	
10.	Fake Indian Currency detection using digital image processing	Harjeet Kaur, Kanika Sharma
11.	An improved cluster head rotation approach for sensor networks	Birbal Kumar Rajak, Kanika Sharma
12.	Improved Dual-Tier Cluster-Based Routing Protocol for Mobile Wireless Sensor network	Gaurav Kumar, Kanika Sharma
13.	Development of Contention Window Based MAC Protocol in Wireless Sensor Network	Adarsh Rana, Kanika Sharma
14.	Improved Adaptive Ranking Based Routing Algorithm for Wireless Sensor Networks	Mohd Shariq Mahboob, Kanika Sharma
15.	Monitoring And Analysis Of A Mumbai Based Deonar Waste Disposal Site Using Low Resolution Satellite Images	Kislaye Sharma, Meenaksh Sood, Amod Kumar
16.	Design Of Hybrid Fusion-Framework For CT and MRI Medical Images Using Multi-Scale Decomposition Techniques	Nirdesh Shukla, Meenaksh Sood, Amod Kumar
17.	Improved Dual-Tier Cluster-Based Routing Protocol For Mobile Wireless Sensor Network	Garuv Goyal, Kanika Sharma
18.	Design Of High Input Impedance & Power Efficient Instrumentation Amplifier For Bio-Medical Application	Pravej Kumar Tanwar, Balwinder Raj, SS Gill
19.	Design Of Low Noise Power Efficient Instrumentation Amplifier For Bio-Medical Applications ()	Ravi Bamnavat, Balwinder Raj, SS Gill
20.	Design Of U2Net Enhanced Convolution Neural Network (UECNN) For Maize Disease Detection And Classification	Sunil Bhardwaj, Meenakshi Sood & Amod Kumar
21.	Miniaturized Antenna Array using Additive Manufactured PLA Substrate with Fractal Geometry and ANN Assisted Fractal Dimensions,” 2024 IEEE Future Networks World Forum (FNWF), pp. 1-5, 2024. DOI: 10.1109/FNWF63303.2024.11028779	Garima Saini, Atul M Kulkarni, Shyam S Pattnaik

