



महात्मा ज्योतिबा फुले
कृषि विद्यापीठ, बरेली

Faculty Profile on University Website

www.mjpru.ac.in

Title	Dr.	Hari	Kumar	Singh	Photograph	
Designation		Assistant Professor – Stage III [AGP-8000]				
Department		Electronics and Communication Engineering				
Address	Campus	E.C.E. Department F.E.T. MJPRU, Bareilly-243006				
	Residence	21-B, Panchsheel Nagar, University Road, Bareilly, Uttar Pradesh				
Mobile No.		+91-9410860110				
Email ID		Personal		harsdik@gmail.com		
		University Domain		hari.singh@mjpru.ac.in		
Professional Networking ID, i.e. Linkedin, Twitter		https://www.linkedin.com/in/dr-hari-kumar-singh-341362258/ https://twitter.com/DrHKSingh1978				
Educational Qualifications (Graduation Onwards)						
Course/Degree		Institution		Year	Details/Thesis Topic/Subjects	
B. Tech		FET, MJP Rohilkhand University, Bareilly		2000	Electronics and Communication Engineering	
M.Tech		NIT, Kurukshetra (HR)		2002	Electronics and Communication Engineering	
PhD		IFTM University, Moradabad		2017	Digital Image Processing and Artificial Intelligence.	
Career Profile						
Organization / Institution				Designation	Duration	Nature of Duties
Shri Krishna Institute of Engineering and Technology, Kurukshetra (HR)				Lecturer	23/07/2001 to 30/06 2003	Teaching
Electronics and Communication Engineering F.E.T, M.J.P.R.U, Bareilly				Guest Faculty	16/07/2003 to 14/06/2005	Teaching
Electronics and Communication Engineering Radha Govind Engineering College, Meerut (UP)				Sr. Lecturer	19/07/2005 to 26/06/2006	Teaching
Electronics and Communication Engineering. College of Engineering and Rural Technology, Meerut (UP)				Assistant Professor	01/08/2006 to 21/08/2008	Teaching
Electronics and Communication F.E.T, M.J.P.R.U, Bareilly				Assistant Professor	28/08/2008 to Till Date	Teaching
Research Interests / Specialization						
Digital Image Processing, Remote Sensing, Artificial Intelligence, Machine Learning, Deep Learning, Wireless Sensor Network, Blockchain Technology and Medical Imaging.						
Research Experience in Years -14 Years						
No of Research Scholars Guided/Guiding – 04 (Research Scholar)						
Name of Programme		Awarded		Under Supervision/Institution		
Ph.D.		2017		Prof. S.K.Tomar , IFTM University, Moradabad U.P		
Dissertation (M.Tech.)		2002		Prof. R.K.Sharma , NIT Kurukshetra, Haryana		

Researcher/ Expert ID	Scopus	Orchid	Publons	Vidwan	Google Scholar				
	57210139659	0000-0001-7025-3482	AAZ-5278-2021	231586	2tEJg6oAAAAJ				
Teaching Experience (Subjects/Courses Taught)									
22 Years of Teaching Experience Undergraduate 02 Years of Teaching Experience Postgraduate									
Digital Image Processing, Digital System Design, Micro Electronics, Digital Electronics, Remote Sensing Mobile Communication, and Artificial Neural Network.									
Honours / Awards & Fellowship FOR OUTSTANDING WORK									
Name of Award/ Fellowship	Awarded By								
	Name of Government Agency	Name of Government Supported Organization/ Department			Name of International Recognized Body				
Research Excellence Award-2022	-	Institute of Scholars (InSc) International Publisher, 2nd Cross, 7th Block, Sir M V Layout, Muddhinapalya, Bengaluru, Karnataka, India.			Institute of Scholars (InSc) International Publisher, India				
Indo Asian-Best Scientist Award 2021	-	IMRF Institute of Higher Education and Research Campus, Vijayawada, India			International Multidisciplinary Research Foundation, Institute of Higher Education and Research, India				
Publications /Academic Activities (Numbers Only)									
Books & Monographs (Single Author)	02	Research Papers Published in International Journals	21	Papers Presented in Seminars/ Conferences	15	Seminars/ Conferences Organized	07	Research Projects (Completed)	02
Books (Co-authored)	03	Research Papers Published in Other Journals	15	Seminar/ Conferences Attended	20	Workshop s Organized	05	Research Projects (Ongoin g)	01
Books (Edited)	07	Articles Published in Popular Fora, e.g., Websites, Newspapers, Magazines etc.	04	Sessions Chaired in Seminars/ Conferences	07	Membership of Academic/ Professional Bodies	06	Research Projects (Submitted)	04
Chapters in Edited Books	05			Resource Lectures Delivered	05	Patents Published / Granted	10	Foreign Countries Visited for Academic Assignments	00

Details of Publications /Academic Activities (2010 Onwards)					
(a) Authored Books/ Monographs					
Name of Book		Year of Publication	Publisher	ISBN No	
Differential Amplifiers and Linear Integrated Circuits		2021	Walnut Publication, International Publisher	978-939-15228-41	
Smart Agriculture Modelling through Image Processing and Remote Sensing Technology		2021	Walnut Publication, International Publisher	978-939-15228-58	
IoT in Multidimensional Approach		2021	INSC Publisher, International Publisher	978-195-61027-89	
Convolution Neural Network for Beginners		2023	Scientific International Publishing House, India	978-93-5757-229-3	
Solar Energy Advancements and Application		2023	Scientific International Publishing House, India	978-93-5757-421-1	
(b) Edited Books					
Year of Publication	Title	Publisher	ISBN	DOI No.	Citations
2012	SAET-2012	Niharkanjali Publication Kanpur	987-81-921124-7-3	-	-
2016	NCAEM-2016	Niharkanjali Publication Kanpur	978-93-82972-12-9	-	-
2016	ICAREMIT-2016	Niharkanjali Publication Kanpur	978-93-82972-19-8	-	-
2018	ICAREMIT-2018	Niharkanjali Publication Kanpur	978-93-82972-27-3	-	-
2019	ICAREMIT-2019	Anukrati Prakashan, Bareilly	978-81-933433-5-7	-	-
2020	ICAREMIT-2020	Anukrati Prakashan, Bareilly	978-81-933433-9-5	-	-
2022	Futuristic Trends in Network and Communication Technologies	IIP Proceedings, Volume 2, Book 19, India and Unit of Selfypage, Novi, Michigan USA	978-81-959356-1-1	-	-
(C) Papers Published in UGC Care Listed /Indexed/ Peer Reviewed Journals					
Science Citation Index (SCI)/ Science Citation Index Expanded (SCIE)					
1. Motilal Rinawa, Prashant Chauhan, Sintu Kumar, Manoj Kumar Singh, Hari Kumar Singh , Amit Sharma and R. P. Sharma “Field Localization and Density Cavitation in Low-Beta Plasmas” Hindawi, Laser and Particle Beams, Volume -2021, Article ID 2891080, 9Pages, https://doi.org/10.1155/2021/2891080 . ISSN: 1469-803X Impact Factor1.160					
2. Kumar Sujit, Dave Vikramaditya, K. Vetri Velmurugan, Yakkala Bhaskarrao, Rupali Singh, Bhasker Pant, Amit Kumar Sharma, Hari Kumar Singh , and Lijalem Mulugeta “Analysis of Structural, optical and aquaphobic properties of zirconium oxide Neno-films by varying sputtering gas” Hindawi, Advances in Materials Science and Engineering, Volume- 2022 Article ID 9968485, 7Pages, https://doi.org/10.1155/2022/9968485 . ISSN: 1687-8442 Impact Factor1.726					
3. Anand Nayyar, Jambi Ratna Kumar, B. Arunadevi and Hari Kumar Singh , VIMNet: A Novel Framework for Accurate Skin Cancer Prediction using dermoscopic images in Journal of Neural Computing and Applications (Q1) ISSN-09410643 Ref No-NCAA-D-23-03729 Year-2023 Impact Factor-6.94 (Comm.)					
4. Sunda Sri Harsha, T.Murali Krishna, Sruthi Nair, Preeti Singh, Parul Gupta, Roopa R, Hari Kumar Singh , N. Sivakumar, Spatial and Spectral Mixture Feature Analysis for Hyperspectral Crop Type Classification in Agriculture in Agronomy Journal (Q1) ISSN:1435-0645, Pages-9, August Year 2023, Impact Factor-2.65 (Comm.)					

Scopus indexed/Web of Science journals

1. Ravindra Pratap Singh, Amit Jain and **Hari Kumar Singh** "Prospect and Consequences of Machine Learning to Wireless Sensor Networks A Systematic Review" Journal NeuroQuantology, ISSN 1303-5150, Volume-20, No 15 (2022) PP 5085-5094, Article Page- 50 Scopus IF-0.29
2. Moti Lal Rinawa, Prashant Chauhan, Rajneesh Sharma, Amarjeet Poonia, **Hari Kumar Singh**, Amit Kumar Sharma and Ram Subbiah, Numerical Investigation of Modified Fin Shapes for the Improved Heat Transfer, in Material Today: Proceedings Volume 62, Part 4, 2022, Pages 1854-1860, ISSN: 1369-7021, 2022, DOI: 10.1016/j.matpr.2022.01.007
3. CH. Mohammad Akram, G. Saritha, Arvind Sharma, **Hari Kumar Singh**, Moti Lal Rinawa and S. Ashwin Kannan "Improving the yield of a solar still with the aid of an evacuated tube" ISSN 1757-899X (Online), IOP Publishing Journal of Physics: Conference Series 2272 (2022) 012009 doi:10.1088/1742-6596/2272/1/012009
4. Rajneesh Sharma, Prashant Chauhan, Amit Kumar Sharma, Atul Katiyar, **Hari Kumar Singh**, Moti Lal Rinawa, and P. Manoj Kumar, Characterization of ZnO/nanofluid for Improving Heat Transfer in Thermal Systems in Journal of Materials Today: Proceedings Volume 62, Part 4, 2022, Pages 1904-1908s, ISSN: 1369-7021, 2022
5. Dr. Sudhakar M, Moti Lal Rinawa; Prashant Chauhan; Amit Kumar Sharma; Hari Kumar Singh; Ankit and M. S Karuna, An investigation on synthesis, aggregation, and mechanical properties of Al 6082 nanocomposites reinforced by Titanium Carbide, in Journal of Materials Today: Proceedings Volume 59, Part 2, 2022, Pages 1526-1532, ISSN: 1369-7021, 2021 DOI: 10.1016/j.matpr.2022.01.406
6. Moti Lal Rinawa, Prashant Chauhan, Amit Kumar Sharma, **Hari Kumar Singh**, Ankit and M. S Karuna, Water Absorption Studies of Pineapple Leaf Fiber/Nano Rice Husk Powder Reinforced Epoxy Matrix Hybrid Composites in Journal of Materials Today: Proceedings, Volume 59, Part 2, 2022, Pages 1498-1502, ISSN: 1369-7021, 2021 DOI: 10.1016/j.matpr.2022.01.279
7. P. K. Bharti, Manoj Kumar Singh, Savrabh Kavar, **Hari Kumar Singh**, Wireless Sensor Networks: Issues, Algorithms and Applications, Year of Publication: 2022, Name of Journal: Design Engineering, ISSN No.: 0011- 9342, Vol:1, Page No.: 2259-2267 Scopus IP-1.41
8. Atul Sarojwal, Atul Katiyar, **Hari Kumar Singh**, "Radio Frequency Based Automatic Efficient Cooler, AC And Blower Control System" in Journal of Webology, Vol 18 Issue 6 | Pages: 7604 -7611, ISSN 1735-188X Scopus IP-1.65, 2021
9. Manoj Kumar Singh, Mohammed Nadeem Khalid, Vivek Schaan, O. P. Upadhyay, Hari Kumar Singh, Motilal Rinawa, M. S. Karuna "Identification and Prioritization of Properties for Composite Materials Usage in Automobiles: An Analytical Hierarchical Process (AHP) Approach" Published in Journal of Design Engineering, Vol 2021 Issue 7 Pages: 12751 -12764, ISSN 0011-9342 Scopus IP-1.41Aug2021
10. **Hari Kumar Singh**, Pooja Singh "Comparative Study of Enhancement Techniques on Different Types of Images" Published in Efflatonia multidisciplinary Journal, PP2390-2402 Volume: 5 Issue 2 ISSN-1110 8703, Web of Science, IF-3.8 March2021
11. **Hari Kumar Singh**, Manoj Kumar Singh "Smart Farming Technologies in Agriculture in India" International Journal of Modern Agriculture, Volume 10, No.2, 2021 ISSN-2305-7246 Web of Science, PP4795 – 4803, IF-0.12, June2021
12. **Hari Kumar Singh**, Pooja Singh, Sanjeev Sharma "Study and Design Noise Cancellation System using Anti-Noise Technique" Vidyabharti International Interdisciplinary Research Journal ISSN: 2319-4979, PP692-697, Web of Science, IF-1.469, Oct 2021
13. Yatendra Kumar, **Hari Kumar Singh**, Atul Katiyar "Compact CP Monopole Antenna with asymmetrical Modified Ground Plane for Wideband Characteristics" Published in Journal of Design Engineering Vol 2021, Issue 7 | Pages 14133-14144 ISSN 0011-9342, Scopus IF-1.41 Aug2021
14. Inderpreet Kaur, **Hari Kumar Singh**, Pooja Singh, Sanjeev Sharma "Next Generation Antenna: Large scale antenna for Mobile Communication" Published in Turkish Journal of Computer and Mathematics Education Volume11 No2 PP816-828, ISSN1309-4653, Scopus, IF-0.33, Sep 2020
15. Yogini Dilip Borole, Subash Ranjan Kabat, Arvind Sharma, **Hari Kumar Singh**, Ashwini Sharma, Nemi Chand Singh "Artificial Neural Network based Advanced Algorithm for new Generation Solar PV Systems" Published in Journal of Nuclear Energy and Power Generation Technology ISSN-23259809, Scopus IF-0.54, 2021
16. Anurag Srivastava, **Hari Kumar Singh**, Praful Vijay Nandankar, Ankit, Prateek Nigam, Motilal Rinawa "A smart Grid Energy Management Optimization Technique" Published in Journal of Nuclear Energy and Power Generation Technology ISSN-23259809, Scopus IF-0.54, 2021
17. Atul Sarojwal, Atul Katiyar, **Hari Kumar Singh**, (2021) "Transparent Solar Cells: A Powerful and Affordable Source of Energy" published in International Journal of Mechanical Engineering, Vol. 6 No. 2 (Special Issue, Nov- Dec, 2021) ISSN:0974-5823, IF- 1.53
18. **Hari Kumar Singh**, Sanjeev Sharma, Pooja Singh, Shiv Kumar Tomar (2020) "Remote Sensing Satellite Data Analysis applied to precision Agriculture Modeling" published in TEST Engineering and Management, January- February 2020 Volume-82, ISSN: 0193-4120 Page No. 15727- 15742
19. Sanjeev Sharma, **Hari Kumar Singh**, Shiv Kumar Tomar (2020) "Application of Remote Sensing and Image Processing for Efficient Urban Planning in India" published in TEST Engineering and Management, January- February 2020 Volume-82, ISSN: 0193-4120 Page No. 15320 - 15329
20. Atul Katiyar, Ajay Yadav, **Hari Kumar Singh** (2018) Model Predictive Control Design for SISO LTI system subjected to bounded constraints Published in Turkish Journal of Computer and Mathematics Education Volume9- No1 ISSN1309-4653, PP170-180, Scopus IF-0.33 April2018
21. **Hari Kumar Singh**, Ajay Yadav, Atul Katiyar (2018) Analysis of Remote Sensed Data Using Neuro- Fuzzy Algorithm: A Case Study of Hyderabad Region Published in Turkish Journal of Computer and Mathematics education Volume9- No1 ISSN1309-4653 PP 181-190, Scopus IF-0.33 April2018

Other Journals

1. Ravindra Pratap Singh, Amit Jain, **Hari Kumar Singh**, Sourabh Pathak (2022) “To analysis of Centralized LEACH protocol to improve the latency in the wireless sensor network” Journal of Electronics Information Technology Science and Management Volume 12, Issue 9, 2022 ISSN No: 0258-7982 Page No: 117-122
2. Vivek Kumar, Neelu Trivedi and, **Hari Kumar Singh** (2021) “A Comprehensive Review on Vivaldi Antenna Used in Electronic Warfare Applications” published in International Journal of Research and Analytical Reviews (IJRAR), December 2021, Volume 8, Issue 4 PP 323-327
3. **Hari Kumar Singh**, Dr. Shiv Kumar Tomar (2016) Technical Paper entitled “Analysis of Remote Sensed Data using Different Image Processing Algorithms applied to Agriculture Yield Optimization Model: A Case Study of Bareilly Region” Published in International Journal of Advance Foundation and Research in Computer (IJAFRC), Volume 2, Issue 9, September - 2015. ISSN 2348 – 4853, Impact Factor – 1.317
4. Pammi kumara, Ravindra Kumar Gautam, **Hari Kumar Singh**, Santosh kumar, Dr. Mayank Kumar Saran and R. P. Singh (2015) “Analysis of Dead Tissues in Medical Images Using Edge Detection Techniques”, IJEEE, Volume 07, Issue 01, Jan- June 2015. Page-72
5. **Hari Kumar Singh**, Dr. S. K. Tomar, and Pooja Singh (2015), Technical Paper entitled “Application of Discrete Fourier Transform on Multispectral Image of Bareilly Region”, Proceeding of International Journal of Advance Research in Science and Engineering, (IJARSE-2015), Vol. No. 4, Special Issue (01), ISSN-2319-8354(E), PP-100-104,
6. Pammi Kumari, Santosh Kumar, **Hari Kumar Singh**, Jeet Singh and Shiv Kumar (2014) “Detection of Dead Tissues by Medical Image Using Clustering” in International Journal of Computer Science and Mobile Computing, Vol. 3, Issue. 12, December 2014, pg.197 – 201
7. Pammi Kumari and **Hari Kumar Singh** (2014) “Analysis of Remote Sensed Data Using Nero-Fuzzy Intelligence System: A Case Study of Shimla Region” in international journal of Research Fellow for Engineering, ISSN-2320-7396, July 2014.
8. Pammi kumari, Santosh kumar, **Hari Kumar Singh** and Jeet Singh “Detection of Dead tissues in Medical Images Using Image Segmentation” in International Journal of Advanced Research in Electronics and Communication Engineering (IJARECE) Volume 3, Issue 11, 2014 page1685-1688
9. Pammi kumari Ravindra Kumar Gautam, **Hari Kumar Singh**, Mridul Saran and Santosh Kumar (2014) “Study and Analysis of Segmentation for Medical Images Based on K-means and Fuzzy c-means Clustering” in International Journal of Computer Science and Mobile Computing, Vol. 3, Issue. 12, 2014
10. Prerna, Jitendra Nath Shrivastva and **Hari Kumar Singh** “Urban Planning through Remotely Sensed Data Using Digital Image Processing: A Case Study of Bareilly Region” in Journal of Basic and Applied Engineering Research, ISSN: 2350-0255; Volume 1, Number 7; October, 2014 pp. 43-48
11. **Hari Kumar Singh**, S. K. Tomar, Prashant Kr Maurya, “Thresholding Techniques Applied for Segmentation of RGB and Multispectral Images” Proceeding of International Journal of Computer Applications, IJCA solicits research papers for the April 2012 Edition.
12. **Hari Kumar Singh**, Pooja Singh and Dr. S. K. Tomar (2013), Technical Paper entitled “Analysis of Multispectral Image using Discrete Wavelet Transform”, in proceeding of IEEE Xplore, 2013, ISSN-2337-0632, PP-59-62.
13. **Hari Kumar Singh**, Prashant Kr Maurya, Khushboo Singh, Pooja Singh (2012) Technical Paper entitled “Discrete Cosine transform And Discrete Fourier Transform of RGB image” in Proceeding of International Journal of Computer Applications, USA solicits research papers for the June 2012 Edition.
14. **Hari Kumar Singh**, Pooja Singh and Khushboo Singh (2012) Technical Paper entitled “Morphological Segmentation and Gradient of Multispectral Image of Bareilly Region” Proceeding of International Journal of Computer Applications Journal, July 2012, published by foundation of C.S, NEW York, USA.
15. **Hari Kumar Singh**, Prashant Kr Maurya, Khushboo Singh, Pooja Singh (2012) “Analysis of Remote Sensed Data Using Hybrid Intelligence System: A Case Study of Bhopal Region” Proceeding of International Journal of Computer Applications, IJCA, USA May 2012

(D) Chapter/Paper Published in Edited Books

1. Inderpreet Kaur, **Hari Kumar Singh**, and Tejasvini Thakral “Wireless Body Area Network Antenna” Book Chapter Published in Wearable and Neuronic Antennas for Medical and Wireless Applications ISBN: 9781119791805 Pages-261 Year-2022 Scrivener Publishing and John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, USA
2. Inderpreet Kaur, **Hari Kumar Singh**, Sanjeev Sharma, Navneet Singh, Yash Bhardwaj “MIMO Antenna for IoT and ISM Band Applications” Book Chapter in Advances of 5G Wireless Communication System in Healthcare Informatics, ISBN: 9781032312194, CRC Press, Taylor and Francis USA
3. Shivam Bhardwaj, Shivam, Jay Varshney, Inderpreet Kaur and **Hari Kumar Singh** “Integrated Circuits Fabrication Techniques For C-MOS, N-MOS and BJT” Book Chapter in Futuristic Trends in Network and Communication Technologies ISBN: 978-81-959356-1-1 IIP Proceedings, Volume 2, Book 19, 2022, PP 249-268, India and Unit of Selfypage, Novi, Michigan USA

4. Yogesh Kumar Goswami, Yogesh Pratap, Kumar Shanu, Inderpreet Kaur and **Hari Kumar Singh** "Analysis of Atmospheric Parameters Using Remote Sensing and ArcGIS" Book Chapter in Futuristic Trends in Network and Communication Technologies ISBN: 978-81-959356-1-1 IIP Proceedings, Volume 2, Book 19, 2022, PP 32-46, India and Unit of Selfypage, Novi, Michigan USA
5. Navneet Singh, Yash Bhardwaj and **Hari Kumar Singh** "Compact 8-Port MIMO Antenna for C-Band and 5G Applications" Book Chapter in Futuristic Trends in Network and Communication Technologies ISBN: 978-81-959356-1-1 IIP Proceedings, Volume 2, Book 19, 2022, PP 293-304, India and Unit of Selfypage, Novi, Michigan USA

(E) Invited as Resource Lectures Person/Examiner/Expert

1. Delivered Series of Lectures on **Digital Image Processing and Mobile Communication** in Year 2012 Sequential M.Tech Course in Department of Electronics and Communication at B.T.Kumaon Institute of Technology Dwarahat, Uttarakhand Technical University, Dehradun, India
2. Invited Talk on **Different image processing algorithms to optimize agriculture yield** in National Conference on Recent advances in science and Technology August 22-23, 2015 held at Seemant Institute of Technology, Pithoragarh, Uttarakhand, India
3. Chaired session of paper presentation in field of **Electrical and Electronics Engineering** in National Conference on Recent advances in science and Technology August 22-23, 2015 held at Seemant Institute of Technology, Pithoragarh, Uttarakhand, India
4. Invited Talk on **Problems and Remedies on job related issues of Engineering Students** in National Conference on Recent advances in science and Technology 2016 held at Seemant Institute of Technology, Pithoragarh, Uttarakhand, India
5. Chaired session of paper presentation in field of **Electrical and Electronics Engineering** in National Conference on Recent advances in science and Technology 2016 held at Seemant Institute of Technology, Pithoragarh, Uttarakhand, India

(F) Seminars/Conferences/Workshops Organized

1. Worked as Co-coordinator in conducting Faculty Development Program on **Environmental Impact Assessment** during 26/03/2015 to 28/03/2015 at Department of Chemical Engineering, MJP Rohilkhand University, Bareilly, U.P.
2. Worked as TPC Member in conducting IEEE sponsored International Conference on **Advances in Computing**, MJP Rohilkhand University, Bareilly, U.P. India
3. Worked as Member Organizing Committee in conducting TEQIP-II sponsored in association with IEEE International Symposium on **Internet of Things: Smart Innovation and Usages** during 22/04/2016 to 23/04/2016 at MJP Rohilkhand University, Bareilly, U.P. India
4. Worked as a Member of Organizing Committee in National conference on **Recent trends in Engineering and Technology** (SAET-2012) at MJP Rohilkhand University, Bareilly, U.P. India
5. Worked as Member Organizing Committee in conducting TEQIP sponsored International Conference on Academic Research in Engineering, Management and Information Technology (**ICAREMIT-2015**) at FET MJP Rohilkhand University, Bareilly, U.P. India
6. Worked as Member Organizing Committee in conducting TEQIP sponsored International Conference on Academic Research in Engineering, Management and Information Technology (**ICAREMIT-2016**) at FET MJP Rohilkhand University, Bareilly, U.P. India
7. Worked as Member Organizing Committee in conducting TEQIP sponsored International Conference on Academic Research in Engineering, Management and Information Technology (**ICAREMIT-2018**) at FET MJP Rohilkhand University, Bareilly, U.P. India
8. Worked as Member Organizing Committee in conducting TEQIP sponsored International Conference on Academic Research in Engineering, Management and Information Technology (**ICAREMIT-2019**) at FET MJP Rohilkhand University, Bareilly, U.P. India
9. Worked as Member Organizing committee in conducting TEQIP-III sponsored workshop on **Project Based Learning using MatLab and Simulink** during 15/02/2019 to 16/02/2019 at ECE Department, FET MJP Rohilkhand University, Bareilly, U.P. India
10. Worked as Member Organizing Committee in conducting TEQIP sponsored International Conference on Academic Research in Engineering, Management, and Information Technology (**ICAREMIT-2020**) at FET MJP Rohilkhand University, Bareilly, U.P. India

(G) Projects (With Title, Year, Grants, Funding Agency and Collaborations)				
Sr. No	Name of the project and Reference No	Funding Agency/Division	Cost (INR) Duration	Status
1	Collaborative Research Project with Mentor Institute, BMS Bangalore	TEQIP-III (MHRD)	4.00 Lakhs (2-Year)	Completed
2	Segmentation of Blood Vessels from Retinal Images using Different Image Processing Algorithms	CST UP Engineering Student's Project Grant Scheme	0.20 Lakh (1-Year)	Completed
3	Monitoring of Sustainable Agriculture of Small Farms Wielding Image Processing Integrating with Sensor Antenna and Machine Learning for Improving Socio Economic Status of Farmers. SUR/2022/000940	Science and Engineering Research Board, New Delhi	30.00 Lakhs (3-Year)	Ongoing
4	Developing a Crop Prediction Model for Sustainable Agriculture in Rural India using Exploratory Data Analysis, IoT and Hybrid Smart Intelligence System	Council of Science & Technology U.P. Vigyan Bhawan Lucknow	16.46 Lakhs (3-Years)	Submitted April 2023
5	Greenhouse automation using solar energy to empower small farmers to socio-economic transformation	Hurtigruten Foundation, Norway	7.2 Lakhs (2-Years)	Submitted May 2023
6	Empowering Rural Communities: Leveraging Solar Powered Hybrid Intelligence Automation System for enhancing employability through Sustainable Agriculture EEQ/2023/000116	Science and Engineering Research Board, New Delhi	49.92Lakhs (3-Years)	Submitted June 2023
7	Deploying Solar Powered Greenhouse Automation Unit to uplift SC/ST Communities through Employment, Social Equality and Sustainable Environment in Rural Regions	Ministry of Science and Technology, Govt of India	116.41 Lakhs (3-Years)	Submitted July 2023

(H) Administrative Positions/Assignments Held

1. Co-coordinator **Remedial Coaching classes for SC/ST students** for MJP Rohilkhand University Funded by UGC, New Delhi
2. Member Purchase committee **TEQIP-II** World Bank Project, Ministry of HRD, Government of India, New Delhi (2013-2016)
3. Member Purchase committee **TEQIP-III** World Bank Project Ministry of HRD, Government of India, New Delhi (2017-2021)
4. **Students Advisor** for Department of Electronics and Communication Engineering for UG/PG Students
5. Served as Observer for conducting Various **Entrance examinations** conducted by M.J.P Rohilkhand University, Bareilly from 2008.
6. External expert for **M. Tech Programme** at Bipin Tripathi Kumaon Institute of Technology (BTKIT) Dwarahat Uttaranchal.

(I) Memberships of Academic/Professional Bodies

Overseas

1. Senior Member The Institute of Research Engineers and Doctors (**IRED**) Headquarters- 42 Broadway, Suite 12-217, New York, NY 10004, USA
2. Member of International Association of Engineers (**IAENG**) is registered at National Taiwan University, Taiwan
3. Member of International Society for Development and Sustainability (**ISDS**) is registered with Japanese Government as a private organization, JAPAN

Indian

1. Associate Member of Institution of Electronics and Telecommunication Engineers (**AM-174411**) since Dec2004 at New Delhi, INDIA
2. Associate Member of Metrology Society of **India (LAM-142)** since Nov 2005 at New Delhi, INDIA
3. Associate Member of Indian Society for Technical Education (**AM-63491**) at New Delhi

Creation of ICT Mediated Teaching Learning Content Development

1. E-Content development for complete course on **Digital Image Processing** at Uttar Pradesh Higher Education Digital Library Year 2020 Suitable for UG/PG students available at <https://heecontent.upsdc.gov.in>
2. E-Content development for complete course on **Mobile Communication** at Uttar Pradesh Higher Education Digital Library Year 2020 Suitable for UG/PG students available at <https://heecontent.upsdc.gov.in>

(J) Seminar/Conference Presentations International Conferences

International Conferences

1. Technical Paper entitled **Comparative study of various image processing Techniques** Published in Proceeding of International Conference on Futuristic Advancements in Material, Manufacturing and Thermal Sciences (ICFAMMT-2022), Jan 20-22, 2022 at IITRAM, Ahmedabad, Gujarat, India
2. Technical Paper entitled **Velocity of Sound using Sonic Waves** Published in Proceeding of International Conference on Futuristic Advancements in Material, Manufacturing and Thermal Sciences (ICFAMMT-2022), Jan 20-22, 2022 at IITRAM, Ahmedabad, Gujarat, India
3. Technical Paper entitled **WSN-IoT Clustering for secure Data Transmission in E-Health Sector using Green Computing Strategy** Published in IEEE Explore, International Conference (Indonesia) CITSM2021 Potensi Utama University 2021
4. Technical Paper entitled **Intelligent Controlled Electronic Speech Supporting Device for Dumb Pharmacy Sales Person** Published in IEEE Explore International Conference (Indonesia) CITSM2021 Potensi Utama University 2021
5. Technical Paper entitled **Comparative Study of Image Compression using Discrete Cosine Transform, Singular Value Decomposition and Discrete Wavelet Transform Techniques** Proceeding of International conference on Academic Research in Engineering, Management and Information Technology (ICAREMIT-2020), ISBN No. ISBN 978-81-933433-9-5 sponsored by IEEE, 01-03 February, 2020, MJP Rohilkhand University, Bareilly.
6. Technical Paper entitled **Remote Sensing Satellite Data Analysis applied to precision Agriculture Modeling** Paper Presented Paper ID-ICEES_MD7HQ8 International Conference ICEES-2020 UNSIET Deokali U.P. 2020
7. Technical Paper entitled "Application of Remote Sensing and image Processing for Efficient Urban Planning in India" Paper Presented Paper ID-ICEES_MD7HQ7 International Conference ICEES-2020 UNSIET Deokali U.P. 2020
8. Technical Paper entitled **Comparative Study of RGB And Multispectral Image Using Image Enhancement Technique** Proceeding of International conference on Academic Research in Engineering, Management and Information Technology (ICAREMIT-2016), sponsored by IEEE, 09-11 Dec, 2016, MJP Rohilkhand University, Bareilly.
9. Technical Paper entitled **Fuzzy C-Means Clustering Algorithm for Analysis of Euclidean Space of Clusters** Proceeding of International conference on Academic Research in Engineering, Management and Information Technology (ICAREMIT-2016), sponsored by IEEE, 09-11 Dec, 2016, pp 303-308, MJP Rohilkhand University, Bareilly
10. Technical Paper entitled **Analysis of Remote Sensed Data Using Neuro- Fuzzy Algorithm: A Case Study of Bareilly Region** Proceeding of International conference on innovations and advancements in information and communication technology (ICIAICT-2012), 30-31 March, 2012, PP-180-189. Greater Noida.

National Conferences

1. Technical Paper entitled **Morphological Segmentation and Directional Gradient of Hyderabad region** Proceeding of National conference on Advancements in Engineering Material (NCAEM-2016), 24-25 Feb, 2016, PP-101-105, ISBN No. 978-93-82972-12-9, organized by Department of Mechanical Engineering, F.E.T MJP Rohilkhand University, Bareilly.
2. Technical Paper entitled **Image Processing Application in Agriculture and Urban Planning** Proceeding of National conference on Recent Advance in Science and Technology (NCRAS-2015), 29-30 Aug, 2016, organized by Seemant Institute of Technology, Pithoragarh, Uttarakhand.
3. Technical Paper entitled **Analysis of Remote Sensed Data using Neuro- Fuzzy Algorithm: A Case Study of Haridwar Region** Proceeding of National conference on Recent Advance in Science and Technology (NCRAS-2015), 22-23 Aug 2015, PP 403-415, organized by Seemant Institute of Technology, Pithoragarh.
4. Presented Technical Paper on **Power Distribution strategies in Co-operative communication** Proceeding of conference on Advances in electronics and communication Technology (AECT-2013), 02/03/2013 Shri Ram Murti Smarak College of Engineering and Technology, Bareilly
5. Technical Paper entitled **Analysis of Satellite Image Data using Artificial Neural Network** Proceeding of conference on Software Applications in Engineering and Technology (SAET-2012), 17, Feb, 2012 MJP Rohilkhand University, Bareilly.
6. Presented Technical Paper on **Analysis of Satellite Image Data using NDVI** Proceeding of conference on Software applications in Engineering and Technology (SAET-2012), 17, Feb, 2012 MJP Rohilkhand University, Bareilly.
7. Presented Technical Paper on **Optimizing Satellite Communications with Adaptive and Phased Array Antennas** Proceeding of conference on Software applications in Engineering and Technology (SAET-2012), 17, Feb, 2012 MJP Rohilkhand University, Bareilly.
8. Presented Technical Paper on **Analysis of Multispectral Image Using Discrete Wavelet Transform** Proceeding of conference on Emerging Technology and System Design (ETSD-2012), 15, April, 2012 Shri Ram Murti Smarak College of Engineering and Technology, Bareilly U.P.
9. Presented Technical Paper on **Design and Simulation of Pyramidal and Sectoral horn Antennas for millimeter wave communication** Proceeding of conference on Emerging Technology and System Design (ETSD-2012), 15, April, 2012 Shri Ram Murti Smarak College of Engineering and Technology, Bareilly U.P. India
10. Technical Paper entitled **An Approach to Very low bit rate Speech Coding**. Proceeding of National conference in recent trends in Information Technology, Dec, 2008 at Bharati Vidyapeeth's college of Engineering, New Delhi.

(K) Participation in Community Service / Exchange Programme / Consulting Activity

Participated in UGC Sponsored 34th Orientation Programme from June 05, 2018 to July 02, 2018 at HRD Centre, University of North Bengal, West Bengal, India

(L) Any Other Details

Paper Setter and Expert for moderation work for Madhya Pradesh Public Service Commission (MPPSC) IInd Floor, Dally College Road, Residency Area, Indore Year 2022 and 2023

Ph.D Supervisions

1. **Mr. Vivek Kumar**, Lecturer, Electronics Engineering, Government Polytechnique is Pursuing his PhD Degree in Field of Antenna on Topic “Vivaldi Antenna in Electronic Warfare Application” in my Guidance from IFTM University, Moradabad, U.P. (2020)
2. **Mr Ravindra Pratap Singh**, Assistant Professor, Department of Electronics and Communication Engineering, B.T.K.I.T Dwarahat Almora, Uttarakhand is Pursuing his PhD Degree in Field of Wireless Communication on Topic “Application of Machine Learning to Wireless Sensor Networks” in my Supervision from SHRI VENKATESHWARA University, Gajraula, Amroha, U.P. (2020)
3. **Mr Amarjeet Poonia**, Lecturer, Department of Electronics and Communication Engineering, Government Polytechnic, Ajmer, Rajasthan is Pursuing his PhD Degree in Field of “Breast Cancer Detection Based on Mammograms and Tomosynthesis Data Using Deep Boosted Hybrid Learning Algorithm” under my Supervision from Bhagwant University, Rajasthan, date of approval 06/07/2022.
4. **Mrs Preeti Singh**, Lecturer, Department of Electronics and Communication Engineering, Government Polytechnic, Bareilly, U.P is Pursuing his PhD Degree in Field of “Monitoring of Sustainable Agriculture of Small Farms Wielding Image Processing Integrating with Sensor Antenna and Machine Learning for Improving Socio Economic Status of Farmers” under my Supervision from M.J.P Rohilkhand University, Bareilly (2022) RMS ID-22PHD0774

Patents And Policy Documents

1. Patents Titled **A Machine Learning and IoT Based System For Incorrect Posture Detection**, National 202121037944, Department of ECE, MJP Rohilkhand University, Bareilly
2. Patents Titled **System and Method for Secure Remote Communication Using WSN Based on Blockchain Technology** Patent (2022), National, 202241050360, Department of ECE, MJP Rohilkhand University, Bareilly
3. Patents Titled **The CNN Approach for The Lung Cancer Detection in Image Processing Patent** (2022), National, 202221066497, Department of ECE, MJP Rohilkhand University, Bareilly
4. Patents Titled **A Smart School Security System that Utilizes GSM and Microcontrollers and is Powered by The Internet of Things (IoT)** Patent (2022), National, 202221037177, Department of ECE, MJP Rohilkhand University, Bareilly
5. Patents Titled **A System and Method for Defect Recognition in Additive Manufacturing using Image Processing Based on IoT and AI** Patent (2022), National, 202231034464, Department of ECE, MJP Rohilkhand University, Bareilly
6. Patents Titled **Artificial Intelligence in the Prediction of Bitcoin Fluctuation** Patent (2022), National, 202211014664, Department of ECE, MJP Rohilkhand University, Bareilly
7. Patents Titled **An IoT And Machine Learning Bases Method of Communicating a Digital Message with an Information Signal** Patent (2022), National, 202211000067, Department of ECE, MJP Rohilkhand University, Bareilly
8. Patents Titled **IoT Based Solar Powered Agriculture Robot** International Design UK Patent (2023), Grant No: 6285563 Department of ECE, MJP Rohilkhand University, Bareilly
9. Patents Titled **Machine Learning based robot for determining Crop Yield** International Design UK Patent (2023), Grant No: 6289556 Department of ECE, MJP Rohilkhand University, Bareilly
10. Patents Titled **Radiography Device for Medical Treatments** International Design UK Patent (2023), Grant No: 6302771 Department of ECE, MJP Rohilkhand University, Bareilly

Participated In Activities

1. Participated in TEQIP-II sponsored International Workshop on **Youth Empowerment though Skill Development** on 09/04/2018 at FET MJP Rohilkhand University, Bareilly, U.P. India
2. Participated in Faculty development program entitled “**Entrepreneurship**” 02-08 Jan, 2018 held at MJPRU Bareilly, organized by ABES Engineering College Ghaziabad, supported by NSTEDB Department of Science and Technology Government. of India
3. Participated in TEQIP-II sponsored Faculty Development Program on **Innovative Research on Materials in Science and Engineering** during 17/04/2016 to 22/04/2016 at FET MJP Rohilkhand University, Bareilly, U.P. India
4. Participated in TEQIP-II sponsored Faculty Development Program on **Municipal Solid Waste Management** during 07/12/2016 to 11/12/2016 at Department of Chemical Engineering, FET MJP Rohilkhand University, Bareilly, U.P. India

5. Participated in TEQIP-II sponsored Faculty Development Program on **Microwave and Wireless Communication** during 29/03/2016 to 03/04/2016 at Department of Electronics and Communication Engineering, FET MJP Rohilkhand University, Bareilly, U.P. India
6. Participated in TEQIP-II sponsored Symposium on **Wavelet and Its Application in Engineering Problems** during 20/12/2015 to 21/12/2015 at Department of Electronics and Communication Engineering, FET MJP Rohilkhand University, Bareilly, U.P. India
8. Participated in TEQIP-II sponsored Workshop on **Water Quality Monitoring, Network Design, Sampling Analysis and Quality Assurances** during 26/03/2015 to 28/03/2015 at Department of Chemical Engineering, FET MJP Rohilkhand University, Bareilly, U.P. India
9. Participated in TEQIP-II sponsored Faculty Development Program on **Environmental Impact Assessment** during 26/03/2015 to 28/03/2015 at Department of Chemical Engineering, FET MJP Rohilkhand University, Bareilly, U.P. India
10. Participated in TEQIP-II sponsored Faculty Development Program on **Frontier Area of Research in Mechanical Engineering** during 25/03/2014 to 29/03/2014 at FET MJP Rohilkhand University, Bareilly, U.P. India
11. Participated in Faculty Development Program on **Matlab and Simulink Programming** 04/02/2014 to 08/02/2014 Organized by Department of CS and IT, FET MJP Rohilkhand University, Bareilly in association with National Institute of Electronics and Information Technology, Gorakhpur, U.P. India
12. Participated in NITTTR Chandigarh AICTE recognized Short Term Course on **Microcontroller Based Embedded System Through ICT** from 06/01/2014 to 10/01/2014 Organized by NITTTR Chandigarh at Department of Electrical Engineering at R.D. Engineering College Ghaziabad U.P., India
13. Participated in AICTE recognized Short Term Course on **VLSI Through ICT** from 10/03/2014 to 14/03/2014 Organized by NITTTR Chandigarh at R.D. Engineering College Ghaziabad U.P., India
14. Participated in Faculty Development Program on **Parallel and Distributed Computing** during 5/02/2012 to 19/02/2012 Organized by Department of CS and IT, FET MJP Rohilkhand University, Bareilly U.P. India



(Dr. Hari Kumar Singh)

Place: Bareilly, U.P, India