Shrish Bajpai
Assistant Professor, Department of Electronics & Communication Engineering, Faculty of Engineering, Integral University, Lucknow, India
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Google Scholar Citation, |Orcid Id, Scopus, |Web Of Science, |Research gate, |linked in

PROFILE

- Dedicated faculty with experience in teaching research and service in the area of electronics engineering. Combines a focus on student achievement with a passion for scholarly work, presenting and publishing at conferences, and maintaining thought leadership in peer-reviewed journals.
- Deeply invested in earning tenure through administrative service, committee contributions, and an achievement-oriented approach to teaching.

RESEARCH INTEREST:

- Image Compression & Segmentation
- Device Modeling
- Machine Learning
- Energy Audit & Energy Management

SUMMARY OF RESEARCH ACCOMPLISHMENT:

- **PhD Research**: Developed the multiple compression algorithms for the remote sensing hyperspectral images and published the result in SCIE index journals
- **PhD Supervision**: Successfully supervised one PhD student, who completed theses on the development of transform based compression algorithm for the hyperspectral images
- **Research Publications**: Published several research papers in high-impact journals related to multimedia technology (WoS = 15 ; Scopus = 37).

- **Collaborative Research:** Engaged in interdisciplinary research collaborations, including image compression, data management (traffic engineering), device modeling and image segmentation.

PROFESSIONAL MEMBERSHIP:

IEEE Membership (Membership ID : 99701821)

COURSE TAUGHT:

- Electromagnetic Field Theory
- Basic Electronics
- Signal and Systems
- Control System
- Data Compression
- Information Theory & Coding

ADMINISTRATIVE/DEPARTMENTAL RESPONSIBILTY

- Member University Time Table Committee (creation of the time table of the classes & faculties)
- Worked as ACS in smooth conduction of the university end semester examination
- Member ECE departmental Board of Studies (BoS)
- Departmental coordinator for the Learning Management System (LMS).
- Departmental NAAC Criteria 3 Incharge
- Departmental Continuous Assessment Examination Incharge

STUDENTS SUPERVISION

Doctoral Supervision : 07 (Awarded : 01 ; Ongoing : 06)

S. No	Name	Enrollment	Title	Status
1	Harshit Chandra	2001269	Development and performance evaluation of compression algorithm for resource constraint hyperspectral image sensors	Awarded (Supervisor)
2	Rajeev Kumar Sachan	2100183	Design and performance analysis of tunnel field effect transistor	Ongoing (Supervisor)
3	Purushottam Lal Nagar	2100246	Design of Ultra Wide Band Antenna for UWB applications	Ongoing (Supervisor)
4	Vinod Kumar Tripathi	2100189	Mathematical transform based coding algorithms for hyporspectral images	Ongoing (Supervisor)
5	Anshu Khare	2301049	Disease detection of a plant leaf using deep learning techniques	Ongoing (Co-Supervisor)

6	Rajesh	2301110	Wavelet Transform base coding algorithm for hyperspectral images	Ongoing (Co-Supervisor)
7	Sushroot	2001270	Design and simulation of tunnel field effect transistor for low power and high frequency applications	Ongoing (Co-Supervisor)

M. Tech Supervision : 05 (Awarded : 05)

S. No	Name	Enrollment	Title	Status
1	Dileep Kumar Shukla	1200131030	Design and analysis of microstrip patch antenna technology	Awarded
2	Swapnil Shukla	1300114076	Statistical approach towards Progression of Renewable Energy in Uttar Pradesh & Analysis of Solar Panel Washing System	Awarded
3	Noman Ahmad		Performance Analysis of Rooftop Grid-Interactive Solar Photovoltaic Power Plant and Performance Analysis Statistical Evaluation of Renewable Energy Technologies and Initiation Programs in Rural Area of Lakhimpur-Kheri, Uttar Pradesh, India: Prevailing Schemes, Barriers Faced and Future Scope	Awarded
4	Rajesh	1801312003	Performance analysis of 5th generation waveform in railing feeding environment	Awarded
5	Talat Zehra	2001116004	Design and modelling of solar photovoltaic system with particles from optimization technique	Awarded

PUBLISHED/ACCEPTED SCI/SCOPUS RESEARCH PAPERS

- Rajeev Kumar Sachan, Ved Vrat, Vidyadhar Gupta, **Shrish Bajpai** (2024), "Insight of Work-function and Gate Oxide Engineered Negative Capacitance TFET for Enhanced Analog/RF Performance" is accepted in Journal of Electronic Materials. (SCIE ; IF = **2.2**)
- **Shrish Bajpai** (2024), “3D-Listless Block Cube Set Partitioning Coding for Resource Constraint Hyperspectral Image Sensors”, Signal, Image and Video Processing Journal, Volume 18, Issue 4, pp. 3163–3178. doi : 10.1007/s11760-023-02979-0 (SCIE ; IF = **2.3**).
- **Shrish Bajpai**, N. R. Kidwai (2024), “Fractional Wavelet Filter based Low Memory Coding for Hyperspectral Image Sensors”, Multimedia Tools and Applications, Volume 83, Issue 9, pp. 26281–26306. doi : 10.1007/s11042-023-16528-x (SCIE ; IF = **3.6**).
- Harshit Chandra, **Shrish Bajpai**, Monauwer Alam, Vishal Singh Chandel, Amit Kumar Pandey, and Digvijay Pandey (2023) "3D-Memory efficient listless set partitioning in hierarchical trees for hyperspectral image sensors." Journal of Intelligent & Fuzzy Systems, Volume 45, Issue 6, pp. 11163-11187. doi : 10.3233/JIFS-231684 (SCIE ; IF = **2**).
- **Shrish Bajpai** (2023), Low Complexity and Low Memory Compression Algorithm for Hyperspectral Image Sensors, Wireless Personal Communications, 131(2), 805-833. doi : 10.1007/s11277-023-10455-8 (SCIE ; IF : **2.2**).

- **Shrish Bajpai** (2023), Low complexity image coding technique for hyperspectral image sensors, Multimedia Tools and Applications, 82(20), 31233–31258. doi : 10.1007/s11042-023-14738-x. (SCIE ; IF : **3.6**).
- Abhinav Gupta, Amit Kumar Pandey, Shipra Upadhyay, Vidyadhar Gupta, Tarun Kumar Gupta, Digvijay Pandey, **Shrish Bajpai**, Vishal Singh Chandel (2023) "The Investigation of Gate Oxide and Temperature Changes on Electrostatic and Analog/RF and Behaviour of Nanotube Junctionless Double-Gate-All Around (NJL-DGAA) MOSFETs using Si Nano-materials", Silicon, 15(12), 5197–5208. doi : 10.1007/s12633-023-02436-0 (SCIE ; IF = **3.4**)
- Prince Rajpoot, Vishal Singh Chandel, Amit Kumar Pandey, Shivendu Mishra, Vikas Patel, **Shrish Bajpai**, Digvijay Pandey (2023), "Disease Detection in Different Plants to Save Environment Using IOT, Image Processing and Machine Learning: A Review", International Journal of Global Warming. doi : 10.1504/IJGW.2023.10057219 (SCIE ; IF = **0.9**).
- **Shrish Bajpai** (2022), Low complexity block tree coding for hyperspectral image sensors, Multimedia Tools and Applications, 81(23), 33205–33232. doi : 10.1007/s11042-022-13057-x (SCIE ; IF : **3.6**).
- **Shrish Bajpai**, Naimur Rahman Kidwai, Harsh Vikram Singh & Amit Kumar Singh (2022), A low complexity hyperspectral image compression through 3D set partitioned embedded zero block coding, Multimedia Tools and Applications, 81(1), 841–872. doi : 10.1007/s11042-021-11456-0 (SCIE ; IF : **3.6**).
- Divya Sharma, **Shrish Bajpai**, Y. K. Prajapati, and R. Tripathi (2020). "112 Gb/s coherent NG-PON2 downstream transmission using advance polarization multiplexed modulation formats." Optoelectronics and Advanced Materials-Rapid Communications 14, no. May-June 2020 (2020): 224-232 (SCIE ; IF = **0.9**).
- **Shrish Bajpai**, Naimur Rahman Kidwai, Harsh Vikram Singh & Amit Kumar Singh (2019), "A Low memory block tree coding for hyperspectral images", Multimedia Tools and Applications, 78, 27193–27209. doi : 10.1007/s11042-019-07797-6 (SCIE ; IF : **3.6**).
- Mohd Sadat, Syed Aqeel Ahmad, Mehmet Ali Silgu, **Shrish Bajpai**, Digvijay Pandey (2024), "A Study on Environmental Impact of Slow Moving Electric Vehicles Using Microsimulation on Lucknow Urban Road With an On-Ramp", Environmental Health Insights, Volume 18, 1-12. doi : 10.1177/11786302241231706. (ESCI IF = 2.7)
- **Shrish Bajpai**, Divya Sharma, Monauwer Alam, Vishal Singh Chandel, Amit Kumar Pandey, Suman Lata Tripathi (2023), "Curvelet transform based compression algorithm for low resource hyperspectral image sensors", Journal of Electrical and Computer Engineering, 1-18. doi : 10.1155/2023/8961271 (ESCI IF = **2..4**).

- Sushant Khare, Abhishek Chatterjee, **Shrish Bajpai**, P.K. Bharati (2016), "Manufacturing Engineering Education in India", Management and Production Engineering Review, 7(1), 40-44. doi : 10.1515/mper-2016-0005 (ESCI IF = **1.4**).
- Sushant Khare, **Shrish Bajpai**, PK Bharati (2015), "Production engineering education in India", Management and Production Engineering Review, 6(1), 21–25. doi : 10.1515/mper-2015-0004 (ESCI IF = **1.4**).
- **Shrish Bajpai**, Harsh Vikram Singh, Naimur Rahman Kidwai (2019), "3D modified wavelet block tree coding for hyperspectral images", Indonesian Journal of Electrical Engineering and Computer Science, 15(2), 1001-1008. doi : 10.11591/ijeecs.v15.i2.pp1001-1008 (Scopus ; Citescore = **2.9**).
- **Shrish Bajpai**, Naimur Rahman Kidwai, Harsh Vikram Singh (2019) "3D Wavelet Block Tree Coding for Hyperspectral Images", International Journal of Innovative Technology and Exploring Engineering, 8(6C), 64-68 (Scopus ; CiteScore = **0.6**).
- Utkarsh Awasthi, Faraz Yusuf Khan, Noman Ahmad, **Shrish Bajpai** (2019), "Statistical Evaluation of Renewable Energy Technologies and Initiation Programs in Rural Area of Lakhimpur-Kheri, Uttar Pradesh, India: Prevailing Schemes, Barriers Faced and Future Scope", International Journal of Innovative Technology and Exploring Engineering, 8(5), 997-1002 (Scopus ; Citescore = **0.6**).
- **Shrish Bajpai**, Sushant Khare, Rishabh Yadav (2016), "Control Education in India : Present & Future", IFAC-PapersOnLine, 49(1), 813-818. doi : 10.1016/j.ifacol.2016.03.157 (Scopus ; CiteScore = **1.8**).

PAPER PUBLISHED IN INTERNATIONAL CONFERENCES

- Y. Prajapti, **Shrish Bajpai**, Vivek Singh, J.P. Saini, (2012) "Dispersion characteristics analysis of wave propagation in hollow clad elliptical waveguide.", International Conference on Emerging Technology Trends in Electronics, Communication & Networking, SVNIT, Surat, India, 1:4. Doi : 10.1109/ET2ECN.2012.6470085.
- Sushant Khare, Shubham Chowdhry, **Shrish Bajpai** (2014), "Control engineering education in India", International Conference on Power, Control and Embedded Systems (ICPCES), MNNIT, Allahabad, 1:4. Doi : 10.1109/ICPCES.2014.7062808.
- Divya Sharma, **Shrish Bajpai,** Y. K. Prajapati (2017), "Next generation PON using PM-BPSK and PM-QPSK modulation", International Conference on Multimedia, Signal Processing and Communication Technologies, AMU, Aligarh, India, 10:12. Doi : 10.1109/MSPCT.2017.8363963.

- **Shrish Bajpai**, Harsh Vikram Singh, Naimur Rahman Kidwai (2017), "Feature extraction & classification of hyperspectral images using singular spectrum analysis & multinomial logistic regression classifiers", International Conference on Multimedia, Signal Processing and Communication Technologies, AMU, Aligarh, India, 97-100 . doi : 10.1109/MSPCT.2017.8363982.
- Faraz Yusuf Klian, Swapnil Shukla, **Shrish Bajpai**, Naimur Rahman Kidwai (2018), "Analytical Approach Towards Progression of Renewable Energy in Uttar Pradesh : Current Scenario, Obstacles and Future Problems", International Conference on Recent Innovations in Electrical, Electronics & Communication Engineering, KIIT, Bhubaneswar, India, 607-611. doi : 10.1109/ICRIEECE44171.2018.9008970.
- Talat Zahra, Faraz Yusuf Khan, **Shrish Bajpai**, Naimur Rahman Kidwai (2018), "Statistical Evaluation of Renewable Energy Technologies in Lucknow: Prevailing Schemes, Barriers and Future Scope", International Conference on Computational and Characterization Techniques in Engineering & Sciences, Integral University, Lucknow, 149-151. doi : 10.1109/CCTES.2018.8674148.
- Faraz Yusuf Khan, Sushant Khare, Aaditya Ranjan Srivastava, **Shrish Bajpai**, Kamran Rasheed (2018), "A Novel Design for Highway Windmill through Re-engineering", International Conference on Contemporary Research in Mechanical Engineering with Focus on Materials and Manufacturing, Integral University, Lucknow, 1:8. doi : 10.1088/1757-899X/404/1/012049.
- Aaditya Ranjan Srivastava, **Shrish Bajpai**, Sushant Khare (2018), "Material Science & Metallurgical Engineering Education in India-Past, Present & Future", International Conference on Contemporary Research in Mechanical Engineering with Focus on Materials and Manufacturing, Integral University, Lucknow, 1:10. doi : 10.1088/1757-899X/404/1/012001.
- Aaditya Ranjan Srivastava, Manavvar Khan, Faraz Yusuf Khan, **Shrish Bajpai** (2018), "Role of Renewable Energy in Indian Economy", ", International Conference on Contemporary Research in Mechanical Engineering with Focus on Materials and Manufacturing, Integral University, Lucknow, 1:5. doi : 10.1088/1757-899X/404/1/012046.
- Aaditya Ranjan Srivastava, Arshad Ali Siddiqui, Faraz Y Khan, **Shrish Bajpai** (2019), "Statistical Analysis of Effects of Make in India on Industrial, Manufacturing & Production Field in India: A Comparative Study", International Conference on Computational & Experimental Methods in Mechanical Engineering, GL Bajaj Institute of Technology, Noida, India, 1:9. doi : 10.1088/1757-899X/691/1/012041.
- Faraz Yusuf Khan, Talat Zahra, Noman Ahmad, **Shrish Bajpai** (2019), "Advancement of Renewable Energy Technology in the Mumbai Metropolitan Region: Prevailing Schemes, Consumer Feedback, Barriers and Future Scope", International Conference on Computational & Experimental Methods in

Mechanical Engineering, GL Bajaj Institute of Technology, Noida, India, 1:7. doi : 10.1088/1757-899X/691/1/012055.

- Talat Zahra, Zeeshan Ahmad, **Shrish Bajpai**, Vishal Singh Chandel (2021), "Analytical Study of Renewable Energy Technologies in Vaishali District of Bihar-Schemes, Barriers and Future Scope", International Conference on Computational & Experimental Methods in Mechanical Engineering, GL Bajaj Institute of Technology, Noida, India, 1 : 7 doi : 10.1088/1742-6596/2007/1/012041.
- Harshit Chandra, **Shrish Bajpai** (2022), "Listless Block Cube Tree Coding for Low Resource Hyperspectral Image Compression Sensors", International Conference on Multimedia, Signal Processing and Communication Technologies, AMU, Aligarh, India, 1-4. doi : 10.1109/IMPACT55510.2022.10029076.
- Harshit Chandra, **Shrish Bajpai** (2023) "3D-Block Partitioning Embedded Coding for Hyperspectral Image Sensors", International Conference on Power, Instrumentation, Energy and Control, AMU, Aligarh, India, 1-4. doi : 10.1109/PIECON56912.2023.10085841.
- Hasnain Nabi Ahmed, Abdul Rahman Asad Khan, **Shrish Bajpai** (2023), "Microstrip Patch Antenna Based Hairtail Fish Freshness Detection : A Novel Approach", International Conference on IoT, Communication and Automation Technology, Buddha Institute of Technology, Gorakhpur, India, 1-5. doi : 10.1109/ICICAT57735.2023.10263751.

PUBLISHED NON-SCI-SCOPUS BUT PEER REVIEWED RESEARCH PAPERS

- Sanjana Tiwari, **Shrish Bajpai**, M Arshad (2014), "Modified W Model for Handheld Application Development", International Journal of Engineering and Technical Research, 2(12), 154-156.
- Mohammad Arshad, **Shrish Bajpai**, Mohd. Danish (2014), "Comparison of Different Dispersion Compensation Techniques in Optical Fiber at High Bit Rate", International Journal of Engineering and Technical Research, 2(10), 71-73.
- Vishal Maurya, Sushant Khare, **Shrish Bajpai** (2015), "Future Scope of Wind Energy in India", IOSR Journal of Electrical and Electronics Engineering (IOSR-JEEE), 10(1), 79-83.
- **Shrish Bajpai**, Sanjana Tiwari (2015), "Psi (Ψ) Model For Handheld Application Development", International Journal of Engineering and Technical Research, 3(1), 117-119.
- **Shrish Bajpai**, Sushant Khare (2015), "Mechatronics engineering education in India", Comparative Professional Pedagogy, 5(4), 73-79. doi : 10.1515/rpp-2015-0069.
- Rahul Seth, Rohit Seth, **Shrish Bajpai** (2015) "Need of biomass energy in Indi", Progress in Science and Engineering Research Journal, 2(6), 13-17.
- Mohammad Anas, **Shrish Bajpai**, S.Hasan Saeed (2015), "Design of Affordable and Effectual DIY Solar Kit", International Journal of Engineering Trends and Technology, 21(1), 22-27.

- Siddiqui Sajida Asif, **Shrish Bajpai** (2015), "Control Engineering in Aeronautic", Journal of Control System and Control Instrumentation, 1 (1), 1-8.
- Sakshi Singh, Kumar Saurabh, **Shrish Bajpai** (2016), "History of Electric Power in India (1890–2015)", Journal of Electrical and Power System Engineering, 2(1), 38-45.
- **Shrish Bajpai**, Siddiqui Sajida Asif, Syed Adnan Akhtar (2016), "Electromagnetic education in India", Comparative Professional Pedagogy, 6(2), 60-66. doi : 10.1515/rpp-2016-0020.
- Shagil Akhtar, Syed Muneeb Iqbal, **Shrish Bajpai** (2016), "Control engineering as a part of undergraduate curriculum for mechanical engineering in India", Comparative Professional Pedagogy, 6(3), 32-36. doi : 10.1515/rpp-2016-0030.
- **Shrish Bajpai**, Shagil Akhtar (2017), "Industrial engineering education in India", Comparative Professional Pedagogy, 7(2), 84-92.
- **Shrish Bajpai**, Naimur Rahman Kidwai (2017), " Renewable energy education in India" Comparative Professional Pedagogy, 7(4), 103-113. doi : 10.1515/rpp-2017-0057.
- Faraz Yusuf Khan, **Shrish Bajpai** (2018), "Electrical engineering education in India: Past, present & future", Comparative Professional Pedagogy, 8(3) doi : 10.2478/rpp-2018-0044.

BOOK CHAPTERS

- **Shrish Bajpai,** Divya Sharma (May 2024) “Moving Towards 3D-Biometric” published in “Digital Image Security: Techniques and Applications”, doi : 10.1201/9781003468974-4.
