

FROM THE DIRECTOR'S DESK



It is my pleasure to provide the depicting the major activities of Atal Bihari Vajpayee- Indian Institute of Information Technology & Management (ABV-IIITM) Gwalior in this half-yearly newsletter “**Gunjan**” (July-December 2023). This Institute, being an institute of national importance, fully financially supported by the Ministry of Education, Govt, of India, is completing its 26th year of starting its academic program and fulfilling its mission and vision to excel the quality education, research, and its service to local, national, and international communities.

From the academic year 2023-24, the institute has started two new BTech Programs: Electrical & Electronics Engineering, and Mathematics & Scientific Computing in addition to our existing 4-year BTech (Computer Science & Engineering), 5- year Integrated Post-Graduate (BTech (IT) + MTech), 5-years Integrated Post-Graduate (BTech (IT) + MBA) with exit option of having only BTech (IT) after 4 years. Institute is also having excellent 2-year MBA, 2-year M. Tech. program in 3 disciplines and full/part- time/QIP PhD programme in number of disciplines. The institute has implemented the NEP2020 in its full sprit.

Institute has started several new initiatives for the benefits of the students such as branch change after first year, exit programs, summer terms, internships, MOOC courses, minors along with major degrees, conversion from regular MTech to PhD, regular PhD to Part-time PhD, various scholarships to the UG/IPG students, etc. During July to December 2023, Institute achieved many milestones in academics, research, and students’ activities. Some of the highlights are:

- ◆ Convocation 2023 has been successfully organised on 13th July 2023. Her Excellency Mrs Doupadi Murmu, The President of India, was the Chief Guest of the convocation. The Honorable Governor of Madhya Pradesh, Honorable Chief Minister of MP, and Honorable Minister of Civil Aviation were the Guest of Honor of the function. Dr Anil Kakodkar was given a DSc (Honoris Causa) Degree in this convocation. It is first DSc of the institute.
- ◆ Institute got 88 NIRF ranking 2023 in Engineering and 68 in management categories.
- ◆ Held three Senate, two finance committee, 4 Board of Governors meetings.
- ◆ Constructions of a mini-health centre and a hostel of capacity 2x250 beds are going to start soon.
- ◆ Selection of faculty positions and non-faculty positions has been completed and more than 15 faculty/non-faculty members have joined. Faculty Research initiation grant up to 10 lakhs is given to newly joined (external) faculty members.
- ◆ To boost the innovation and research, 2nd Atal Research and Incubation Conclave (ARIC 2023) was organised in ABV-IIITM during December 18-19, 2023.
- ◆ Institute bags many sponsored & consultancy projects, organised Karyshalas, FDPs & Vertika from India and abroad.
- ◆ International Conference on Computer Vision and Machine Intelligence CVMI-2023 is planned during 10-11 December 2023 jointly with Ryukyus University Japan. 2nd International Conference on Advances in Nanomaterials and Devices for Energy and Environment “CANDEE-2023 was organised during 19-20 December 2023.
- ◆ MoU with Russian Academy has been signed for academic and research collaborations.
- ◆ New SPGC and SUGC Chairperson are appointed, and they have taken charge with effect from October 1, 2023.
- ◆ Ordinances of UG/IPG, MTech and MBA are prepared and approved by the Senate. The PhD ordinance is revised to take care of various senate approvals.
- ◆ 2nd IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI-2024) will be held during March 14-16, 2024.

Our vision is to make our Institute a world-class educational centre of knowledge generation, acquisition and dissemination that will benefit society, and to educate and train people to work in fields where they will be valued both for their specialised knowledge and for their ability to research, communicate and solve problems.



INSTITUTE ACTIVITIES & ACHIEVEMENTS

GETRI Training Program

Module-3 of the two weeks Training Program on "Advancements in Information Technology and Data Science" to the officers of Gujrat Energy Training and Research Institute (GETRI) was organized during June 25 to July 8, 2023. Prof P K Singh and Dr K K Pattanaik were the coordinators of the program.



Karyashala on Machine Learning

The DST-SERB sponsored Karyashala, a week-long intensive workshop on "Machine Learning Applications for Medical Imaging", was organized under the Accelerate Vigyan scheme. The duration of the program was July 10-16, 2023. The program was coordinated by Dr Wilfred Godfrey.

4th Convocation

The 4th convocation of the Institute was held on July 13, 2023, for the pass out students. Hon'ble president of India Ms Draupadi Murmu graced and addressed the convocation. Addressing the students, the President said that they are expected to think about those people of the society who have been left behind in the developmental journey. Apart from her, the other guests were Shri Jyotiradiya Scindia, Shri Shivraj Singh Chauhan, and Shri Deepak Ghaisas. On the occasion, she also laid the foundation stone for a 500-bed Boys Hostel of the institute.



Karyashala on Dielectric Resonator

The DST-SERB sponsored Karyashala, a week-long intensive workshop on "Recent Trends in Dielectric Resonator Antennas" was held during July 17-23, 2023. Dr Pinku Ranjan was the coordinator of the event.

Karyashala on Deep Learning

The DST-SERB sponsored High-end Workshop Karyashala on "Deep Learning Applications in Imaging Systems", under the Accelerate Vigyan scheme, was held in the Department of Computer Science and Engineering at ABV-IIITM Gwalior Institute during July 17-23, 2023. Prof K V Arya coordinated the event.



Karyashala on Quantum Computing

The DST-SERB sponsored Karyashala (High-end Workshop) on Quantum Computing and Information was held in the Department of Engineering Sciences at ABV-IIITM Gwalior Institute from July 22-28, 2023. Prof Pankaj Shrivastava was the coordinator of the event.

Foundation day of departments

The foundation day of various Institute departments was held on August 8, 2023. On this day, the faculty members of each department gathered and celebrated the event. The department heads presented the one-year plan for the future.

15th August celebration

The Institute celebrated Independence Day of August 15, 2023. Faculty members, staff, and the students gathered in front of the administrative building and the flag hoisting was done. Later, a cultural program was organized in the Institute auditorium. Hon'ble director addressed the



participants.

Orientation program for newly admitted students

As the new students has joined the campus, so to help them understand the working of the Institute, an orientation program was organized on August 21, 2023. Students and their parents participated in the program. On this occasion, Hon'ble Directors, Heads, and Deans addressed the gathering and answered the questions asked by students' or parents.



Intra-IIITM Gwalior sports day celebration

Together with academics, sports are given adequate importance at ABV-IIITM. To encourage sporting activities, we have a full-fledged complex, and games facilities in each of the students' hostels. We believe it is essential to remain physically fit and alert together with mental sharpness. Working on the same theme, the Institute organized various

sports' events to celebrate the Intra-IIITM sports' meet during July 26-27, 2023.

Farewell program of Prof G K Sharma

On the retirement of Prof GK Sharma on August 31, 2023, the Institute did a farewell program in Institute MDP center. He was a senior professor in the Department of IT. He used to work in the field of Digital System Design, Testing and Testability, CAD, Parallel & Distributed Computing, Artificial Intelligence, Soft Computing and Algorithms.



Gyanotsav

Gyanotsav-2080 was organized jointly by Atal Bihari Vajpayee Indian Institute of Information Technology and Management Gwalior, and Shiksha Sanskriti Trust, Madhya Bharat Province on 3-4 September 2023. This two-day event was organized in the form of a seminar

for a detailed discussion on the role of schools and higher educational institutions in the implementation of the National Education Policy 2020. Prof. Anurag Shrivastava was the coordinator of the event.



FDP on Literature Review and Analysis

The Department of Management Studies has organized a Seven-day Faculty Development Program (FDP) on Systematic Literature Review and Meta-Analysis (SLR&MA-2023) during September 4-10, 2023. It was an attempt to enrich the participants in a Systematic Literature Review, Bibliometric Analysis, and Meta-Analysis. The program has provided theoretical knowledge as well as hands-on learning for the participants. The coordinators of this program were Dr Manoj Dash, Dr Vishal Vyas, and Dr Arun Kumar.



Teacher's Day celebration



Teachers Day is celebrated on September 5th in India and is a day to express

the love and gratitude we feel towards those who have taught us in life, from schoolteachers to college professors to our tutors or trainers in fields other than academics. Teacher's Day celebration was held on September 5, 2023, in the Senate Hall, Admin Block.

Hindi Pakhwada

To create awareness about the official language Hindi, there is a provision to organize many Hindi programs, competitions, poetry conferences,



seminars, and official language conferences by every department at the Indian level during the Hindi Fortnight. Institute Hindi Fortnight has been organized from September 14 to September 28, 2023. The institute has organized various competitions for the participation of students over this fortnight.

Swachh Bharat Abhiyan

To accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation, the Prime Minister of India had launched the Swachh Bharat Mission on 2nd October 2014. By adopting the theme "Swachhta Hi Seva Hai", a Plastic Free Campaign under Swachh Bharat Abhiyan has been organized on October 2, 2023. The event was coordinated by Dr Arun Kumar.



Vigilance awareness week

The Ministry of Micro, Small and Medium Enterprises (MSME) is observing the Vigilance Awareness Week from 30th October to 5th November 2023 with the theme given by Central Vigilance

Commission "Say No to Corruption; Commit to the Nation". Going on the same path, the Institute organized Vigilance awareness at the Institute campus on the aforesaid dates. Prof. S. Tapaswi was the coordinator of the event.



FDP on Structural Equation Modeling

The Department of Management Studies organized a Seven-day Faculty Development Program (FDP) on Structural Equation Modeling and Analysis (SEMA-2023) from 9th to 15th October 2023. It was an attempt to enrich the participants in Structural Equation Modeling (SEM) using SPSS, AMOS, and SMARTPLS software. SEM is a multivariate statistical analysis technique that is used to analyze structural relationships between

measured and latent variables. The program discussed various types of SEM such as Confirmatory Factor Analysis, Path Analysis, and Partial Least Squares Modeling. Each of these helps to build relationships between variables. The program provided theoretical knowledge as well as hands-on learning. The coordinator of this program was Dr Manoj Dash, Dr Vishal Vyas, and Dr Arun Kumar.



Meri Mati Mera Desh

"Meri Maati Mera Desh", with the tagline "Mitti ko naman, veeron ka vandan", is a nationwide and people led "Jan bhagidari" initiative to commemorate 75 years of India's independence. It is the finale of Azaadi ka Amrit Mahotsav program. Meri Maati Mera Desh celebrates the many achievements of

the nation. It involves paying tribute to the 'Veers' who protect our nation. The ceremonies would be conducted at the level of village, Panchayat, Block, Urban Local body, State and National level. At our Institute also, the celebration of Meri Mati Mera Desh was done on October 13, 2023. Dr. Anuraj Singh was the coordinator of the event.



Workshop on Robotics

A workshop on Robotics and Autonomous Systems was on October 19, 2023, at the Center for Autonomous Systems of the Institute. Dr Rahul Kala (Department of IT), Dr W Wilfred Godfrey and Dr Deepak Kumar Dewangan (Department of CSE), Dr Nalin Kumar, Gaurav Sharma (Department of EEE) were the coordinators of the event.





FDP on Research Methodology

The Department of Management Studies organized a Seven-day Faculty Development Program (FDP) on Practicing Research Methodology in the Fields of Management and Social Sciences (PRMFMS- 2023). The duration of the event was from 26th October to 1st November 2023. The coordinator of this program was Prof Naval Bajpai.

5G Labs Initiative

ABV-IIITM Gwalior has been awarded 5G lab under the 100 5G Labs Initiative by the Department of Telecommunications (DoT) with the objective of building competencies and engagement in 5G and beyond technologies for students & startup communities. The award ceremony was held on October 27, 2023, and Prof Aditya Trivedi was the recipient of the award on behalf of the Institute.

Inauguration of Generic Computing lab

The state-of-the-art fully networked and air-conditioned General Computing Lab is available for the use of students for their academic project documentation and other general computing purposes. The inauguration of Generic Computing Lab was done on October 30, 2023, in EEE department.



Integrity Pledge

We believe that corruption has been one of the major obstacles to the economic, political, and social progress of our country. We believe that all stakeholders such as Government, citizens, and private sector need to work together to eradicate corruption. And so, Integrity Pledge was taken by faculty/staff members of the Institute on October 30, 2023. Prof. S. Tapaswi coordinated the event.



Jan Jatiya Gaurav Diwas

Floral tributes to the portrait of Bhagwan Birsa Munda on the occasion of Jan Jatiya Gaurav Diwas (JJGD), was celebrated remembering his birth anniversary on November 15, 2023. The event was coordinated by Dr Wilfred Godfrey.

FDP on Multi-Criteria Decision Making

The Department of Management Studies organized a one-week Faculty Development Program on Multi-Criteria Decision Making - Techniques in Management Research (MCDM-TiMR 2023). It was scheduled during November 18-24, 2023. The coordinator of this program was Dr Vinay Singh, Dr Manoj Dash, and Prof Rajendra Sahu.



FDP on Multivariate Data Analysis



The Department of Management Studies organized a one-week Faculty Development Program (FDP) on Research Methodology and Multivariate Data Analysis (RMMDA-2023) from 27th November to 3rd December 2023. This program enriched the participants for research methodology process and multivariate data analysis with scientific research writing methods. Each topic includes a lecture and hands-on applications using IBM-SPSS, AMOS, VOS Viewer, Mendeley, R-Studio etc. The coordinators of this program were Prof Gaurav Agrawal and Dr Manoj Dash.



Conference on Computer Vision

The 2nd International Conference on Computer Vision and Machine Intelligence (CVMI) - 2023 was organized during December 10-11, 2023, by the Department of Computer Science and Engineering, Atal Bihari Vajpayee-Indian Institute of Information Technology and Management (ABV-IIITM), Gwalior for researchers from industry and academia to disseminate their research outcomes.



Karyashala on Cybersecurity

The Department of Computer Science and Engineering at ABV-IIITM Gwalior conducted a high-end workshop, KARYASHALA on "Cybersecurity in Edge Computing enabled Internet of Things (IoT)" during December 12-18, 2023. Dr Saumya Bhaduria was the coordinator of the event.

FDP on Startup Capacity Building and Strategy Planning

The Department of Management Studies organized a one-week-long faculty development program on "Advance MDP on Startup Capacity Building and Strategy Planning" from December 14-18, 2023, at ABV-IIITM Gwalior. This program was under the Entrepreneurship Skill Development Program (E-SDP) of the MSME Government of India. The coordinators of this program were Dr Manoj Dash and Prof Anurag Srivastava.



The ARIC Conference

The Technology Innovation and Incubation Centre (TIIC) at ABV- Indian Institute of Information



Technology and Management, Gwalior, organized the 2nd Atal Research and Incubation Conclave (ARIC'23) during December 18-19, 2023, at ABV-IIITM Gwalior. It is a unique initiative of the TIIC-ABV-IIITM Gwalior, to recognize, respect, and reward grassroots innovations/ideas and is based on the theme "Science and Technology: Lab to Market." The program advisor of this MDP was Prof Anurag Shrivastava and the coordinator of this ARIC 2023 was Dr Manoj Dash and Co-coordinator was Dr Santosh Singh Rathore.

Confere

ence on Nanomaterials

The Department of Engineering Sciences at ABV-Indian Institute of Information Technology and Management Gwalior organized the 2nd International Conference on Advances in Nanomaterials and Devices for Energy and Devices, "CANDEE-2023," during December 19-20, 2023, at ABV-IIITM Gwalior. Prof Anurag Shrivastava was the coordinator of the event.



Joining of new faculty members

Dr Rahul Kala (Department of IT), Dr Veena Anand (Department of IT), Dr Biswabandhu Jana (Department of EEE), Dr Gaurav Sharma (Department of EEE) have joined the Institute in their respective departments as faculty members.



Joining of new staff members

Mr Vineet Surana (Assistant Registrar), Mr Vishvambhar Jhakar (Assistant Registrar), and Mr Krishan Kumar Tiwari (Registrar) have joined the Institute during the period July-December 2023.

Ph.D. Awarded

The Institute produced 05 number of PhDs during the period of July-December 2023. The details are given below :

<i>S.No.</i>	<i>Name</i>	<i>Topic</i>
1.	Vaibhav Agrawal	Efficient Data Acquisition Mechanisms for IoT-enabled Wireless Sensor Networks
2.	Prigya Rawat	Exploration of Circular Bioeconomy Antecedents – A Multi-Perspective Empirical and Conceptual Study of Circular Organizations in Case of Developing (Circular) Economies
3.	Vikram Garg	Cooperative Multi-Robot Target Searching and Tracking using Nature Inspired Algorithms
4.	Kumar Gaurav	Computational Investigations of One Dimensional (1D) Nanomaterials based Spintronic Devices for Multifunctional Applications
5.	Rakesh Singh Tomar	Mathematical Modelling and Dynamical Analysis of Infectious Diseases in Temporal Domain with Co-Infection, Immunization, and Delay
6.	Ankit Parwaliya	Study of Impact of Delay(s) in Different Prey-Predator Models
7.	Richa Sharma	Machine Learning Based Defence Techniques Against Poisoning and Hardware Trojan Attacks
8.	Abhijeet Vikramaditya Tiwari	An Analysis of Psychological Factors Leading to Memorable Tourism Experience (MTE), Affecting Revisit Intention in Tourist
9.	Anil Kumar Rajput	Energy-Aware VLSI Architectures for In-Memory Computing System
10.	Himanshu Gauttam	Towards Efficient Edge Intelligence Framework Design for Smart Manufacturing

FACULTY ACHIEVEMENTS

Invited Talks

1. Dr Narinder Singh Punn delivered an expert lecture hosted by the IEEE computer society PSIT student chapter and Department of Basic Sciences and Humanities at our esteemed institution, Pranveer Singh Institute of Technology-Kanpur (2023).
2. Dr Narinder Singh Punn delivered a hands-on session in the Karyashala on “Machine learning applications for medical imaging” at the ABV-IIITM, India (2023).
3. Dr Narinder Singh Punn delivered a hands-on session in the Karyashala on “Advanced Workshop on Deep Learning Applications in Imaging Systems” at the ABV-IIITM Gwalior India (2023)."
4. Dr Debanjan Sadhya delivered an expert lecture in Workshop on “Cybersecurity in Edge Computing enabled Internet of Things (IoT)”, ABV-IIITM Gwalior, India, 2023.
5. Dr Debanjan Sadhya delivered an expert lecture in Workshop on “Machine Learning Applications for Medical Imaging”, ABV-IIITM Gwalior, India, 2023."
6. Dr Irshad Ahmad Ansari delivered an expert lecture in FDP (AI/ML for computer vision Applications) sponsored by Centre for Training and Learning, NIT Warangal at Department of ECE, Ballari Institute of Technology and Management (BITM) Ballari-Karnataka-583104 during 03-07 October 2023.
7. Dr Irshad Ahmad Ansari delivered an expert Lecture in SERB Karyashala on "Deep Learning Applications in



Imaging System" during 17-23 July 2023, ABV-IIITM Gwalior on topic "Image Watermarking", during 17-23 July 2023.

8. Dr Rakesh Chowdhury delivered an expert Lecture on "Circularly Polarized Dielectric Resonator Antennas, in High - End Workshop under the KARYASHALA Scheme on "Recent trends in Dielectric resonator antennas", - A SERB initiative scheme on July 17-23, 2023, Organized by ABV-IIITM Gwalior.
9. Dr Rakesh Chowdhury delivered an expert Lecture on "Circularly Polarized Dielectric Resonator Antennas: Fundamentals, Ideas and Analysis, in Three Days current scope and future challenges in Electronics Engineering on September 20-22, 2023, organized by Teaching learning centre of excellence with VIT Vellore.
10. Dr Rakesh Chowdhury delivered an expert Lecture on "Fundamentals and Design of Dielectric Resonator Antennas for future Communications", Ideas and Analysis, in 5 days FDP on "Modern Electronics Engineering for Advanced Wireless Communication on 4-8 December 2023, organized by SENSE, VIT Vellore".
11. Dr Rahul Kala delivered Lecture on Reinforcement Learning on 3rd August 2023 at Applied Machine Learning: Unleashing its Real-World Potential (AML 2023), Department of CSIT of SOA University, Bhubaneswar
12. Dr Rahul Kala delivered Lectures on Learning-based robotics and Robotics in warehousing on 16th and 17th December at Vellore Institute of Technology, Vellore.
13. Dr Pinku Ranjan Delivered talk in 5 days FDP/Workshop Next-Generation Wireless Networks organized by DTU, Delhi, India on 11th to 15th Dec. 2023.
14. Dr Pinku Ranjan Delivered talk in 5 days FDP/Workshop Modern Electronics Engineering for Advanced Wireless Communication, organized by VIT Vellore, India on 4th to 8th December 2023.
15. Dr Pinku Ranjan Delivered Keynote Speaker talk at IEEE 3rd ASIANCON 2023, Pune, India Aug. 25-27, 2023.
16. Dr Pinku Ranjan Delivered talk in 7 days High End Workshop/Karyashala Workshop on Recent Trends in Dielectric Resonator Antennas organized by DST/SERB, ABV-IIITM Gwalior, India on 17th to 23rd July. 2023.
17. Dr Anuraj Singh delivered a plenary talk on "Codimension-m bifurcations in discrete-time ecological models" at the International Conference on Mathematical Techniques in Engineering Applications (ICMTEA2023), Graphic Era University, Dehradun during December 1-2, 2023.
18. Dr Anuraj Singh delivered a guest lecture on "Applications of Differential Equations in Biological Systems" at the Department of Mathematics, School of Advanced Sciences, Vellore Institute of Technology, Vellore on November 03, 2023.
19. Dr Anuraj Singh delivered a guest lecture on "Qualitative Analysis of Biological Systems through Differential Equations" at the Department of Mathematics, School of Advanced Sciences, Vellore Institute of Technology, Vellore on November 21, 2023.
20. Dr. Amrendra Singh Yadav delivered a talk in 7-day High-End Workshop/Karyashala workshop on "Machine learning applications for medical imaging"; organized by DST/SERB, ABV-IIITM Gwalior on 10 to 16 July 2023.
21. Dr. Amrendra Singh Yadav delivered an invited talk on Two-Week AICTE sponsored workshop on "DevOps: Software Development and Operations" under ATAL Programme: organized by Dr B. A. Tech. University Lonere, Maharashtra, India, on November 27th to 2nd December 2023.
22. Dr. Amrendra Singh Yadav delivered an invited talk on One Week Online Workshop on "Recent trends in Blockchain Enabled Internet of Things" organized by Dr B R Ambedkar National Institute of Technology Jalandhar, Punjab, India, 4th to 8th December 2023.
23. Dr. Amrendra Singh Yadav delivered a talk in 7-day High-End Workshop/Karyashala workshop on "Cybersecurity in Edge Computing enabled Internet of Things (IoT)"; organized by DST/SERB, ABV-IIITM Gwalior on 12 to 18 December, 2023.

Projects Awarded

1. Dr Binod Prasad is awarded a project on "Machine Learning Aided Self Sustainable Future Wireless Networks Funding Agency" by SERB (DST), GOI.
2. Dr Narinder Singh Punn has an accepted project grant of 7,00,000 under FIG call for a period of two years for the research project entitled "Robust Defense Mechanism Against Adversarial Attacks in Medical Imaging Systems".
3. Dr Irshad Ahmad Ansari, Title: Investigation of Multimodal Emotion Recognition using Machine Learning Techniques, Funded by: ABV-IIITM (ABV-IIITM/DoRC/FIG/2023/2525), Duration: October 2023 – October 2025, Budget: 1000000 (INR), Status: On-going.



4. Dr Rakesh Chowdhury has accepted a project titled "Design and Development of a Millimeter Wave Circularly Polarized Dielectric Resonator Antenna for Ka - Band (26.5 GHz-40 GHz) Satellite-IoT Applications", Science and Engineering Research Board (SERB), DST, GoI, India, Rs. 28 Lacs, 3 Years.
5. Dr Arun Kumar has been awarded a project on "Service Quality Index for In-house Medical Facilities: Case of Private and Public Higher Educational Institutions in India" as PI, Funding Agency: ICSSR. He has also been awarded another project as Co-PI on "Development of a Framework for Knowledge Sharing Behavior: A Case of Indian Public Funded R&D Organizations"; Funding Agency: ICSSR; PI: An IoT based complete sanitization system for dispensary of ABV-IIITM, Gwalior funded by TIIC.
6. Dr Debanjan Sadhya has been awarded a project on "Design of privacy-preserving and efficient mechanisms for handling heterogeneous biometric data in the context of Aadhaar", Funding Agency: Science and Engineering Research Board (SERB), Government of India, File Number: SRG/2021/000051.
7. Dr Santosh Singh Rathore has been Awarded State-up research (SRG) grant, DST-SERB, GOI. Role: PI.
8. Dr Gaurav Kaushal has been awarded a project on "Algorithm-Accelerator Codesign of Energy Efficient Hardware for 3D object Detection".
9. Dr K K Pattanaik has been awarded a project on "Dynamic Bayesian Network Model for Behavioral Study of Autonomous Data Agents". SERB, DST (2022-2025)
10. Dr Somesh Kumar has been awarded a project under TIDE 2.0 Scheme, "An IoT based Complete Sanitization System for the Dispensary of ABV-IIITM Gwalior", (Jan. 2022, 3Lakh).
11. Prof Anurag Srivastava has been awarded a project on Purification and Valorization through Indigenous Tailoring of Raw Polymeric Waste into Advanced Multidimensional Carbon Nano Materials (PAVITRAM) for Large Scale Energy Storage Applications Including Supercapacitors and Batteries" from Kumaun University, Nainital.
12. Prof Manisha Pattanaik has been awarded a project on Chips to Startup (C2S) Programme from Meit New Delhi.
13. Dr Veena Anand has been awarded a project on Development of an Adaptive Smart City Framework to solve urban area problems using Internet of Things from SERB New Delhi.
14. Dr Vinal Patel has been awarded a project on Development of Prototype Assistive Listening Device by Incorporating a Microphone Array and Haptic Stimulation from DBT, New Delhi.
15. Dr W W Godfrey has been awarded a project on AI Model development and subsequent approval from Tribmoon Agroforestry Pvt Ltd.
16. Prof Anurag Srivastava and Dr M K Dash has been awarded a project on Training programmes under ESDP Scheme from MSME, New Delhi.
17. Dr Mahendra Kumar Shukla has been awarded a project on Design and Development of Intelligent Physical Layer Security Techniques for Wireless Health Monitoring Applications from SERB New Delhi.
18. Dr Praveen Kumar Singhya has been awarded a project on Design and Analysis of Hybrid FSO/THZ- based Backhaul Networks for 6G Communications from SERB New Delhi.

Awards

1. Dr Rajesh Rajagopal is listed in the world's top 2% of scientists by the Stanford University-Elsevier list (2021), with a world ranking of 98 in the subject field, "Operations Research". He is also Ranked #1 among the faculties from the 25 IITs in India by the Stanford University-Elsevier list.
2. Dr Somesh Kumar is awarded a 3L Grant for the ATAL FDP. He has also been awarded a grant of Rs. 1.5 for Vartika by SERB, DST.
3. Dr Rahul Kala is listed among Top 2% Scientists Worldwide 2023 by Stanford University".
4. Dr Irshad Ahmad Ansari is recognized as one of the 'World's Top 2% Scientists globally (October 2023) by the survey of Elsevier and Stanford University.
5. Prof SN Singh, Director, ABV-IIITM Gwalior, got Lifetime Achiever Award 2023 by ISTE New Delhi.
6. Prof SN Singh, Director, ABV-IIITM Gwalior, got IEEE Industrial Electronics Society Distinguish Lecturer 2023.
7. Prof Joydip Dhar got Expert Teacher award from Gwalior Vikas Samiti Madhya Pradesh for his contributions towards outstanding teaching on September 5, 2023.
8. Dr Rakesh Chowdhury has received a grant of 5 Lakh from SERB to conduct Karyashala for the event titled "Recent Trends in Antenna Design and Technology for Next Generation Communication Ecosystem".



Publications

1. Bihari, R., Jeevaraj, S., Kumar, A. Geometric approach for ranking generalized trapezoidal fuzzy numbers and its application in selecting security guard service company, (2023) *Expert Systems with Applications*, 234.
2. Nayak, P., Srivastava, P., Gupta, D. C. Holistic Exploration of Structural, Electronic, Magnetic, Transport, Mechanical, and Thermodynamic Characteristics, Including Curie Temperature Analysis, (2023) *ACS Omega*, 8 (50), pp. 48113-48129.
3. Kumari, E., Shukla, M.K., Pandey, O.J., Yadav, S. NeuroAid: Emotion-Based EEG Analysis for Parkinson's Disease Identification, (2023) *IEEE Sensors Letters*, 7 (12).
4. Anjali, Dai, H.-N., Kumar, J., Pandey, O.J. AERed: An Autoencoder-Decoder Dimensionality Reduction Method for Wearable-Based Human Activity Recognition, (2023) *IEEE Sensors Journal*, 23 (23), pp. 29804-29814.
5. Singh, G., Singh, S., Daultani, Y., Chouhan, M. Measuring the influence of digital twins on the sustainability of manufacturing supply chain: A mediating role of supply chain resilience and performance, (2023) *Computers and Industrial Engineering*, 186.
6. Shrivastava, A.K., Agrawal, U.K., Shukla, M.K., Pandey, O.J. Neural Networks-Based Phase Estimation and Symbol Detection for RIS-Assisted Wireless Communications, (2023) *IEEE Communications Letters*, 27 (12), pp. 3245-3249.
7. Naseem, S., Rathore, S.S., Kumar, S., Gangopadhyay, S., Jain, A. An approach to occluded face recognition based on dynamic image-to-class warping using structural similarity index, (2023) *Applied Intelligence*, 53 (23), pp. 28501-28519.
8. Suneera, C.M., Prakash, J., Singh, P.K. Question answering over knowledge graphs using BERT based relation mapping, (2023) *Expert Systems*, 40 (10).
9. Dewangan, C.L., Vijayan, V., Shukla, D., Chakrabarti, S., Singh, S.N., Sharma, A., Hossain, M.A. An improved decentralized scheme for incentive-based demand response from residential customers, (2023) *Energy*, 284.
10. Shankar Mishra, A., Singh Rathore, S. Implicit and explicit mixture of experts' models for software defect prediction, (2023) *Software Quality Journal*, 31 (4), pp. 1331-1368.
11. Pandey, S.K., Shukla, A., Bhatia, S., Gadekallu, T.R., Kumar, A., Mashat, A., Shah, M.A., Janghel, R.R. Detection of Arrhythmia Heartbeats from ECG Signal Using Wavelet Transform-Based CNN Model, (2023) *International Journal of Computational Intelligence Systems*, 16 (1).
12. Sharma, V.S., Singh, A., Elsonbaty, A., Elsadany, A.A. Codimension-one and -two bifurcation analysis of a discrete-time prey-predator model, (2023) *International Journal of Dynamics and Control*, 11 (6), pp. 2691-2705.
13. Gupta, J., Dhar, J., Sinha, P. Study of anthrax disease dynamics in multi-compartment with Grass and herbivores population, (2023) *Rendiconti del Circolo Matematico di Palermo*, 72 (8), pp. 3841-3867.
14. Majumdar, A., S, J., Kaliyan, M., Agrawal, R. Selection of resilient suppliers in manufacturing industries post-COVID-19: implications for economic and social sustainability in emerging economies, (2023) *International Journal of Emerging Markets*, 18 (10), pp. 3657-3675.
15. Agrawal, G., Mishra, A. Public health insurance for elderly: did researchers recognise health as human right for elderly? (2023) *International Journal of Human Rights in Healthcare*, 16 (4), pp. 352-363.
16. Kaur, G., Bhattacharya, M. Intelligent Fault Diagnosis for AIT-Based Smart Farming Applications, (2023) *IEEE Sensors Journal*, 23 (22), pp. 28261-28269.
17. Yadav, A.S., Charles, V., Pandey, D.K., Gupta, S., Gherman, T., Kushwaha, D.S. Blockchain-based secure privacy-preserving vehicle accident and insurance registration, (2023) *Expert Systems with Applications*, 230.
18. Dash, M.K., Sahu, R., Panda, G., Jain, D., Singh, G., Singh, C. Social media role in public health development: a bibliometric approach, (2023) *Kybernetes*, 52 (11), pp. 5460-5479.
19. Nemu, A., Jaiswal, N.K., Srivastava, P. Influence of fluorine molecule adsorption on the structural and electronic properties of armchair GaN nanoribbons, (2023) *Chemical Physics Letters*, 830.
20. Rai, J.K., Ranjan, P., Chowdhury, R. Frequency reconfigurable wideband rectangular dielectric resonator antenna for sub-6 GHz applications with machine learning optimization, (2023) *AEU - International Journal of Electronics and Communications*, 171.
21. Jeevaraj, S., Gokasar, I., Deveci, M., Delen, D., Zaidan, B.B., Wen, X., Shang, W.-L., Kou, G. Adoption of energy consumption in urban mobility considering digital carbon footprint: A two-phase interval-valued Fermatean fuzzy dominance methodology, (2023) *Engineering Applications of Artificial Intelligence*, 126.



22. Jain, S., Majhi, S. Sparsity-Constrained Kernel Generalized Maximum Versoria Criterion with Variable Center, (2023) IEEE Transactions on Circuits and Systems II: Express Briefs, 70 (11), pp. 4261-4265.
23. Ranjan, P., Krishnan, A., Dwivedi, A.K., Singh, S.K., Sharma, A. Design and Optimization of MIMO Dielectric Resonator Antenna Using Machine Learning for Sub-6 GHz based on 5G IoT Applications, (2023) Arabian Journal for Science and Engineering, 48 (11), pp. 14671-14679.
24. Malviya, V., Kala, R. Navigation with a Cooperative Social Robot for a Group of Visitors using Face Detection and a 'Stop and Wait' Scheme, (2023) Journal of Scientific and Industrial Research, 82 (10), pp. 1009-1021.
25. Jenkin Suji, R., Bhadauria, S.S., Wilfred Godfrey, W. A survey and taxonomy of 2.5D approaches for lung segmentation and nodule detection in CT images, (2023) Computers in Biology and Medicine, 165.
26. Kumar, A., Jain, S., Majhi, S. Channel Estimator and Symbol Detector for OTFS Systems Impaired by Impulsive Noise, (2023) IEEE Communications Letters, 27 (10), pp. 2742-2746.
27. Padhy, S., Rathore, S.S. An attention-based deep learning model for credibility assessment of online health information, (2023) Computational Intelligence, 39 (5), pp. 832-859.
28. Kant, K., Kumar, R., Chakraborty, S., Nelakanti, G. - Discrete Galerkin and Iterated Discrete Galerkin Methods for Derivative-Dependent Fredholm–Hammerstein Integral Equations with Green’s Kernel, (2023) Mediterranean Journal of Mathematics, 20 (5).
29. Kaur, A., Kumar, K., Prakash, A., Tripathi, R. - Imperfect CSI-Based Resource Management in Cognitive IoT Networks: A Deep Recurrent Reinforcement Learning Framework, (2023) IEEE Transactions on Cognitive Communications and Networking, 9 (5), pp. 1271-1281.
30. Sisodiya, O.S., Misra, O.P., Dhar, J. - Analysis of a temperature-dependent model for water-borne disease transmission dynamics, (2023) International Journal of Dynamics and Control, 11 (5), pp. 2112-2126.
31. Nayak, P., Srivastava, P., Gupta, D.C. - Theoretical exploration of inherent electronic, structural, mechanical, thermoelectric, and thermophysical response of KRu₄Z₁₂ (Z = As₁₂, Sb₁₂) filled skutterudite materials, (2023) RSC Advances, 13 (40), pp. 27873-27886.
32. Narwaria, P., Chauhan, S.S., Shrivastava, A.K., Srivastava, P. - Electronic and transport properties of boron and nitrogen doped germanene nanoribbons: A first principles study, (2023) Physica B: Condensed Matter, 665.
33. Sharma, R., Mehta, K., Vyas, V. - Drivers of green manufacturing practices by steel companies in India, (2023) AIP Conference Proceedings, 2888 (1).
34. Mehta, K., Vyas, V., Sharma, R. - Benchmarking and ranking the efficient units of power industry using DEA and TOPSIS, (2023) AIP Conference Proceedings, 2888 (1).
35. Shukla, A.K., Dhar, J., Mishra, R. - Plants and age-structured pest dynamics with natural enemy as control strategy: A fractional differential equations model, (2023) Results in Control and Optimization, 12.
36. Sharma, P., Agrawal, G., Arora, G., Sharma, D.K., Chotia, V. - Research on Price Discovery in Financial Securities: Trends and Directions for Future Research, (2023) Journal of Risk and Financial Management, 16 (9).
37. Archana, S.M., Prakash, J., Singh, P.K., Ahmed, W. - An Effective Biomedical Named Entity Recognition by Handling Imbalanced Data Sets Using Deep Learning and Rule-Based Methods, (2023) SN Computer Science, 4 (5).
38. Rathor, V.S., Sharma, G.K. - A New ATPG and Online Monitoring based Technique for Hardware Trojan Detection, (2023) Microprocessors and Microsystems, 101.
39. Patel, A.S., Tiwari, V., Ojha, M., Vyas, O.P. - Ontology-based detection and identification of complex event of illegal parking using SPARQL and description logic queries, (2023) Chaos, Solitons and Fractals, 174.
40. Sharma, V.S., Singh, A. - Strong Resonance Bifurcations and State Feedback Control in a Discrete Prey-Predator Model with Harvesting Effect, (2023) Qualitative Theory of Dynamical Systems, 22 (3).
41. Ameen, M., Mallick, P., Chowdhury, R., Ray, A.K., Chaudhary, R.K. - Wideband Low-RCS Step-Type Cavity-Backed Stacked Dielectric Resonator Antenna for Unmanned Aerial Vehicle Communications, (2023) IEEE Antennas and Wireless Propagation Letters, 22 (9), pp. 2170-2174.
42. Purohit, L., Rathore, S.S., Kumar, S. - A QoS-Aware Clustering Based Multi-Layer Model for Web Service Selection, (2023) IEEE Transactions on Services Computing, 16 (5), pp. 3141-3154.
43. Yadav, A.S., Singh, N., Kushwaha, D.S. - Evolution of Blockchain and consensus mechanisms & its real-world applications, (2023) Multimedia Tools and Applications, 82 (22), pp. 34363-34408.
44. Bhattacharyya, J., Dash, M.K., Kundu, S., Sakshi, S., Bhattacharyya, K., Kakkar, K.B. - No Virus on Me: The Indian



- Ways of Managing the COVID-19 Pandemic: Marine to Mountain, (2023) Asian Journal of Management Cases, 20 (2), pp. 128-156.
45. Soni, P., Ansari, I.A. - Vision assistance to work in a foggy industrial area, (2023) Advanced Signal Processing for Industry 4.0, 2, pp. 2.1-2.19.
 46. Ansari, I.A., Bajaj, V. - Preface, (2023) Advanced Signal Processing for Industry 4.0, 2, pp. xv-xvi.
 47. Janbandhu, A.C., Ansari, I.A. - Surveillance of industrial area using drone: Design, modeling and uses, (2023) Advanced Signal Processing for Industry 4.0, 2, pp. 6.1-6.59.
 48. Ansari, I.A., Bajaj, V. - Advanced signal processing for industry 4.0, (2023) Advanced Signal Processing for Industry 4.0, 2, pp. 1-365.
 49. Sharma, R., Sharma, G.K., Pattanaik, M., Prashant, V.S.S. - Structural and SCOAP Features Based Approach for Hardware Trojan Detection Using SHAP and Light Gradient Boosting Model, (2023) Journal of Electronic Testing: Theory and Applications (JETTA), 39 (4), pp. 465-485.
 50. Sheoran, M., Sharma, R., Chaudhary, S., Dawar, A., Ojha, S., Verma, A., Srivastava, A., Sinha, O.P. - An economical green route synthesis of carbon spheres derived from kitchen biowastes for supercapacitor application, (2023) Applied Physics A: Materials Science and Processing, 129 (8).
 51. Singh, S., Trivedi, A., Saxena, D. - Unsupervised LoS/NLoS identification in mmWave communication using two-stage machine learning framework, (2023), Physical Communication, 59.
 52. Gauttam, H., Pattanaik, K.K., Bhadauria, S., Nain, G., Prakash, P.B. An efficient DNN splitting scheme for edge-AI enabled smart manufacturing, (2023) Journal of Industrial Information Integration, 34.
 53. Kumar, D., Singya, P.K., Choi, K., Bhatia, V. SWIPT Enabled Cooperative Cognitive Radio Sensor Network with Non-Linear Power Amplifier, (2023) IEEE Transactions on Cognitive Communications and Networking, 9 (4), pp. 884-896.
 54. Bhowmick, A., Prasad, B., Nallagonda, S. Throughput and harvesting time trade-off in a energy harvesting cognitive radio network, (2023) Wireless Networks, 29 (6), pp. 2619-2633.
 55. Mangal, S., Misra, O.P., Dhar, J. Fractional-order deterministic epidemic model for the spread and control of HIV/AIDS with special reference to Mexico and India, (2023) Mathematics and Computers in Simulation, 210, pp. 82-102.
 56. Bhaskara, S., Rathore, S.S. Causal effect analysis-based intrusion detection system for IoT applications, (2023) International Journal of Information Security, 22 (4), pp. 931-946.
 57. Garg, V. E2RGWO: Exploration Enhanced Robotic GWO for Cooperative Multiple Target Search for Robotic Swarms, (2023) Arabian Journal for Science and Engineering, 48 (8), pp. 9887-9903.
 58. Jain, D., Dash, M.K., Thakur, K.S. The sustainability of financial innovation in E-payment systems, (2023) The Sustainability of Financial Innovation in E-Payment Systems, pp. 1-217.
 59. Parihar, A.S., Swami, P., Choi, K., Brida, P., Bhatia, V. On Performance of NOMA-Based Wireless Powered Communication Networks Assisted With Power Beacons and PPP Distributed IN, (2023) IEEE Wireless Communications Letters, 12 (7), pp. 1294-1298.
 60. Rajput, A.K., Pattanaik, M. Local bit line 8T SRAM based in-memory computing architecture for energy-efficient linear error correction codec implementation, (2023) Microelectronics Journal, 137.
 61. Pradhan, V., Dhar, J., Kumar, A. Testing coverage-based software reliability growth model considering uncertainty of operating environment, (2023) Systems Engineering, 26 (4), pp. 449-462.
 62. Tomar, A.S., Arya, K.V., Rajput, S.S. Noise robust face super-resolution via learning of spatial attentive features, (2023) Multimedia Tools and Applications, 82 (16), pp. 25449-25465.
 63. Nagar, S., Jain, A., Singh, P.K., Kumar, A. Structural similarity-based Bi-representation through true noise level for noise-robust face super-resolution, (2023) Multimedia Tools and Applications, 82 (17), pp. 26255-26288.
 64. Rajesh, R. An introduction to grey causal modelling (GCM): applications to manufacturing, supply chains, resilience, and sustainability, (2023) Artificial Intelligence Review, 56 (7), pp. 6267-6293.
 65. Chandrakant, R., Rajesh, R. Social sustainability, corporate governance, and sustainability performances: an empirical study of the effects, (2023) Journal of Ambient Intelligence and Humanized Computing, 14 (7), pp. 9131-9143.
 66. Singh, A., Sharma, V.S. Codimension-2 bifurcation in a discrete predator-prey system with constant yield predator harvesting, (2023) International Journal of Biomathematics, 16 (5), art. no. 2250109.



67. Dash, M.K., Sahu, M.K., Bhattacharyya, J., Sakshi, S. Customer-centricity in organized retailing: A guide to the basis of winning strategies, (2023) *Customer-Centricity in Organized Retailing: A Guide to the Basis of Winning Strategies*, pp. 1-175.
68. Shishodia, A., Sharma, R., Rajesh, R., Munim, Z.H. Supply chain resilience: A review, conceptual framework and future research, (2023) *International Journal of Logistics Management*, 34 (4), pp. 879-908.
69. Jessin, T.A., Rajeev, A., Rajesh, R. Supplier selection framework to evade pseudo-resilience and to achieve sustainability in supply chains, (2023) *International Journal of Emerging Markets*, 18 (6), pp. 1425-1452.
70. Sharma, P., Singh, S., Mehla, R., Sapra, G., Gupta, S. Investigating the photovoltaic performance for Si-doped zigzag graphene nanoribbons using a DFT framework, (2023) *Journal of Computational Electronics*, 22 (3), pp. 856-866.
71. Mishra, N.K., Himthani, P.K., Singh, P.K. StaC: Stacked chaining for multi-label classification, (2023) *Expert Systems with Applications*, 219.
72. Suji, R.J., Bhadauria, S.S., Godfrey, W.W., Dhar, J. On using a Particle Image Velocimetry based approach for candidate nodule detection, (2023) *Multimedia Tools and Applications*, 82 (15), pp. 22871-22888.
73. Kumar, M., Kishor, A., Samariya, J.K., Zomaya, A.Y. An Autonomic Workload Prediction and Resource Allocation Framework for Fog-Enabled Industrial IoT, (2023) *IEEE Internet of Things Journal*, 10 (11), pp. 9513-9522.
74. Rajput, A.K., Tiwari, A.K., Pattanaik, M. An Energy-Efficient Hybrid SRAM-Based In-Memory Computing Macro for Artificial Intelligence Edge Devices, (2023) *Circuits, Systems, and Signal Processing*, 42 (6), pp. 3589-3616.
75. Tyagi, K., Dwivedi, A.K., Singh, S.K., Ranjan, P., Sharma, A. Four Port Dielectric Resonator-Based MIMO Antenna Design for Cognitive Radio Applications, (2023) *IEEE Transactions on Circuits and Systems II: Express Briefs*, 70 (6), pp. 1936-1940.
76. Soni, S., Chouhan, S.S., Rathore, S.S. TextConvoNet: a convolutional neural network-based architecture for text classification, (2023) *Applied Intelligence*, 53 (11), pp. 14249-14268.
77. Purohit, L., Rathore, S.S., Kumar, S. Feature selection and clustering based web service selection using QoSs, (2023) *Applied Intelligence*, 53 (11), pp. 13352-13377.
78. Bajpai, N., Kulshreshtha, K., Dubey, P., Sharma, G. Travesty of Life Elders Abuse an Inquiry of Physical and Psychological Abuse, (2023) *Ageing International*, 48 (2), pp. 413-437.
79. Satyarthi, D., Arya, K.V., Dixit, M. Drone technologies: Aviation strategies, challenges, and applications, (2023) *Drone Technology: Future Trends and Practical Applications*, pp. 117-152.
80. Sekhar, C., Patwardhan, M. Flexible working arrangement and job performance: the mediating role of supervisor support, (2023) *International Journal of Productivity and Performance Management*, 72 (5), pp. 1221-1238.
81. Tomar, A.S., Arya, K.V., Rajput, S.S. Attentive ExFeat based deep generative adversarial network for noise robust face super-resolution, (2023) *Pattern Recognition Letters*, 169, pp. 58-66.
82. Sharma, U., Faisal, K.N., Sharma, R.R., Arya, K.V. Facial Landmark-Based Human Emotion Recognition Technique for Oriented Viewpoints in the Presence of Facial Attributes, (2023) *SN Computer Science*, 4 (3).
83. Bhadauria, S., Singh, V. Blending absorptive capacity with open innovation: a bibliometric review, (2023) *Benchmarking*, 30 (4), pp. 1110-1136.
84. Jain, A., Nagar, S., Singh, P.K., Dhar, J. A hybrid learning-based genetic and grey-wolf optimizer for global optimization, (2023) *Soft Computing*, 27 (8), pp. 4713-4759.
85. Sharma, D., Katiyar, R., Dwivedi, A.K., Nagesh, K.N., Sharma, A., Ranjan, P. Dielectric resonator-based two-port filtennas with pattern and space diversity for 5G IoT applications, (2023) *International Journal of Microwave and Wireless Technologies*, 15 (2), pp. 263-270.
86. Samal, U., Kushwaha, S., Kumar, A. Testing-Effort Based SRGM Incorporating Imperfect Debugging and Change Point, (2023) *Reliability: Theory and Applications*, 18 (1), pp. 86-93.
87. Ranjan, P., Yadav, S., Gupta, H., Bage, A. Design and Development of Machine Learning Assisted Cylindrical Dielectric Resonator Antenna, (2023) *Evergreen*, 10 (1), pp. 308-316.
88. Khare, K.P., Kathal, R., Shukla, N., Srivastava, R., Srivastava, A. Quantum Molecular Descriptors of 6-Thioguanine Adsorbed PPy-PNVK Conducting Polymer: A DFT Analysis, (2023) *Asian Journal of Chemistry*, 35 (3), pp. 555-562.
89. Vyas, V., Mehta, K., Sharma, R. The nexus between toxic-air pollution, health expenditure, and economic growth: An empirical study using ARDL, (2023) *International Review of Economics and Finance*, 84, pp. 154-166.



90. Jeevaraj, S., Rajesh, R., Lakshmana Gomathi Nayagam, V. A complete ranking of trapezoidal-valued intuitionistic fuzzy number: an application in evaluating social sustainability, (2023) *Neural Computing and Applications*, 35 (8), pp. 5939-5962.
91. Shanker, R., Sankesara, H., Nagar, S., Bhattacharya, M. RESPNet: resource-efficient and structure-preserving network for deformable image registration, (2023) *Journal of Supercomputing*, 79 (5), pp. 4713-4736.
92. Suji, R.J., Godfrey, W.W., Dhar, J. Border to border distance-based lung parenchyma segmentation including juxta-pleural nodules, (2023) *Multimedia Tools and Applications*, 82 (7), pp. 10421-10443.
93. Dash, M.K., Singh, C., Panda, G., Sharma, D. ICT for sustainability and socio-economic development in fishery: a bibliometric analysis and future research agenda, (2023) *Environment, Development and Sustainability*, 25 (3), pp. 2201-2233.
94. Tiwari, S., Farooq, S.U., Rathore, S.S. A Report on the Fifth Workshop on Emerging Software Engineering Education (WESEE 2023), (2023) *ACM International Conference Proceeding Series*.
95. Singh, G., Daultani, Y., Rajesh, R., Sahu, R. Modeling the growth barriers of fresh produce supply chain in the Indian context, (2023) *Benchmarking*, 30 (2), pp. 653-677.
96. Parmar, J., Chouhan, S., Raychoudhury, V., Rathore, S. Open-world Machine Learning: Applications, Challenges, and Opportunities, (2023) *ACM Computing Surveys*, 55 (10).
97. Khare, K.P., Kathal, R., Shukla, N., Srivastava, R., Srivastava, A. Suitability of ZnO Nanocomposite of Copolymer (PPy-PNVK-ZnO) (PPy = Polypyrrole; PNVK = Poly 9-vinyl carbazole) for the Detection of 6-Thioguanine: A DFT Analysis, (2023) *Asian Journal of Chemistry*, 35 (2), pp. 422-430.
98. Tyagi, N., Jha, K.K., Jaiswal, N.K., Srivastava, P., Sanvito, S. Designing nanoscale organic interconnects via sp²/sp³ fluorine functionalized armchair graphene nanoribbons, (2023) *Materials Science and Engineering: B*, 288.
99. Rajoria, S., Trivedi, A., Godfrey, W.W. Energy efficiency optimization for MM-NOMA heterogeneous network with wireless backhauling and energy harvesting, (2023) *AEU - International Journal of Electronics and Communications*, 159, art. no. 154477.
100. Meena, Y.K., Arya, K.V. Multimodal interaction and IoT applications, (2023) *Multimedia Tools and Applications*, 82 (4), pp. 4781-4785.
101. Singh, A., Deolia, P. COVID-19 outbreak: a predictive mathematical study incorporating shedding effect, (2023) *Journal of Applied Mathematics and Computing*, 69 (1), pp. 1239-1268.
102. Rajesh, R. An introduction to grey influence analysis (GINA): Applications to causal modelling in marketing and supply chain research, (2023) *Expert Systems with Applications*, 212.
103. Gupta, J., Dhar, J., Sinha, P. Mathematical study of the influence of canine distemper virus on tigers: an eco-epidemic dynamic with incubation delay, (2023) *Rendiconti del Circolo Matematico di Palermo*, 72 (1), pp. 117-139.
104. Kulshreshtha, K., Sharma, G., Bajpai, N. Conjoint analysis: the assumptions, applications, concerns, remedies, and future research direction, (2023) *International Journal of Quality and Reliability Management*, 40 (2), pp. 607-627.
105. Prakash, G., Ambedkar, K. Digitalization of manufacturing for implanting value, configuring circularity and achieving sustainability, (2023) *Journal of Advances in Management Research*, 20 (1), pp. 116-139.
106. Sharma, P., Arya, K.V., Rajput, S.S. Action recognition techniques, (2023) *Intelligent Multimedia Processing and Computer Vision: Techniques and applications*, pp. 315-334.
107. Rajput, S.S., Arya, K.V. Introduction, (2023) *Intelligent Multimedia Processing and Computer Vision: Techniques and applications*, pp. 1-6.
108. Rai, D., Rajput, S.S., Arya, K.V., Sharma, P. AI- and ML-based multimedia processing for surveillance, (2023) *Intelligent Multimedia Processing and Computer Vision: Techniques and applications*, pp. 299-314.
109. Rajput, S.S., Arya, K.V. Conclusion, (2023) *Intelligent Multimedia Processing and Computer Vision: Techniques and applications*, pp. 335-338.
110. Ankit K Srivastava, AN Tiwari, SN Singh, Harmonic and Interharmonic Estimation using Poincaré Filtering Assisted ESPRIT Method, *IEEE Transactions on Industry Application*, Vol 59. No. 4, July/August 2023, pp. 4859-4867.
111. Ranamay Saha, S.N. Singh, J. Samal, E. Gupta and Shantanu Bhattacharya, Impedance Spectroscopy Based Detection of Viral RNA from Clinical Samples, *IEEE Sensors Letter*, Vol. 7, No. 8, August 2023, pp. 1-4 (4501704).
112. V Vineet, A Mohapatra and SN Singh, An Efficient Modular Optimization Scheme for Unbalanced Active



Distribution Networks with uncertain EV and PV Penetrations, IEEE Transactions on Smart Grid, Vol. 14, No.5, September 2023, pp. 3876-3888.

113. Chaman Lal Dewangan, Vineeth Vijayan, Devesh Shukla, S. Chakrabarti, S. N. Singh, Ankush Sharma, Md Alamgir Hossaind, An improved decentralized scheme for incentive-based demand response from residential customers, Energy Journal, Volume 284, December 2023, 128568.
114. Ankit Srivastava, Bharat S Rajpurohit and SN Singh, Hybrid FFT and HAQSE Based Method for Fast and Accurate Online Harmonic/Interharmonic Estimation in Modern Power System, IEEE Industry Applications Society Annual Meeting Tennessee USA, October 29-2 November 2023.
115. Rahul Sagwal, Prof. Dr Ramkumar J, Sri Niwas Singh, Stacked LSTM based Enhanced Data-driven Framework for Forecasting Day-ahead Electricity Prices, 10th "IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON-2023), Amity University, Gr Noida, Dec 1-3, 2023.
116. Vikash Singh, Sourabh Ghosh, Asheesh Kumar Singh, Sri Niwas Singh, LMS-based Control of Grid-tied Bidirectional Converter for Electric Vehicle Applications, 10th "IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON-2023), Amity University, Gr Noida, Dec 1-3, 2023.

Books

1. Sri Niwas Singh, Saurov Mahanta, Yumnam Jayanta Singh, Proceedings of the NIELIT's International Conference on Communication, Electronics and Digital Technology (NICE-DT) 2023, Springer Singapore Lecture Notes in Networks and Systems (LNNS, volume 676), ISBN: 978-981-99-1698-6, eBook ISBN978-981-99-1699-3.
2. S. N. Singh, Naveen Jain, Umesh Agarwal, Manoj Kumawat, Optimal Planning and Operation of Distributed Energy Resources (Energy Systems in Electrical Engineering), Springer UK Pvt Ltd 2023, ISBN: 978-981-99-2799-9.
3. Ashwani Kumar, S. N. Singh, Pradeep Kumar, Decarbonization and Digitization of the Energy System, 2024, Springer Nature Singapore Pvt Ltd, ISBN 978-981-99-7629-4.

STUDENTS' ACHIEVEMENTS

Events by AASF club

The AASF club of the students did the following events during the period July-December 2023: Group Discussion, Weekly junior practice sprint, Web Week – backend, Webkriti, Introduction to Open Source, Introduction to git and github, Orientation for 2023 batch, Abhishar v13.0 – the annual magazine, Lifescape – Art and photography contest, Product 101: Navigating through product management, and Introduction to CPP.

FORTHCOMING EVENTS @ ABV-IIITM GWALIOR

<i>S.No.</i>	<i>Event</i>	<i>Date</i>
1.	Alumni Meet	January 16, 2024
2.	Foundation Day	January 17, 2024
3.	FDP on HR Analytics Tools and Techniques in Management Research (HRATTMR-2024)	January 28- February 3, 2024
4.	5-Days Self-Sponsored Online Short-Term Course on Hands-on on Machine Learning and Deep Learning (Module-1)	January 29 – February 2, 2024
5.	FDP on Multi-Criteria Decision Making with Machine Learning Techniques in Management Research	February 9-15, 2024
6.	Five-Day Workshop on Recent Trends in Cyber Security Technologies	February 12-16, 2024
7.	Aurora cultural festival	February 16-18, 2024
8.	One Week Short Term Course on Supply Chain Analytics	February 16-22, 2024



INSTITUTE IN NEWS

The collage features numerous news snippets with headlines and images. Key headlines include:

- राष्ट्रीय शिक्षा नीति पाश्चात्य आंश से वाहर निकाल कर भारतीय परंपराओं पर केन्द्रित है** (National Education Policy is moving away from Western influence and focusing on Indian traditions).
- प्रो. सिंह को नए आविष्कार के लिए पेटेंट मिला** (Prof. Singh received a patent for his new invention).
- ट्रिपल आईटीएम में वीरों की याद में किया गया पौधरोपण** (Planting was done in memory of heroes at Triplax IITM).
- ट्रिपल आईटीएम में सतर्कता जागरूकता अभियान** (Awareness campaign for vigilance at Triplax IITM).
- एबीवी ट्रिपल आईटीएम में निकली अमृत कलश यात्रा** (Ammrit Kalash Yatra departed from ABVIITM Triplax IITM).
- प्रो. निवास सिंह को एजुकेशनरट अफ द ईयर अवार्ड 2023 से अलंकृत किया** (Prof. Niwas Singh awarded Educationer of the Year 2023).
- एबीवी ट्रिपल आईटीएम में शिक्षकों के लिए कार्यक्रम 9 अक्टूबर को, आवेदन शुरू** (Program for teachers at ABVIITM Triplax IITM on Oct 9, applications open).
- सर्वश्रेष्ठ बी-स्कूल में ट्रिपल आईटीएम को 23 वीं रैंक** (Triplax IITM ranked 23rd as the best B-school).
- दैनिक जीवन में हिंदी का महत्व : प्रो. निवास** (Importance of Hindi in daily life: Prof. Niwas).
- स्टार्टअप क्षमता निर्माण पर प्रतिभागियों ने पूछे सवाल** (Questions asked by participants on startup skill building).

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