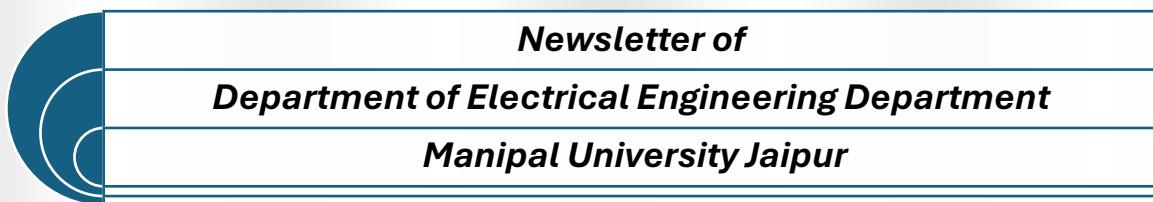


SPARK

- **Volume 1 Issue 4**
- **(October-December 2024)**



**Faculty
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About Newsletter

The Department of Electrical Engineering, Manipal University Jaipur, proudly presents SPARK Volume 1, Issue 4, highlighting the department's remarkable achievements. This edition showcases faculty accomplishments, high-impact research publications, and societal outreach initiatives. It also covers numerous technical events, international conferences, workshops, and expert lectures, fostering innovation and academic excellence. Through cutting-edge research and engaging activities, the department continues to make meaningful contributions to the engineering community. SPARK serves as a testament to the department's commitment to knowledge sharing, technological advancements, and global engagement, inspiring students and faculty to push the boundaries of engineering and innovation!

Peeyush Garg, Faculty Editor- SPARK

Ayushi Mittal, Student Editor- SPARK

Sanskar Bansal, Student Editor- SPARK

Skill Enhancements

Participation in Faculty Development Programme (FDP)

Faculty Name	Organizing institution	Name of Event
Dr. Amit Soni	Research Foundation of India	Innovative Teaching and Learning Pedagogy
Mr. Abhishek Kumar	EICT Academy, IIT ROORKEE	AI/ML Approaches for Efficient VLSI Circuit Designs

Faculty Accomplishments



President's Gold Medal

- Many congratulate to Dr. Himanshu Priyadarshi for receiving prestigious "President's Gold Medal" for Excellence in Research in the Graduating batch 2023-24 during 11th Convocation 2024.



Best Paper Award

- Congratulate to Mr. Peeyush Garg, for receiving **Best Paper Award** in IEEE International Conference on Augmented Reality, Intelligent Systems, and Industrial Automation (ARIIA-2024), at MAHE, Udupi.

Research Outcomes

Journal Articles/ Book Published

- **Gaurav Gangil (Ph.D. Scholar)**, Sunil Kumar Goyal, and Amit Saraswat published a research article titled as "A multi-objective techno-economic operation of distribution network considering reactive power support from renewable energy and battery storage system." in *Journal of Energy Storage* 102 (2024): 114116. (**SCIE-Q1**)
- **Himanshu Priyadarshi**, A. Shrivastava, D. Mishra and K. Singh has published a research article titled as "Iron-Ion Nanoparticles for Smart and Cost-Effective Energy Storage Cell Electrode Integration Using Novel Nano-Sedimentation Method," in *IEEE Transactions on Nanotechnology*, vol. 24, pp. 17-26, 2025, doi: 10.1109/TNANO.2024.3510757 (**SCIE-Q3**)
- **Amit Soni**, D. Tripathi, J. Sahariya & K.N. Sharma edited and published a book titled as *Eco-Materials and Green Energy for a Sustainable Future* (1st ed.) (2024) CRC Press. <https://doi.org/10.1201/9781003473749>

Research publication in Scopus- book series

- **Divya Rishi Shrivastava**, et al. published a research paper titled as "A Fast Real-Time Transient Stability Estimation for Enhanced Situational Awareness" in: Malik, H., Mishra, S., Sood, Y.R., García Márquez, F.P., Ustun, T.S. (eds) *International Conference on Signal, Machines, Automation, and Algorithm. SIGMAA 2023. Advances in Intelligent Systems and Computing*, vol 1461. Springer, Singapore (2024) https://doi.org/10.1007/978-981-97-6352-8_20
- **Divya Rishi Shrivastava**, et al. published a research paper titled as "Leveraging Synchronized Measurements for Novel Wide-Area Event Detector" in: Malik, H., Mishra, S., Sood, Y.R., García Márquez, F.P., Ustun, T.S. (eds) *International Conference on Signal, Machines, Automation, and Algorithm. SIGMAA 2023. Advances in Intelligent Systems and Computing*, vol 1460. Springer, Singapore. (2024) https://doi.org/10.1007/978-981-97-6349-8_53

Research publication in Scopus- book series

- D. Ghose, Shabbiruddin, **Neeraj Kanwar**, V.K. Jadoun published a research paper titled as “Understanding the Implications of Post-COVID Corporate Policies on the Power Grid Using DC Optimal Power Flow” in: Malik, H., Mishra, S., Sood, Y.R., García Márquez, F.P., Ustun, T.S. (eds) International Conference on Signal, Machines, Automation, and Algorithm. SIGMAA 2023. Advances in Intelligent Systems and Computing, vol 1460. Springer, Singapore. (2024) https://doi.org/10.1007/978-981-97-6349-8_2
- **Samarendra Pratap Singh, Neeraj Kanwar, Amit Saraswat** published a research paper titled as “Optimal Scheduling of Solar PV Generators and Network Assets in Distribution Network” in: Tripathi, A., Soni, A., Tiwari, M., Swarnkar, A., Sahariya, J. (eds) Intelligent Computing Techniques for Smart Energy Systems. ICTSES 2023. Lecture Notes in Electrical Engineering, vol 1277 Springer, Singapore. (2024) https://doi.org/10.1007/978-981-97-8429-5_18
- **Amit Saraswat**, et al. published a research paper titled as “Classification and Prediction of Knee Osteoarthritis by Deep Learning Approach” in: Tripathi, A., Soni, A., Tiwari, M., Swarnkar, A., Sahariya, J. (eds) Intelligent Computing Techniques for Smart Energy Systems. ICTSES 2023. Lecture Notes in Electrical Engineering, vol 1277. Springer, Singapore (2024). https://doi.org/10.1007/978-981-97-8429-5_9
- **Y. Gupta, Amit Saraswat** published a research paper titled as “Predicting Stock Price and Market Direction Using Statistical and LSTM Models” in: Tripathi, A., Soni, A., Tiwari, M., Swarnkar, A., Sahariya, J. (eds) Intelligent Computing Techniques for Smart Energy Systems. ICTSES 2023. Lecture Notes in Electrical Engineering, vol 1277. Springer, Singapore (2024). https://doi.org/10.1007/978-981-97-8429-5_10
- **Anu Prakash, Amit Saraswat**, N.S. Jayalakshmi, A. Shrivastava published a research paper titled as “Optimization-Based Cost Analysis for Energy Management System in Microgrids” in: Tripathi, A., Soni, A., Tiwari, M., Swarnkar, A., Sahariya, J. (eds) Intelligent Computing Techniques for Smart Energy Systems. ICTSES 2023. Lecture Notes in Electrical Engineering, vol 1277. Springer, Singapore (2024). https://doi.org/10.1007/978-981-97-8429-5_8
- **Peeyush Garg, et. al**, published a research paper titled as "Finite Element Based Elastic Modelling and Analysis of Two Dimensional Roadcut Slopes” in Proceedings of the 2nd International Conference on Geotechnical Issues in Energy, Infrastructure and Disaster Management. ICGEID 2024. Lecture Notes in Civil Engineering, vol 475. Springer, Singapore (2024). https://doi.org/10.1007/978-981-97-1757-6_59

Research publication in conference proceedings

- **Pratham Tatraiya**, Himanshu Priyadarshi, Adhishree Srivastava and Vinay Gupta, "Enhancing Power System Reliability: Leveraging Machine Learning for Unsymmetrical Fault Detection and Analysis," *2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET)*, Hyderabad, India, 2024, pp. 1-6, doi: 10.1109/SEFET61574.2024.10717482.
- **Manish Kumar Thukral** published a conference paper titled as "LETFM: A Robust and Key-Space Enhanced Map for Secure IoT Image Encryption," in *Control Instrumentation System Conference (CISCON)*, Manipal, India, 2024, pp. 1-5, doi: 10.1109/CISCON62171.2024.10696174
- **Rajkumar Soni**, Manish Kumar Thukral and Neeraj Kanwar, "Decentralized Phasor Measurement Unit Data Management on the Ethereum Blockchain," in *IEEE Third International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES)*, Delhi, India, 2024, pp. 508-513, doi: 10.1109/ICPEICES62430.2024.10719177
- **Kiran**, Sandeep Chaurasia and H. Ravishankar Kamath, "A Sustainable approach to Design and Optimize a Solar Powered E2W Charging Station for Manipal University Jaipur," *2024 IEEE Third International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES)*, Delhi, India, 2024, pp. 627-632, doi: 10.1109/ICPEICES62430.2024.10719174.
- **Nidhi Choudhary** and Amit Soni, "Effect of Strain on K₂ScAgCl₆ Halide Double Perovskite for Solar and Thermoelectric Applications," *2024 IEEE Third International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES)*, Delhi, India, 2024, pp. 857-861, doi: 10.1109/ICPEICES62430.2024.10719202.
- **Nidhi Choudhary** and Amit Soni, "Effect of Strain on K₂ScAgCl₆ Halide Double Perovskite for Solar and Thermoelectric Applications," *2024 IEEE Third International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES)*, Delhi, India, 2024, pp. 857-861, doi: 10.1109/ICPEICES62430.2024.10719202.
- **S. Sharma, Amit Soni**, J. Sahariya, K. Rangar, and K. Rawat. "First Principle Investigations of K doped CuInSe₂ for Optoelectronic Applications." In *Journal of Physics: Conference Series*, vol. 2844, 012009. IOP Publishing, 2024.
- **Pratham Tatraiya**, Himanshu Priyadarshi , "Advanced Feature Extraction Techniques for Machine Learning-Based Fault Analysis in Power Grids," *2024 3rd Odisha International Conference on Electrical Power Engineering, Communication and Computing Technology (ODICON)*, Bhubaneswar, India, 2024, pp. 1-7, doi: 10.1109/ODICON62106.2024.10797502.

BLOOD DONATION CAMP 2024 – MUJ



Registration Number	Name of the student	Semester
229209035	Diwanshu Poonia	VI Sem, B.Tech.-ELC
229209036	Sanskar Bansal	VI Sem, B.Tech.-ELC
229209037	Raghav Bhatia	VI Sem, B.Tech.-ELC



Students' Active Contributions:

- **Mr. Akash Mukherjee**, VI Semester B.Tech. (Electrical and Computer Engineering) student, is member of organisation committee of Blood Donation Camp as a Sponsorships Director for the 2024 edition. Happy to share that this event successfully landed 1L+ in sponsorships with 2300+ Donors.

Students Accomplishments

Many congratulations to Mr. Naman Bhasin for successfully completion and earn certification of NPTEL online course "Introduction of Machine Learning" of 12 weeks.



NPTEL ONLINE CERTIFICATION
(Funded by the MoE, Govt. of India)

This certificate is awarded to
NAMAN BHASIN
for successfully completing the course
Introduction to Machine Learning
with a consolidated score of **54 %**

Online Assignments	19.38/25	Proctored Exam	34.44/75
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Total number of candidates certified in this course: 4541

Prof. Andrew Thangaraj
Chair
Centre for Outreach and Digital Education, IITM

Jul-Oct 2024
(12 week course)

Prof. Vignesh Muthuvijayan
NPTEL Coordinator
IIT Madras

Indian Institute of Technology Madras

swayam

Roll No: NPTEL24CS101S551803868 To verify the certificate

No. of credits recommended: 3 or 4

Inspiring Young Minds: Our School Science Outreach

A team of engineering students from the Electrical and Computer Engineering branch of Manipal University Jaipur—Ayushi Mittal, Sanskar Bansal, Mimansha Bhandari, and Aakash Mukherjee—recently visited local schools, accompanied by their faculty mentor, Mr. Vikas Kumar Brodak, Assistant Professor, EE Department.

The initiative aimed to engage students from classes 7 to 10 through interactive activities and awareness sessions on renewable energy and electricity hazards. By demonstrating hands-on experiments such as the balloon-and-candle water test (illustrating air pressure) and paper rubbing (exploring static electricity), the team made science both fun and educational.



Farewell 2024

The Department of Electrical Engineering at Manipal University Jaipur recently bid an emotional farewell to its graduating students of batch 2021-2025. The event was a blend of heartfelt speeches, engaging activities, and cherished memories shared by both faculty and students.



4th International Conference on Flexible Electronics for Electric Vehicles– 2024 (FlexEV - 2024) December 19th - 20th, 2024

Organized by
Department of Electrical Engineering, Manipal University Jaipur

Lecture Notes
in Electrical
Engineering



The accepted & presented papers will be submitted for publication in online Springer LNEE Book Series

CHIEF PATRON:

- Shri S. Vaitheeswaran, Chairperson MUJ

PATRON:

- Prof. N. N. Sharma, President MUJ

CO-PATRON:

- Prof. Karunakar A Kotegar, Pro President MUJ
- Prof. Nitu Bhatnagar, Registrar MUJ

GENERAL CHAIRS:

- Prof. Kuldip Singh Sangwan, Dean FoE, MUJ
- Prof. Amit Soni, Director SEEC, MUJ

ORGANIZING CHAIR:

- Dr. Sunil Kumar Goyal, EE, MUJ

CONVENER:

- Dr. Divya Rishi Shrivastava, EE, MUJ

About FlexEV-2024

The last decade has witnessed fast developments and substantial achievements that have been shaping the field of flexible electronics. In order to forge interactions among active researchers in the area of flexible electronics, **Department of Electrical Engineering, Manipal University Jaipur, Jaipur** is organizing the **4th International Conference on Flexible Electronics on Electric Vehicle (FlexEV-2024)** on **December 19-20, 2024**.

This Conference on Flexible Electronics for Electric Vehicles (FlexEV-2024) aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results on all aspects of Flexible Electronics and allied domains. It also provides a premier interdisciplinary platform for researchers, practitioners, and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered, and solutions adopted in the fields of Flexible Electronics for Electric Vehicles.

Important Dates

Paper Submission Deadline	10 th Nov. 2024
Paper Acceptance Decision	25 th Nov. 2024
Registration Deadline	30 th Nov. 2024
Conference Dates	19 th - 20 th Dec. 2024

Scope of Conference

Conference includes the following areas, but not limited to:

- Track 1: Flexible Electronics & Applications
- Track 2: Electric Vehicle Technology & Infrastructures
- Track 3: Materials & Device
- Track 4: Battery Management & Intelligent Systems

Call for paper

Prospective authors are invited to submit original, unpublished research papers formatted according to the Springer LNEE guidelines that are in accordance with (but not limited to) the conference tracks. The Authors need to follow the LNEE-Springer conference template available in the below link to prepare or format their manuscript.

Paper format & Guideline: <https://www.springer.com/us/authors-editors/conference-proceedings/conference-proceedings-guidelines>

Similarity score less than 10 % excluding bibliography/references and rest all filters disabled must be achieved. Submissions should not less than [4] pages and exceeding [10] pages and should be submitted electronically through the Microsoft CMT conference website.

Paper Submission link: <https://cmt3.research.microsoft.com/FlexEV2024>

Registration Fees			Publication
Participants Category	Amount in INR	Amount in USD	It is planned to publish the peer reviewed and selected papers of conference as proceedings with Springer in their prestigious "Lecture Notes in Electrical Engineering" series: https://www.springer.com/series/7818 Selected papers from the conference will be published by Springer as a proceedings book volume. Springer will conduct quality checks on the accepted papers and only papers that pass these checks will be published.
Industry/Academia	10000	150	
Scholar/Students (Offline)*	6000	100	
Scholar/Students (Online)	4000	100	
Attendees	Free	Free	

*Registration for Offline participants will include 2-day lunch, high tea and conference kit

Conference Venue
Manipal University Jaipur, Dehmi Kalan,
Jaipur-Ajmer Express Highway, Jaipur-303007,
Rajasthan, INDIA (<http://jaipur.manipal.edu>)

Convener: Dr. Divya Rishi Shrivastava
Tel No.: 9731744751
E-mail: flexev2024@gmail.com



For more, visit website: <https://sites.google.com/view/flexev2024>

Events Organized

MANIPAL UNIVERSITY JAIPUR

SEMINAR
ON
"Advancing Battery Management Systems: Nonlinear Filter Techniques for Accurate State-of-Charge Estimation in Lithium-Ion Cells"







Organized by
Department of Electrical Engineering
In collaboration with
Dr. Rajeeb Dey,
Associate Professor, EE
NIT Silchar






Event Coordinator
Dr. Divya Rishi Shrivastava
Department of Electrical Engineering

December 19, 2024
Time: 11:30 AM - 12:30 AM

Board Room, Faculty Block II, 1AB

MANIPAL UNIVERSITY JAIPUR

WORKSHOP
ON
"Analytically Designed PI Control for a Polymer Electrolyte Membrane Fuel Cell"

Organized by
Department of Electrical Engineering
In collaboration with
Dr. Sudipta Chakraborty
Assistant Professor, NIT Silchar

December 19, 2024
Time: 02:00 PM - 03:00 PM

Electrical Machines Lab, 1AB

Event Coordinator
Dr. Divya Rishi Shrivastava
Department of Electrical Engineering

MANIPAL UNIVERSITY JAIPUR

PANEL DISCUSSION
ON
"Research Opportunities in Predicting Market Clearing Prices"






Organized by
Department of Electrical Engineering
In collaboration with
Dr. Akash Saxena,
Professor & Head (T&P),
Central University of Haryana

Event Coordinator
Dr. Divya Rishi Shrivastava
Department of Electrical Engineering

December 19, 2024
Time: 12:30 PM - 1:30 PM

Board Room, Faculty Block – II, 1AB

MANIPAL UNIVERSITY JAIPUR

WORKSHOP
ON
"Lithium-Ion Battery Recycling: A Catalyst for Electric Vehicle Growth"







Organized by
Department of Electrical Engineering
In collaboration with
Er. Neha Sakka,
JVNNL, State Nodal Agency for EVCS

Event Coordinator
Dr. Divya Rishi Shrivastava
Department of Electrical Engineering

December 20, 2024
Time: 11:45 AM - 12:45 PM

Board Room, Faculty Block – II, 1AB & Electrical Machines Lab



INTERNATIONAL SEMINAR

ON
"Opportunities and Challenges in Antenna Innovation for IoT and Wireless Connectivity: Insights from Industry and Academia"








Organized by
Department of Electrical Engineering

In collaboration with
Dr. Jaume Anguera
IEEE Fellow, Founder and CTO at Ignion
Universitat Ramon Llull, Barcelona, Spain

Event Coordinator
Dr Sunil Kumar Goyal
Associate Professor & Head
Department of Electrical Engineering

December 19, 2024
Time: 02:00 PM - 03:00 PM

MS Teams: <https://tinyurl.com/7caa4dx6>



PANEL DISCUSSION

ON
"Research Opportunities in Energy management and Charging Strategies in XEVs"






Organized by
Department of Electrical Engineering

In collaboration with
Dr. Hari Om Bansal,
FIE, SMIEEE, MISTE,
Professor EE, BITS Pilani

Event Coordinator
Dr Divya Rishi Shrivastava
Department of Electrical Engineering


December 20, 2024
Time: 03:30 PM - 04:30 PM


Board Room, Faculty Block – II, 1AB



NATIONAL WORKSHOP

ON
"Antennas for Health Monitoring Applications"









Organized by
Department of Electrical Engineering

In collaboration with
Dr. Sanyog Rawat,
Associate Professor & Head, ECE,
Central University of Rajasthan

Event Coordinator
Dr Divya Rishi Shrivastava
Department of Electrical Engineering

December 20, 2024
Time: 02:00 PM - 04:00 PM


Board Room, Faculty Block – II, 1AB

Industry Expert Lecture

on
Electric Vehicles and their Charging Infrastructure

Under
Trust EV Awareness Oath Program



Resource Person
Er. Neha Sakka
JVNL, State Nodal Agency
for EVCS

Schedule: November 21st 2024, 6:45 PM

Meeting Link: <https://meet.google.com/xfr-rhnp-qqc>

Convener
Dr. Neeraj Kanwar
Department of Electrical Engineering
Manipal University Jaipur



**MANIPAL UNIVERSITY
JAIPUR**
(University under Section 2(f) of the UGC Act)



DEPARTMENT OF ELECTRICAL ENGINEERING

ORGANIZES

**One Day
Workshop on
Recent Trends in Battery
Technology for E-mobility**



DR BRAHMA PRAKASH DUBEY
Manager, Advanced Battery Chemistry,
OLA Electric



23 NOV, 2024

11:00 AM
Online(MS Teams)



<https://tinyurl.com/3tam9yba>

Organizer:
Mr. Satya Narayan Agarwal



**CAPABILITY ENHANCEMENT
WORKSHOP**



*Beyond the Classroom to Elevate & Empower:
Professional Development for MUJ Teaching and
Support Staff*

26TH, 27TH AND 30TH DECEMBER 2024

KEY AREA OF FOCUS

- Teaching Methodologies
- Personal & Professional Development
- Use of Technology in Education
- Emotional and Mental Well-being

**Organized
by
Department of Electrical
Engineering**
In Association with
**HR Department, Manipal University
Jaipur**

Conveners: Dr Divya Rishi Shrivastava & Mr Peeyush Garg
Assistant Professor, Department of Electrical Engineering

Board Room, Faculty Block -II, 1AB, Manipal University Jaipur

• Students Testimonial



Mr. Pranshul Goel
B.Tech. (EEE)- Batch 2017-21



**MANIPAL UNIVERSITY
JAIPUR**
(University under Section 2(f) of the UGC Act)



NAAC A+ GRADE WITH 3.28 SCORE

Testimonial

Pranshul Goel

Digital Engineer
Texas Instruments

36.21 LPA

B.Tech in Electrical & Electronics Engineering
Batch: 2017-2021

“The EE department at Manipal University Jaipur has excellent facilities and resources that help students succeed. Studying in this department has given me the skills and knowledge to succeed in my career, and I am grateful for the education I received here”



Website:

<https://jaipur.manipal.edu/foe/department-of-electrical-engineering.php>



Facebook:

<https://www.facebook.com/eemuji/>