



MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR  
(A Government Aided UGC Autonomous Institute Affiliated to R.G.P.V. Bhopal)  
NAAC Accredited With A++ Grade



# ELECTRICAL ENGINEERING DEPARTMENT

# ELEC-TECH TIMES



Vol. 08 No. 04

October - December 2023

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 [eedmitsgwalior](https://www.instagram.com/eedmitsgwalior)

The Department of Electrical Engineering established in 1957, boasts a rich history as one of the institution's most earliest departments, initially enrolling 40 students. Currently, the department provides a diverse spectrum of educational opportunities, encompassing undergraduate, postgraduate, and doctoral programs in various Electrical Engineering disciplines. As of now, the B.Tech. program has a total capacity of 120 students, while the M.E. program in "Industrial Systems & Drives" accepts 25 students. Notably, in 2020, the department introduced a novel B.Tech. program focused on "Internet of Things," accommodating up to 60 students.

The department's primary areas of emphasis include Power Systems, Power Electronics, Control Systems, and Biomedical Instrumentation. To foster high-quality research, the department offers M.E. and Ph.D. programs, nurturing a culture of excellence in academic exploration. Equipped with cutting-edge laboratories, our department is dedicated to providing hands-on experiences that strengthen students' practical skills and actively support groundbreaking research initiatives.

Our department's mission is to prepare students for challenging roles in a wide array of industries and encourage engagement in research and development endeavors aimed at advancing society. To stay abreast of rapid technological advancements, our course syllabi are continually updated, and our laboratories are modernized.

Our course offerings cater to a broad spectrum of learning needs, spanning from foundational knowledge to advanced expertise. Furthermore, the department offers a wide range of elective courses to cover contemporary technological trends and developments.

***Vision***

***Our Vision: To Prepare Professionally Competent Electrical Engineers for Global Industrial requirements and Social needs***

***Mission***

***Our mission: Quality technical education, technology awareness, collaboration, and holistic student development through soft skills and ethics training.***



## TALK DELIVERED OUTSIDE THE INSTITUTE

Dr. A.K.Wadhvani delivered an expert Lecture on Chakra Energy Measurement, Healing Science and Pandemic Duration Prediction: An Integrated Knowledge Base System with Astrological Aspects & Fuzzy Approaches, at MANIT, Bhopal on 10.10.2023



Dr. A.K.Wadhvani delivered an Expert Talk on Chakra Energy Measurement, Healing Science and Pandemic Duration Prediction: An Integrated Knowledge Base System with Astrological Aspects & Fuzzy Approaches, at The Institution of Engineers (India), Gwalior Local Center on 03.12.2023.

Prof. Richa Sharma delivered an expert talk on “Internet of things”:Activity based learning, at PM SHRI Kendriya Vidyalaya No. 3, Morar Cantt. Gwalior on 21st November 2023.



## WORKSHOP/WEBINAR ATTENDED

- Dr. A. K. Wadhvani, attended FDP, Five Days Online FDP (e-FDP) “Opportunities and Challenges in Applications of Renewable Energy Systems” OCARES-2023, at NIT, Hamirpur 177005 Oct-23-27, 2023
- Dr. Shishir Dixit Chaired the Session at the 5th International Conference on Sustainable and Innovative Solutions for Current Challenges in Engineering & Technology (ICSISCET 2023) Organized in In-person and Online (Hybrid Mode) by Madhav Institute of Technology & Science, Gwalior, India Technically Sponsored by Soft Computing Research Society October 21-22, 2023
- Dr. Shishir Dixit has successfully participated in the Five Days Online FDP on “Opportunities and Challenges in Applications of Renewable Energy Systems” held on October 23-27, 2023 at the Department of Electrical Engineering, National Institute of Technology Hamirpur, Himachal Pradesh, India.
- Dr. Shishir Dixit of the Department of Electrical Engineering, Madhav Institute of Technology and Science (M.I.T.S.), Gwalior, (M.P.) India successfully attended webinar on AI in fashion design on 09 September 2023, organized by BVICAM, New Delhi, Sponsored by Azadi ka Amrit Mahotsav, IEEE Delhi section, IEEE Computer Society Delhi, AICTE New Delhi, CSI Delhi chapter, IITP Delhi, ISTE Delhi section, IMP Delhi.
- Dr. Shishir Dixit of Department of Electrical Engineering, MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR has successfully attended Rise of Robots on 23 December, 2023, organized by BVICAM, New Delhi. Sponsored by Azadi ka Amrit Mahotsav, IEEE Delhi section, IEEE Computer Society Delhi, AICTE New Delhi, CSI Delhi chapter, IITP Delhi, ISTE Delhi section, IMP Delhi



## PUBLICATIONS

Dr. Shishir Dixit and Vinay Kumar Tatikayala, "Optimal Allocation of Open Unified Power Quality Conditioner in Integrated Distribution System Environment with Renewable Energy Sources" has been accepted for publication in the International Journal of Green Energy. (SCIE)

Vishal Chaudhary, Hari Mohan Dubey, Manjaree Pandit, Surender Reddy Salkuti. A chaotic Jaya algorithm for environmental economic dispatch incorporating wind and solar power[J]. AIMS Energy, 2024, 12(1): 1-30.

<https://www.aimspress.com/article/doi/10.3934/energy.2024001>



## TRAINING

Vishal Chaudhary attended a one-week Industrial Training program on "O & M of Transmission and Distribution" from 18th to 22nd December 2023 organised by NPTI Shivpuri.



# ACTIVITIES ORGANIZED

## INDIAN ARMED FORCE WORKSHOP

Holistic Health Club MITS, in collaboration with the Electrical Engineering and Computer Science & Engineering Department, organized a successful Indian Armed Forces Workshop on October 7, 2023. The event, guided by Prof. Vishal Chaudhary and Prof. Mona Pandey Sharma, featured guest appearances by Lieutenant Colonel Mustafa, Mr. Sudhir Mishra, Lieutenant Commander Vineet Singh, Dr. Sapna Kumari, and Prof. Mona Pandey Sharma.



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HOLISTIC HEALTH CLUB MITS  
Presents  
**INDIAN ARMED FORCES WORKSHOP**  
with  
ELECTRICAL ENGINEERING AND  
COMPUTER SCIENCE & ENGINEERING DEPARTMENT

INTRODUCTION TO ARMED FORCES

STAGES OF SSB INCLUDING MOCK SCREENING, PSYCHOLOGY, GTO & PI

SSB INTERVIEW INCLUDING MOCK OIR & PPDT

LIFE AS AN OFFICER

REGISTRATION  
FEE: RS 50  
SPECIAL DISCOUNT FOR THE STUDENTS WITH MEMBERSHIP REFRESHMENTS FOR ALL

07 OCTOBER 2023  
COLLOQUIUM  
11:00AM

FOR ANY QUERIES CONTACT  
NITIN SHROTI:  
8817155100  
VARTIKA SHARMA:  
6261879082

FACULTY CO-ORDINATORS:  
PROF. VISHAL CHAUDHARY  
PROF. MONA PANDEY SHARMA

SCAN TO REGISTER



## ART OF LIVING

On October 10, 2023, our Holistic Health Club, in collaboration with the Computer Science Engineering Department, hosted an Art of Living session. This transformative event featured meditation techniques to connect participants with their higher selves and spirit teams. Through intentional practice, attendees entered the witness state of mind, fostering holistic well-being. The synergy of spirituality and technology marked a unique intersection, enriching both mind and soul.



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WORLD MENTAL HEALTH DAY  
October 10

ART OF LIVING

ORGANIZED BY "COMPUTER SCIENCE AND ENGINEERING" DEPARTMENT  
WITH "HOLISTIC HEALTH CLUB"

E-Certificate For all Participants

SCAN ME FOR REGISTRATION

MEDITATION IS WHEN YOU CONNECT WITH YOUR HIGHER SELF WITH YOUR SPIRIT TEAM INTENTIONALLY BY ENTERING THE "WITNESS" STATE OF MIND

DATE: 10 OCTOBER 2023  
TIMING: 4:00 PM TO 6:00 PM  
LOCATION: SEMINAR HALL-7

EVENT SPEAKER:  
DR. SANGEETA JHA  
(STATE LEVEL TRAINER)  
DR. SAPNA KUMARI  
(Student Counsellor)

FACULTY CO-ORDINATORS:  
PROF. JIGYASA MISHRA  
(ASSISTANT PROFESSOR)  
PROF. KRATIKA SHARMA  
(ASSISTANT PROFESSOR)

CONVENER:  
DR. MANISH DIXIT  
(PROF. & HEAD,  
CSE DEPARTMENT)



# ACTIVITIES ORGANIZED

## 5<sup>th</sup> INTERNATIONAL CONFERENCE ON SUSTAINABLE AND INNOVATIVE SOLUTIONS FOR CURRENT CHALLENGES IN ENGINEERING & TECHNOLOGY

Madhav Institute of Technology and Science (MITS), Gwalior hosted the 5<sup>th</sup> INTERNATIONAL CONFERENCE ON SUSTAINABLE AND INNOVATIVE SOLUTIONS FOR CURRENT CHALLENGES IN ENGINEERING & TECHNOLOGY (ICSISCET -2023) on October 21-22, 2023. The conference, organized in collaboration with the Multidisciplinary Learning and Research Club and IEEE PES Student Branch Chapter MITS, was technically sponsored by the Soft Computing Research Society.



**5<sup>TH</sup> INTERNATIONAL CONFERENCE ON SUSTAINABLE AND INNOVATIVE SOLUTIONS FOR CURRENT CHALLENGES IN ENGINEERING & TECHNOLOGY**  
**ICSISCET - 2023**



**OCTOBER 21 - 22, 2023**

**Coordinator**  
**Dr. Manjaree Pandit**  
Dean Academics & Professor In-Charge  
Centre of Artificial Intelligence & Centre of Internet of Things

**Organized By :**  
MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P.), INDIA  
माधव प्रौद्योगिकी एवं विज्ञान संस्थान, ग्वालियर (म.प्र.), भारत  
A GOVT. AIDED UGC AUTONOMOUS INSTITUTE, AFFILIATED TO R.G.P.V. BHOPAL (M.P.), INDIA  
NAAC ACCREDITED WITH A++ GRADE  
Website : <https://web.mitsgwalior.in/>

**Technically Sponsored By :**  
Soft Computing Research Society, Delhi, India

**In Collaboration With :**  
Multidisciplinary Learning & Research Club, MITS Gwalior  
IEEE Power & Energy Society (PES) Student Branch Chapter, MITS Gwalior

The event was spearheaded by Dr. Manjaree Pandit, the Coordinator and General Chair of ICSISCET - 2023, who holds the position of Professor In-Charge at the Centre of Artificial Intelligence and is also the Dean Academics at MITS, Gwalior, India. Dr. K.K. Aggarwal, the Chief Patron, brought his wealth of experience as the Former Chairman of NBA and Former VC of GGS Indraprastha University, New Delhi, India.

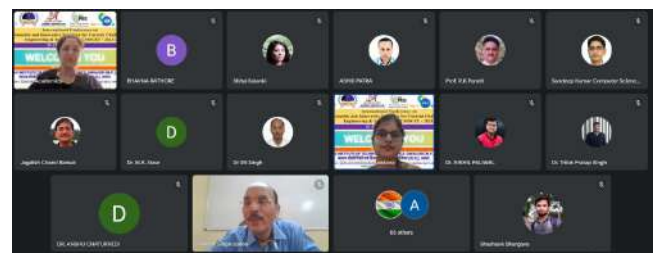


**5<sup>th</sup> INTERNATIONAL CONFERENCE ON SUSTAINABLE AND INNOVATIVE SOLUTIONS FOR CURRENT CHALLENGES IN ENGINEERING & TECHNOLOGY (ICSISCET-2023)**

**ORGANIZED BY**  
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NAAC ACCREDITED WITH A++ GRADE

**TECHNICALLY SPONSORED BY : SOFT COMPUTING RESEARCH SOCIETY**  
21 - 22 OCTOBER 2023

<b>CHIEF PATRON</b>  <b>DR. K.K. AGGARWAL</b> Former Chairman NBA, Former VC, GGS Indraprastha University, New Delhi	<b>HONORARY CHAIR</b>  <b>DR. S. H. SINGH</b> Director, ASV-ITM, Gwalior	<b>PATRON</b>  <b>DR. R.K. PANDIT</b> Director, MITS, Gwalior	<b>COORDINATOR &amp; GENERAL CHAIR</b>  <b>DR. MANJAREE PANDIT</b> Coordinator & General Chair of ICSISCET - 2023, Dean Academics & Professor In-Charge, Centre of Artificial Intelligence, MITS, Gwalior
<b>GENERAL CHAIR</b>  <b>DR. MAHOJWAR GAUR</b> Professor, IIT Kanpur, IITM, Gwalior, India	<b>GENERAL CHAIR</b>  <b>DR. SANDEEP KUMAR</b> CNSCT, Chennai & Indian Institute of Information Technology, Bangalore	<b>GENERAL SECRETARY (SCRS)</b>  <b>DR. J. C. BANGAL</b> Professor, Indian Institute of Information Technology, New Delhi	<b>ORGANISING CHAIR</b>  <b>DR. PRATEESH JAYADWAL</b> Faculty, IIT Kanpur

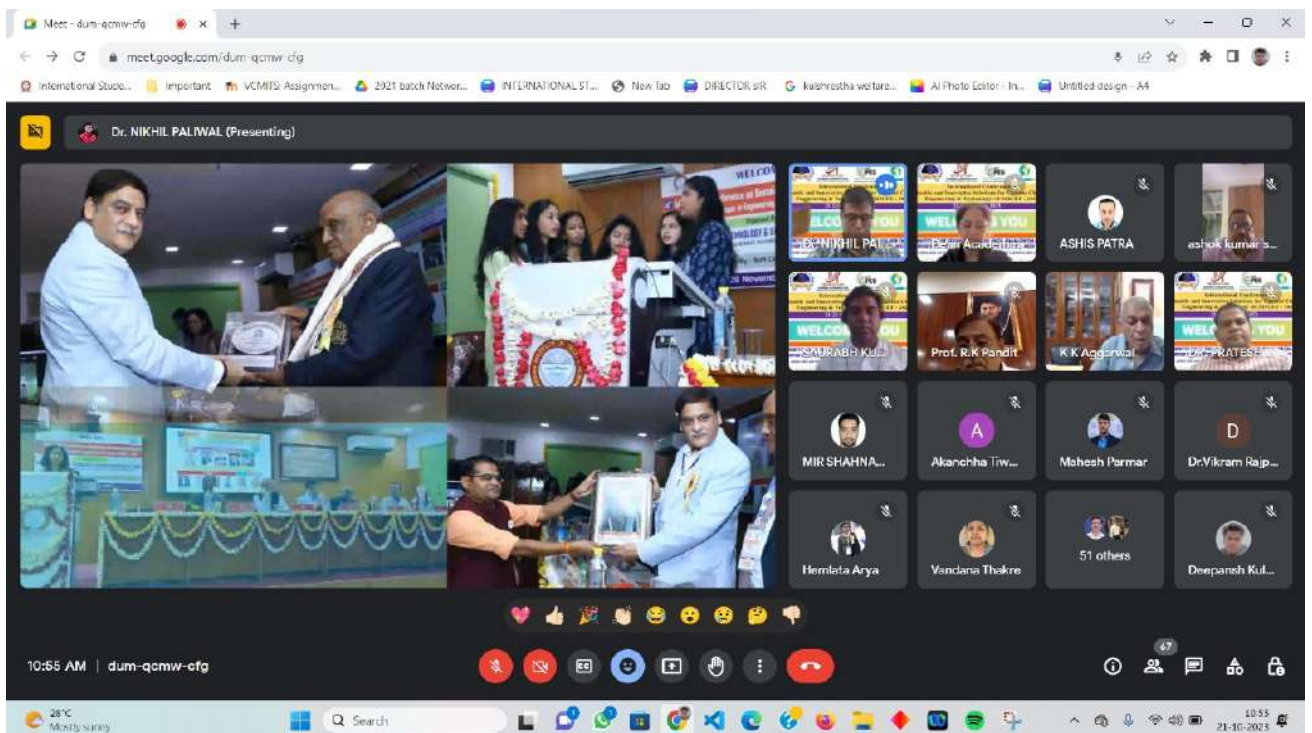


Dr. S. N. Singh, the Honorary Chair and Director of ABV-IIITM Gwalior, played a pivotal role in the success of ICSISCET-2023. Another prominent figure, Dr. J. C. Bansal, General Secretary of the Soft Computing Research Society (SCRS) at South Asian University, New Delhi, contributed significantly to the conference.

Dr. Sandeep Kumar, General Chair from CHRIST (Deemed to be University), Bangalore, and Dr. Manoj Kumar Gaur, General Chair and Professor & Head of MED at MITS, Gwalior, India, added their expertise to ensure the conference's success.

Dr. Pratesh Jayaswal, the Organizing Chair and Professor & Registrar at MITS, Gwalior, India, played a crucial role in coordinating the various aspects of ICSISCET-2023. The collaboration of these distinguished individuals and organizations made the conference a platform for fostering sustainable and innovative solutions to current challenges in engineering and technology.

In this conference, a total of more than 250 research papers were presented, with participants hailing from approximately 11 different countries. In this significant event, the scientific community contributed to the field of study and research through their experiences, fresh perspectives, and new initiatives. ICSISCET-2023 provided a platform for scientists from various countries to share their knowledge, fostering an exchange of ideas and insights. The conference aimed to promote advancements in both technique and technology, paving the way for a prosperous future.





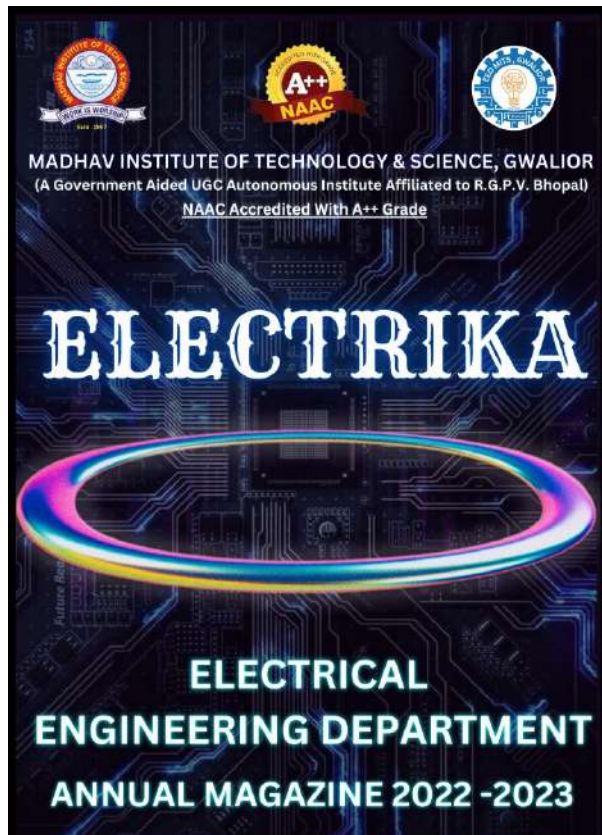
# ACTIVITIES ORGANIZED

## OHM'S ARTISTRY CHALLENGE

The Electrical Engineering Department organized a logo competition, led by faculty coordinators Dr. Nikhil Paliwal and Prof. Vishal Chadhary, with student coordinators Abhinav Tiwari and Deepansh Kulshrestha. Among 23 submissions, Abhinav Tiwari emerged as the winner, showcasing creativity and excellence in capturing the essence of the department. The Electrical Engineering Department organized a logo competition, led by faculty coordinators Dr. Nikhil Paliwal and Prof. Vishal Chadhary, with student coordinators Abhinav Tiwari and Deepansh Kulshrestha. Among 23 submissions, Abhinav Tiwari emerged as the winner, showcasing creativity and excellence in capturing the essence of the department.



## “ELECTRIKA”: ANNUAL MAGAZINE EED

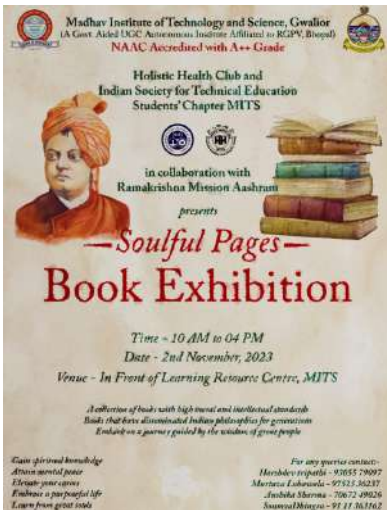
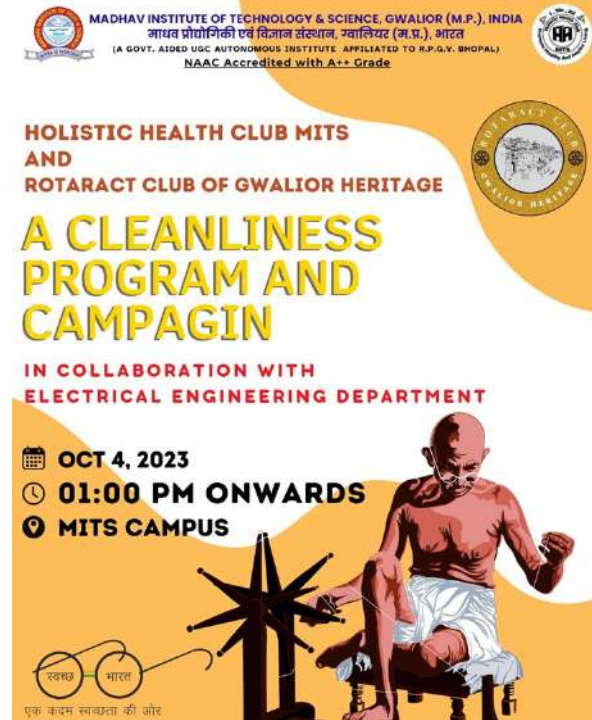


On November 14 2023, celebrating MITS Founder's Day, the Electrical Engineering Department unveiled its inaugural magazine, "ELECTRIKA" Spearheaded by the magazine coordinator Dr. Suloachna Wadhvani (Prof & Head EED), along with Prof. Kuldeep Kumar Swarankar and Prof. Vishal Chaudhary, it encompasses poetry, activities, records, and achievements. The dynamic student coordinators, Deepansh Kulshrestha, Shivam Patidar, Anushka Rawat, and Divyanshu Tiwari, contributed to the magazine's diverse content, reflecting the department's vibrant spirit and accomplishments.

# ACTIVITIES ORGANIZED

## A CLEANLINESS PROGRAM & CAMPAGIN

On October 4, 2023, the Holistic Health Club and Rotary Club of Gwalior Heritage joined hands with the Electrical Engineering Department for a collaborative cleanliness program and campaign at MITS campus. Together, they aimed to foster a cleaner and healthier environment through collective efforts and community engagement.



## BOOK EXHIBITION

On November 2, 2023, the Holistic Health Club and ISTE Student's Chapter at MITS, in collaboration with the Radhakrishna Mission Ashram, organized a book exhibition in front of the Learning Resource Centre. This collaborative effort aimed to promote knowledge and well-being, fostering a spirit of learning and holistic development within the MITS community.

## WRITING CREATIVE

The Holistic Health Club at MITS is hosting a creative writing competition from November 25 to December 3, 2023. Open to all, this event encourages participants to express their creativity through the written word, fostering a holistic approach to well-being. Join us in celebrating the power of imagination and literary expression during this enriching competition.





# ACTIVITIES ORGANIZED

NEWSLETTER

## BLOCKHIVE

The ISTE Student Chapter at MITS Gwalior presents "BlockHive" on November 25-26, 2023, featuring Mr. Snehil Banawal, an esteemed alumnus of ISTE SC MITS-GWL. This session promises insights into blockchain technology, offering students a valuable opportunity to engage with industry expertise and enhance their understanding of this innovative field.



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INDIAN SOCIETY FOR TECHNICAL EDUCATION  
STUDENTS' CHAPTER MITS-GWL

PRESENTS

# BLOCKHIVE

Dive into Decentralization: Blockchain Workshop by ISTE MITS Alumni - Transforming Ideas into Imutable Innovations.

Mr. Snehil Banawal  
ISTE SC MITS-GWL ALUMNI

SCAN QR TO REGISTER

FREE for ISTE Members  
Rs. 50/- for others

25TH-26TH NOVEMBER, 2023  
FROM 12PM TO 2PM  
ONLINE MODE

Still have any queries? Contact - Harshdev Tripathi - 93055 79097 Sanskriti Bisen - 93296 79795

## CAREER CATALYST

The Electrical Engineering Department's organise career-related session, "Career Catalyst," on December 15, 2023. The event will feature a keynote address by Mr. Katrikya Kumar, an accomplished alumnus of MITS EED with an M.Tech in Power Systems from IIT Delhi. With a remarkable GATE AIR of 451, Mr. Kumar will share valuable insights, providing guidance and inspiration to students as they navigate their career journeys.

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ELECTRICAL ENGINEERING DEPARTMENT

Presents

# CAREER CATALYST

Keynote Speaker:  
**Kartik Kumar**

Gate AIR: 451  
Pursuing: M.Tech (Power System)  
IIT Delhi

📅 15 December, 2023  
🕒 02:00 PM - 04:00 PM  
📍 Seminar hall - 3

Faculty Coordinator  
**Prof. Vishal Chaudhary**

eednewsletter@gmail.com  
eedmitsgwalior

# ACTIVITIES ORGANIZED

## ***NPTI SHIVPURI TRAINING***

The success of the recent 5-day training program on "Operation and Maintenance of Transmission and Distribution" organized by the National Power Training Institute (NPTI) Shivpuri, in collaboration with the Department of Electrical Engineering. The training, conducted from December 18 to December 22, 2023, was attended by all third-year students from the Electrical Engineering Department. Under the guidance of Prof Vishal Chaudhary and esteemed faculty, the program covered a diverse curriculum, including power generation technologies, industrial safety, simulator technologies, transmission systems, solar energy technology, distribution systems, and advanced technologies like AMI, Smart Meters, SCADA, and OMS. Expert lectures by Sh. Yogesh Kumar Paliwal and Sh. Rohit Gupta, along with hands-on experiences, enhanced the practical knowledge of participants. The program's success was further validated through assessments and feedback sessions, ensuring that all third-year students are well-equipped to tackle the dynamic challenges of the power sector. We express our gratitude to NPTI Shivpuri, Shri Dipak Pandit, and our esteemed faculty for making this program a resounding success.





## FIRST YEAR

Tarun Rajput actively participated in the Indian Armed Forces Workshop held on October 7, 2023. This workshop provided valuable insights and knowledge related to the Indian Armed Forces, contributing to Tarun's understanding of defense and national security matters. His attendance reflects a keen interest in matters pertaining to the armed forces and their role in safeguarding the nation.



Ajay Rana actively participated in two significant events, the Sardar Unity Trinity Quiz - Samridhh Bharat (Dec 1-31, 2023), and the Quiz on the Indian Constitution (Nov 24 - Dec 24, 2023). His engagement reflects a commendable interest in promoting the social values associated with Sardar Vallabhbhai Patel and gaining knowledge about the foundational principles of the Indian Constitution, showcasing a well-rounded commitment to historical and constitutional awareness.



Aryan Sharma actively participated in the Indian Armed Forces Workshop on October 7, 2023, gaining valuable insights into the operations and functions of the Indian Armed Forces. Additionally, on October 5, 2023, he engaged in the IBM Skills Build event, where he received information about the IBM Skill Build process, contributing to his skill development and knowledge enhancement.



## FIRST YEAR

Payal Chopde showcased her athletic prowess by participating in the State Volleyball Tournament held in Bhopal on December 2, 2023, where she proudly represented her college in the competition. Her active involvement in the state-level volleyball tournament demonstrates her commitment to sports and collegiate representation.





## SECOND YEAR

Gagan Choudhary excelled in the field of sports by participating in the Nodal and State level Yoga competition. On November 20, 2023, he secured the 1st position in the Nodal competition, and on November 24, 2023, he achieved the 3rd position at the State level. Gagan's remarkable performance earned him a medal and a trophy in the Nodal competition, along with a trophy at the State level, showcasing his dedication and skill in the discipline of yoga.



Aayushi Neeraj Sharma showcased her versatile talents in both dance and yoga competitions. In the "Filmistaan" intercollege dance competition organized by the SMAC club on October 10, she secured the 2nd prize in the Freestyle category, highlighting her prowess in dance. Additionally, at the Yoga Nodal event held at MITS on November 20, Aayushi clinched the 1st prize in the Female Yoga Nodal - District category, demonstrating her excellence in yoga. Her achievements reflect a commendable dedication to both artistic expression and physical well-being.



## SECOND YEAR

Deepansh Kushrestha has achieved significant milestones in his academic and extracurricular journey. He successfully completed the Google Analytics certification and application development in Chas, showcasing his proficiency in these domains. Additionally, he explored data analysis and mastered the creation of flows to manage user information. Deepansh also excelled in building an AI web app using Python and Flask. Furthermore, he actively participated in a poetry competition organized by Skill Smart, highlighting his creative talents. His knowledge extends to cloud computing, Microsoft 365 experience configuration, and serving as a student core committee member in the INTERNATIONAL CONFERENCE ON SUSTAINABLE AND INNOVATIVE SOLUTIONS FOR CURRENT CHALLENGES IN ENGINEERING & TECHNOLOGY (ICSISCET -2023). Moreover, he organized Ohm's Artistry Challenge, the official logo-making competition of the Electrical Engineering department. These accomplishments reflect Deepansh's diverse skill set and commitment to both technical and creative pursuits.



NEWSPLETTER



## SECOND YEAR

Sneha Sharma attended the "Exploring Cosmic Connections" seminar by Rocket Club MITS on October 4, 2023, receiving a participation certificate. She also participated in the QuizBrainly Bowl organized by ASIMOV Robotics Club.



Shambhavi Sharma excelled in both cultural and sports domains. She participated in the Indian Armed Forces Workshop on October 7, 2023, earning a participation certificate. In basketball nodals on November 7, 2023, Shambhavi secured the 1st position, receiving a trophy for her outstanding performance. Her achievements highlight a well-rounded commitment to diverse interests.



Vinayak Singh participated in EY TECATHON 4.0, a national-level competition organized by Ernst and Young on October 16. This annual event provides a platform for participants to showcase their technological and innovation skills. Vinayak's involvement reflects a keen interest in staying abreast of cutting-edge developments in the technology sector.



## **SECOND YEAR**

**Yash Kumar Soni displayed outstanding skills in the Nodels Basketball match held on November 7, 2023, securing the first prize. His commendable performance in the basketball game reflects a dedication to sports excellence and a notable achievement in the competition.**



## THIRD YEAR

Narendra Soni recently excelled in the State Level Volleyball Tournament from December 1 to December 2, 2023. Our team secured the Runners-Up position, earning him a Volleyball State Level Certificate. Moreover, his stellar performance has qualified him for the Inter-University Tournament in the West Zone, Maharashtra, to be held in Nanded. This achievement underscores his dedication to the sport and positions him as a standout player at the inter-university level.



Shashank Chandravanshi showcased his creative prowess in two competitions. In "Logocraft: The Ultimate Logo Design competition" organized by CDC Club, he secured the prestigious title of creating the official emblem for the Career Development Club, earning a featured spot on their Instagram profile and an opportunity to join the Core Team. Additionally, in the "National Nutrition Week Poster Making Competition" by Dance Club in October 2023, Shashank clinched the 1st position, earning an achievement certificate for his outstanding poster creat



Akshita Mishra actively participated in the National Power Training on "O&M of Transmission and Distribution" from December 18 to December 22, 2023. This program provided valuable insights into the operation and maintenance aspects of power distribution systems, contributing to Akshita's knowledge and expertise in the field of electrical engineering.



Shubham Dhakad demonstrated cybersecurity awareness by actively participating in the "Cyber Stalking" event organized as part of National Cyber Security Awareness under the ISEA Project Phase-II on October 3, 2023. Achieving an impressive score of 85%, Shubham showcased his commitment to understanding and addressing issues related to online security and cyber threats.



## THIRD YEAR

Mohini Mishra participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from October 30 to November 3, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.



Dev Mекle participated in the Indian Karting Race.



Harshit Shrivastava underwent two significant training programs. The first, a week-long training on power generation technology at NPTI, Shivpuri, took place from October 30 to November 3, 2023. The second program, focusing on the Operation and Maintenance (O&M) of transmission and distribution, also held at NPTI, Shivpuri, spanned from December 18 to December 22, 2023. These training sessions likely equipped Harshit with valuable insights into power sector operations and maintenance practices.



Anushka Rawat actively participated in the Indian Armed Forces Workshop, held on October 7. The workshop provided insights into the Indian Army and its examinations, offering valuable knowledge about the armed forces. Anushka's notable achievement includes securing the 3rd position in the accompanying quiz, showcasing her dedication to learning about the defense sector.



## THIRD YEAR

Nitin Srothi participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from October 30 to November 3, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.



Vaishali Gaur participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.

Shailendra Singh kaurav participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.



Shivam Singh participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.

Vikas Mishra participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.





## THIRD YEAR

Ritika Ghoshi participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.



Kunal Bharadwaj participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.

Karan Savita participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.



Komal Gauhar participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.

Radhika Sharma participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.



## THIRD YEAR

Geetanjali yadav participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.



Radhika Yadav participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.

Rishi Bohare participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.



Aditya Singh participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.

Arpit Purohit participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.





## THIRD YEAR

Durgesh Sen participated in a week-long training program at NPTI, specializing in various power generation techniques such as hydro, atomic, and sustainable sources. The program encompassed comprehensive theoretical instruction, hands-on practical training with simulators and real equipment, industry visits for firsthand experience, research initiatives, and skill development programs. This training equips individuals with the expertise to contribute to the efficiency and sustainability of the power sector. Additionally, Durgesh Sen actively engaged in Annual Training Camps (ATC) and Combined Annual Training Camps (CATC) conducted within the state, and Centrally Organized Camps (COC) at the national level, from October 30 to November 3, 2023, and October 2 to October 11, 2023, respectively.



Faizan participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.



Sonakshi Bansal participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.

Radha Sharma participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.



## THIRD YEAR

Utkarsh Gupta excelled in a multifaceted learning journey, starting with a week-long training program at NPTI, specializing in various power generation techniques. He then delved into the intricacies of ethical hacking and cybercrime investigation through the EHCCI workshop, gaining crucial skills in cybersecurity practices. Additionally, Utkarsh showcased his proficiency in web development by participating in a 7-day boot camp where he successfully created an Instagram clone using HTML, CSS, and JavaScript. These accomplishments underscore Utkarsh's commitment to continuous skill enhancement across diverse domains.



Nandini Thakur participated in a five-day internship focused on power generation technology, sponsored by MPSSDEGB under the SANKALP YOJNA initiative. The internship, conducted from December 18 to December 22, 2023, provided valuable insights and practical exposure in the field of power generation, contributing to Nandini's knowledge and skills in this domain.



Ankit Singh Tomar attended NPTI Shivpuri's 5-day training on O&M of Transmission and Distribution from December 18 to 22, 2023. The program provided technical expertise and practical skills, enhancing his understanding of power delivery systems for future challenges in the industry.





## THIRD YEAR

Sparsh Mishra participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.



Naman Sharma participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from October 30 to November 3, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.

Yarthar participated in a week-long training program on Power Generation Technologies at NPTI Shivpuri from December 18 to December 22, 2023. The program equipped her with insights into the latest advancements in power generation and fostered a deeper understanding of the intricacies associated with the field.



## FINAL YEAR

Ayush Meena actively participated in the Amazon ML Summer School 2023, a technical event hosted by Amazon India. The program spanned from September 16, 2023, to October 8, 2023, providing a comprehensive learning experience in Machine Learning (ML) technologies. The initiative, now in its third edition, was designed to equip students with valuable insights from Amazon scientists, fostering their expertise in machine learning. Ayush Meena's attendance demonstrates a commitment to staying abreast of cutting-edge technologies and preparing for a career in the dynamic field of machine learning.



Ankit Sharma participated in the Sardar Unity Trinity Quiz - Samridh Bharat, a National Level Quiz held on December 13, 2023. This quiz, hosted on the MyGov platform, aimed to celebrate the life and ideals of Sardar Vallabhbhai Patel, fostering awareness of his social values and ethics. Ankit's active involvement highlights a commitment to cultural and historical appreciation, contributing to the promotion of national unity.

Ankit Sharma actively participated in the National Workshop/Seminar on "TORQUE METROLOGY" held on December 16, 2023. Torque metrology focuses on the measurement and calibration of rotational forces in industrial applications, encompassing devices like torque sensors and transducers, calibration equipment, and compliance with international standards. In industries such as manufacturing and automotive, precise torque measurements are crucial for ensuring product quality and reliability. Ankit Sharma was awarded the Certificate of Participation for his involvement in this significant event.



NEWSLETTER



## भारतीय संस्कृति का अनोखा स्वरूप

स्वभाव की गंभीरता, मन की समता, संस्कृति के अंतिम पाठों में से एक है और यह समस्त विश्व को वश में करने वाली शक्ति में पूर्ण विश्वास से उत्पन्न होती है।

अगर भारत के संदर्भ में बात की जाए तो भारत एक विविध संस्कृति वाला देश है, एक तथ्य कि यहाँ यह बात इसके लोगों, संस्कृति और मौसम में भी प्रमुखता से दिखाई देती है। हिमालय की अनश्वर बर्फ से लेकर दक्षिण के दूर दर्राज में खेतों तक, पश्चिम के रेगिस्तान से पूर्व के नम डेल्टा तक, सूखी गर्मी से लेकर पहाड़ियों की तराई के मध्य पठार की ठंडक तक, भारतीय जीवनशैलियाँ इसके भूगोल की भव्यता स्पष्ट रूप से दर्शाती है। एक भारतीय के परिधान, योजना और आदतें इसके उद्भव के स्थान के अनुसार अलग-अलग होते हैं।

भारतीय संस्कृति अपनी विशाल भौगोलिक स्थिति के समान अलग-अलग है। यहाँ के लोग अलग-अलग भाषाएँ बोलते हैं, अलग-अलग तरह के कपड़े पहनते हैं, भिन्न-भिन्न धर्मों का पालन करते हैं, अलग-अलग भोजन करते हैं किंतु उनका स्वभाव एक जैसा होता है। चाहे कोई खुशी का अवसर हो या कोई दुख का क्षण, लोग पूरे दिल से इसमें भाग लेते हैं, एक साथ खुशी या दर्द का अनुभव करते हैं। एक त्यौहार या एक आयोजन किसी घर या परिवार के लिये समिति नहीं है। पूरा समुदाय या आस-पड़ोस एक अवसर पर खुशियाँ मनाने में शामिल होता है, इसी प्रकार एक भारतीय विवाह मेल-जोल का आयोजन है, जिसमें न केवल वर और वधु बल्कि दो परिवारों का भी संगम होता है। चाहे उनकी संस्कृति या फिर धर्म का मामला क्यों न हो। इसी प्रकार दुख में भी पड़ोसी और मित्र उस दर्द को कम करने में एक महत्त्वपूर्ण भूमिका निभाते हैं।

भारतीय संस्कृति के बारे में पं. मदनमोहन मालवीय का कहना है कि “भारतीय सभ्यता और संस्कृति की विशालता और उसकी महत्ता तो संपूर्ण मानव के साथ तादात्म्य संबंध स्थापित करने अर्थात् ‘वसुधैव कुटुंबकम्’ की पवित्र भावना में निहित है।

भारत का इतिहास और संस्कृति गतिशील है और यह मानव सभ्यता की शुरूआत तक जाती है। यह सिंधु घाटी की रहस्यमयी संस्कृति से शुरू होती है और भारत के दक्षिणी इलाकों में किसान समुदाय तक जाती है। भारत के इतिहास में भारत के आस-पास स्थित अनेक संस्कृतियों से लोगों का निरंतर समेकन होता रहा है। उपलब्ध साक्ष्यों के अनुसार लोहे, ताँबे और अन्य धातुओं के उपयोग काफ़ी शुरूआती समय में भी भारतीय उप-महाद्वीप में प्रचलित थे, जो दुनिया के इस हिस्से द्वारा की गई

प्रगति का संकेत है। चौथी सहस्राब्दि बी.सी. के अंत तक भारत एक अत्यंत विकसित सभ्यता के क्षेत्र के रूप में उभर चुका था।

संस्कृति के शब्दिक अर्थ की बात की जाए तो संस्कृति किसी भी देश, जाति और समुदाय की आत्मा होती है। संस्कृति से ही देश, जाति या समुदाय के उन समस्त संस्कारों का बोध होता है जिनके सहारे वह अपने आदर्शों, जीवन मूल्यों आदि का निर्धारण करता है। अतः संस्कृति का साधारण अर्थ होता है- संस्कार, सुधार, परिवार, शुद्धि, सजावट आदि। वर्तमान समय में सभ्यता और संस्कृति को एक-दूसरे का पर्याय माना जाने लगा है लेकिन वास्तव में संस्कृति और सभ्यता अलग-अलग होती है। सभ्यता में मनुष्य के राजनीतिक, प्रशासनिक, आर्थिक, प्रौद्योगिकीय व दृश्य कला रूपों का प्रदर्शन होता है जो जीवन को सुखमय बनाने में महत्त्वपूर्ण भूमिका निभाते हैं जबकि संस्कृति में कला, विज्ञान, संगीत, नृत्य और मानव जीवन की उच्चतम उपलब्धियाँ सम्मिलित हैं।

भारतीय संस्कृति विश्व की प्राचीनतम संस्कृतियों में से एक है। यह माना जाता है कि भारतीय संस्कृति यूनान, रोम, मिस्र, सुमेर और चीन की संस्कृतियों के समान ही प्राचीन है। भारत विश्व की सबसे पुरानी सभ्यताओं में से एक है जिसमें बहुरंगी विविधता और समृद्ध सांस्कृतिक विरासत है। इसके साथ ही यह अपने-आप को बदलते समय के ढालती भी आई है।

“यूनान-ओ-मिस्र-ओ-रोमां,सब गिर गए जहाँ से अब तक मगर है बाकी नाम-ओ-निशाँ हमारा, कुछ बात है कि हस्ती मिटती नहीं हमारी,सदियों रहा है दुश्मन दौर-ए-जहाँ हमारा।”



**शाम्भवी शर्मा**  
*2nd year (Electrical )*



## **IMPOSTER SYNDROME: A COMMON PROBLEM IN STUDENTS**

Imposter syndrome (IS) is a behavioral health phenomenon described as self-doubt of intellect, skills, or accomplishments among high-achieving individuals. College often brings increased academic challenges and expectations. Students may feel pressured to excel, leading them to set extremely high standards for themselves. Consequently, when they achieve success, they attribute it to luck or other external factors rather than their own capabilities. In a competitive academic environment, students frequently compare themselves to their peers. This constant comparison can amplify feelings of inadequacy, especially if they perceive others as more accomplished or competent. For many students, college represents a significant transition from high school. Adjusting to a new environment, meeting higher academic demands, and navigating newfound independence can exacerbate feelings of self-doubt and uncertainty.

### **Coping with Imposter Syndrome**

- 1. Acknowledge and Normalize Feelings:** Encourage students to recognize that imposter syndrome is common and experienced by many high-achieving individuals. Normalize the experience by discussing it openly, reducing the stigma surrounding these feelings.
- 2. Reframe Negative Thoughts:** Help students challenge their negative self-talk by reframing thoughts. Encourage them to replace self-doubt with affirmations of their accomplishments and capabilities. Practicing positive self-talk can gradually change their mindset.
- 3. Set Realistic Goals:** Emphasize the importance of setting achievable goals rather than pursuing unattainable perfection. Encourage students to break tasks into smaller, manageable steps, celebrating achievements along the way.
- 4. Seek Support and Mentorship:** Encourage students to seek guidance and support from mentors, professors, or counselors. Having a mentor or a support network can provide perspective, advice, and reassurance during challenging times.

Addressing imposter syndrome in college students involves fostering a supportive environment that encourages open discussions about self-doubt and providing resources for managing stress, building confidence, and promoting a healthy perspective on success and failure. Awareness, support networks, and strategies for reframing negative thoughts are crucial in helping students navigate and overcome imposter syndrome during their college journey.



**Sneha Sharma**  
**2nd year (Electrical)**

## **FUTURE OF RENEWABLE ENERGY IN INDIA**

India, faced with twin challenges on energy and environmental front, has no option but to work towards increasing the role of renewable in the future energy systems. Renewable energy technologies vary widely in their technological maturity and commercial status. In India, renewable energy is at the take-off stage and businesses, industry, government and customers have a large number of issues to address before these technologies could make a real penetration. India with large renewable energy resources (solar PV, wind, solar heating, small hydro and biomass) is to set to have large-scale development and deployment of renewable energy projects . The aim of meeting 10% of the country power supply through renewable by 2012 and also ambitious plans for the distribution of biogas plants, solar PV applications and solar city appears to be within reach. Moreover introduction of tradable renewable energy certificates (REC) could overcome the existing gap that is hindering the application of quota for renewables and thereby creates a vibrant market. India would also have to look for international cooperation in renewable energy through well defined R&D projects with proper division of labour and responsibilities for specific tasks with equitable financial burden and credit sharing arrangements. Renewable energy development is considered in India to be of great importance from the point of view of long term energy supply security, environmental benefits and climate change mitigation. The Integrated Energy Policy report has recognized the need to maximally develop domestic supply options as well as the need to diversity energy sources. The Committee has placed emphasis on higher use of renewables in all forms of services. It is expected that the contribution from renewables in power generation alone can be of the extent of 60,000 MW in the year 2031–2032. By 2031–2032 renewables will be the key driver in social inclusion of the poor in the development process. A modest assessment of investments in the renewable energy sector will be about Rs. 300,000 crores over the next 25 years. MNRE has included in its mission: energy security; increase in the share of clean power; energy availability and access; energy affordability; and energy equity . A number of government and private organizations such as MNRE, Centre for Wind Energy Technology, Universities, IITs, NITs, Indian Oil Corporation Ltd. (IOCL) and The Energy Resource Institute (TERI) are involved in R&D of renewable energy sources.



**Ajay Rana**  
**1st year (Electrical )**

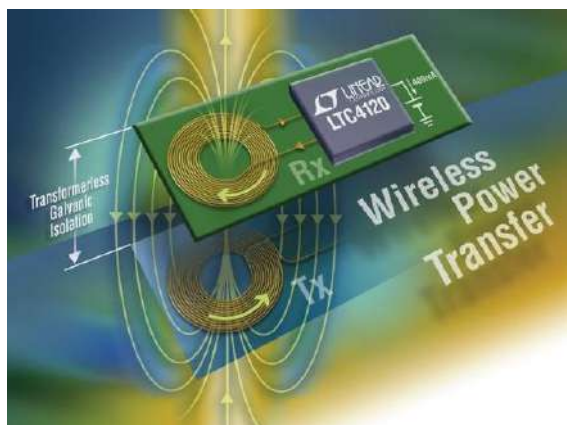


## ADVANCEMENTS IN BATTERY TECHNOLOGY

- **Solid-state batteries:** These batteries offer increased safety, faster charging times, and longer lifespans compared to traditional lithium-ion batteries. Recent breakthroughs in materials science and production processes have brought them closer to commercialization, potentially revolutionizing electric vehicles and grid storage.
- **Lithium-metal batteries:** While facing safety concerns, this technology promises even higher energy density than current lithium-ion batteries. Improved electrolyte designs and safety mechanisms are being explored to make them viable, potentially impacting everything from drones to portable electronics.



## WIRELESS POWER TRANSFER (WPT)



- **Mid-range WPT:** This technology allows for efficient wireless charging over distances of several meters, with applications beyond close-range smartphone charging. Imagine powering home appliances, furniture, or even medical implants without cables.
- **Dynamic WPT:** This evolving technique enables charging of moving objects like robots or electric vehicles, further expanding the possibilities of WPT.

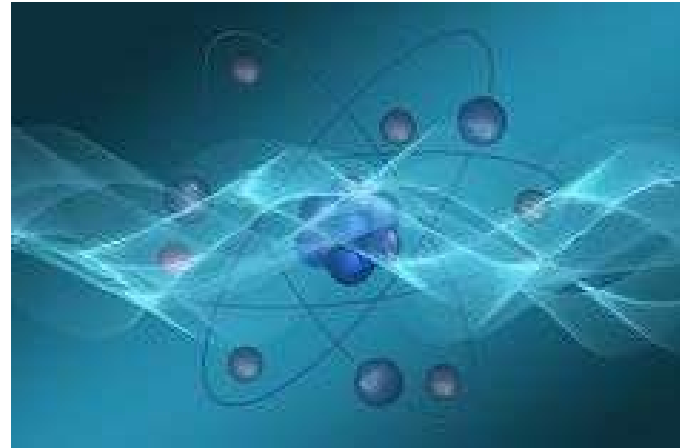
## AI AND ML FOR POWER SYSTEMS

- **Smart grid optimization:** AI algorithms are being used to optimize energy distribution in smart grids, improving efficiency, reducing waste, and enabling integration of renewable energy sources.
- **Predictive maintenance:** Machine learning models are being developed to predict equipment failures in power plants and grids, allowing for preventive maintenance and reducing downtime.



## MATERIAL SCIENCE BREAKTHROUGH

- **Gallium nitride (GaN) transistors:** These highly efficient transistors are replacing traditional silicon transistors in power electronics applications, enabling smaller, lighter, and more efficient devices.
- **Perovskite solar cells:** These emerging solar cell materials offer the potential for cheaper and more efficient solar energy conversion, potentially driving down the cost of renewable energy.



## DRONES IN ELECTRICAL ENGINEERING



- **Inspection and maintenance:** Drones equipped with sensors are increasingly used for inspecting power lines, wind turbines, and other electrical infrastructure, improving safety and efficiency.
- **Construction and repair:** Drones are being used to deliver tools and materials to remote locations or access hard-to-reach areas for repairs, minimizing risk and time spent on tasks.



- In 2023, a pilot project in California successfully demonstrated the feasibility of a fully decarbonized, AI-powered smart grid, paving the way for wider adoption.
- Tesla's 4680 battery cell promises significant improvements in range and energy density, potentially pushing EV performance to new heights.
- Researchers at MIT have developed a new type of transistor that is just 1 atom thick, opening up possibilities for incredibly miniaturized and efficient electronics.
- AI algorithms are being used to optimize energy consumption in buildings, leading to significant reductions in greenhouse gas emissions.
- The development of low-power wireless communication protocols like LoRaWAN is making it possible to connect even the most remote devices to the IoT.
- Germany's "Energiewende" project is ambitiously transforming its grid to 100% renewables by 2030, showcasing the potential for large-scale smart grid implementation.
- China, the world's largest auto market, is a hotbed for EV innovation, with companies like BYD and NIO producing cutting-edge electric vehicles for both domestic and international markets.
- The International Renewable Energy Agency (IRENA) launched the "AI for Renewables" initiative, bringing together experts from around the world to leverage AI for optimizing renewable energy systems in developing countries.
- The LoRaWAN Alliance, a global collaboration, is developing and promoting long-range, low-power wireless communication protocols, making it possible to connect even the most remote devices to the IoT, bridging the digital divide across the globe.

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