



Department of Electrical Engineering
Bansal Institute of Engineering & Technology, Lucknow

Report of PELS Day 2023

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|--------------------------|---|
| Name of Event | : PELS Day 2023 |
| Date | : 20-21 June, 2023 |
| Time | : 10:30 AM- 04:00 PM |
| Venue | : Seminar Hall, EED |
| Participants | : 2 nd , 3 rd and 4 th year students of EE |
| Coordinator | : Dr. Anurag Dwivedi , Head, EE Department |
| Co-coordinator | : Dr. Arun Kumar Yadav, Associate Professor, EED Dr. Rachit Srivastava, Assistant Professor, EED |
| Technical Sponsor | : BIET IEEE Student Branch, IEEE PELS Society |

The poster for IEEE PELS Day 2023 at Bansal Institute of Engineering & Technology, Lucknow, Department of Electrical Engineering. It features the IEEE PELS Day logo, the IEEE Student Branch logo, and the IEEE Power Electronics Society logo. The event is scheduled for June 20-21, 2023. The poster lists three speakers: Dr. Shailendra Kumar (Asst. Professor, IIT BHILAI), Dr. Indra Vijay Singh (Scientist-C, ICMR, Mumbai), and Dr. Saurabh Ghosh (Research Associate, MNIT Allahabad). The event is divided into two days: Day 1 (20 June, 2023) and Day 2 (21 June, 2023). The venue is Seminar Hall (EE).

BANSAL INSTITUTE OF ENGINEERING & TECHNOLOGY, LUCKNOW
DEPARTMENT OF ELECTRICAL ENGINEERING
Celebrates
IEEE PELS DAY
20 - 21 JUNE 2023

DAY 1 (20 June, 2023)

| | |
|--|---------------------|
| [Talk 1] :- "Bi-directional EV Charging System" By - Dr. Shailendra Kumar | 10:00 AM - 11:00 PM |
| [Talk 2] :- "Emerging Trends in Power Electronics" By - Dr. Indra Vijay Singh | 12:00 PM - 01:00 PM |
| Lunch | |
| [Talk 3] :- "Overview on Renewable Energy assisted Electric Vehicle Charging Infrastructure" By - Dr. Saurabh Ghosh | 02:00 PM Onwards |

DAY 2 (21 June, 2023)

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|--|------------------|
| [Talk 1] :- "Workshop on EV Charging Systems: On-board & Off-board Topologies" By - Dr. Saurabh Ghosh | 09:30 AM Onwards |
|--|------------------|

Venue : Seminar Hall (EE)

[f](#) [in](#) [in](#) /@ieeebansalietlko



Department of Electrical Engineering Bansal Institute of Engineering & Technology, Lucknow

Institute Profile

BIET is managed by Bansal Educational Trust founded in the year 2007 and registered under the Societies Registration Act of 1860 with an aim of providing quality technical education. The Institute is attempting to create benchmarks by incorporating new initiatives in the field of education through its learning methodologies and aiming to provide the students with realistic knowledge. The institute has highly qualified and experienced faculty and excellent infrastructural facilities.

Vision of the Institute

To be the most sought after destination in the country in providing quality technical education and be known for producing knowledge driven, skilled and industry ready engineers who can contribute to building strong nation and society.

Missions of Institute

- M1:** Offer a dynamic, interactive & practical education that engages students in the learning process.
- M2:** To empower every student by providing an environment that encourages knowledge enhancement, application & growth by engaging management, teachers, students, alumni & industry in the process.
- M3:** Provide clear learning outcomes by building a robust system of imparting knowledge, analyzing result, taking feedback & improving systems.
- M4:** Continuous commitment to improvement for producing knowledgeable, skilled & industry-ready professionals.

Department Profile

Electrical Engineering Department of Bansal Institute of Engineering & Technology is established to educate the students in the arena of Electrical Engineering with an emphasis such that students are able to apply basic knowledge to achieve technological advances. The department has been imparting quality education at undergraduate. The courses offered by the department is B.Tech in Electrical Engineering Our mission is to impart knowledge in Electrical Engineering and Technology to meet the international standards and make the Electrical Engineering ethically and emotionally strong enough to meet the technological challenges for the well-being of the human kind. Our degree programs help students to become outstanding professionals, prepared to impact modern society in all manners through the application of cutting edge technology. The course curriculum is being revised from time to time so as to keep abreast with the latest developments and emerging technologies. The department has highly qualified and motivated faculty members from top notch universities of India with publications in international and national journals and conferences in the area of Power System & Control, Power Electronics, Renewable Energy and Smart Grid. The department has state-of-the art laboratories in almost all the areas of Electrical Engineering e.g. Basic Electrical Engineering, Control System, Electrical Machine, Electric Drives, Power System, Power Electronics are the few name to take. The department is also equipped with the latest simulation tools e.g. MATLAB.



Department of Electrical Engineering Bansal Institute of Engineering & Technology, Lucknow

Vision of the Department

To emerge as a centre of technical excellence in the field of electrical engineering to mould the students into technocrats to fulfill the requirements of industry and society

Missions of Department

M1: To provide quality and practical education in the field of Electrical Engineering.

M2: To build technically skilled Engineers to meet the current and future requirements of industry.

M3: To empower every student by providing them a strong and positive learning environment through seminar, workshop and personality development classes.

Program Educational Objectives

PEO1: To provide sound knowledge in the field of mathematics, science and electrical engineering to identify as well as to solve real time problems with enhanced efficiency and also, adapt themselves to recent technologies.

PEO2: To transform students in a way that they can work effectively in multi-disciplinary and multicultural groups.

PEO3: To develop moral and ethical values, lifelong learning skills, social responsibility, and aptitude for innovation.

Introduction and Objective of the Event:

The Power Electronics Society (PELS) is one of the fastest-growing technical societies of the Institute of Electrical and Electronics Engineers (IEEE). For over 35 years, the PELS has facilitated and guided the development and innovation in power electronics technology. This technology encompasses the effective use of electronic components, the application of circuit theory and design techniques, and the development of analytical tools for efficient conversion, control, and condition of electric power. Some of our members include distinguished award winners, practitioners, and preeminent researchers.

PELS invites everyone to celebrate PELS Day on 20 June. On this day in 1987, PELS became a full-fledged Society within IEEE. On this occasion, IEEE SB BIET and Electrical Engineering Department, BIET Lucknow, celebrates two days PELS 2023, which involves various activities. Brief details of celebration of two days PELS 2023, are enclosed below:

| Day 1 | Event | Date/Timing |
|-------|---|----------------------------------|
| | Inaugural Function | 20/06/2023 (10:30 AM – 11:00 PM) |
| | Keynote by Dr. Indra Vijay Singh | 20/06/2023 (11:00 AM- 12:45 PM) |
| | Keynote by Dr. Sourabh Ghosh | 20/06/2023 (02:00 PM- 04:00 PM) |
| Day 2 | Event | Date/Timing |
| | Keynote by Dr. Shailendra Kumar Dwivedi | 21/06/2023 (11:00 AM - 12:45 PM) |
| | Valedictory Function | 21/06/2023 (01:00 PM- 1:30 PM) |



Department of Electrical Engineering
Bansal Institute of Engineering & Technology, Lucknow

Day 1, Date: 20/06/2023

Inauguration

Event was inaugurated on 20/06/2023 (at 10:30 AM) by Dr. Anurag Dwivedi (Convenor) HoD, EE Department, Bansal IET Lucknow and Dr. Indra Vijay Singh (Chief Guest) Scientist-C ICMR Mumbai. Inauguration function of the event was anchored by Mr. Ashutosh Kumar (EE, 2nd Year) . First of all Mr. Ashutosh Kumar welcome to Chief Guest, all Guest, Faculty members, Participant etc. Mr. Ashutosh Kumar introduces Chief Guest Dr. Indra Vijay Singh, and HOD Anurag Dwivedi.

After the introduction Saraswati Vandana was song by Jyoti, Madhuri and Shanvi, B.Tech. 2nd year student.

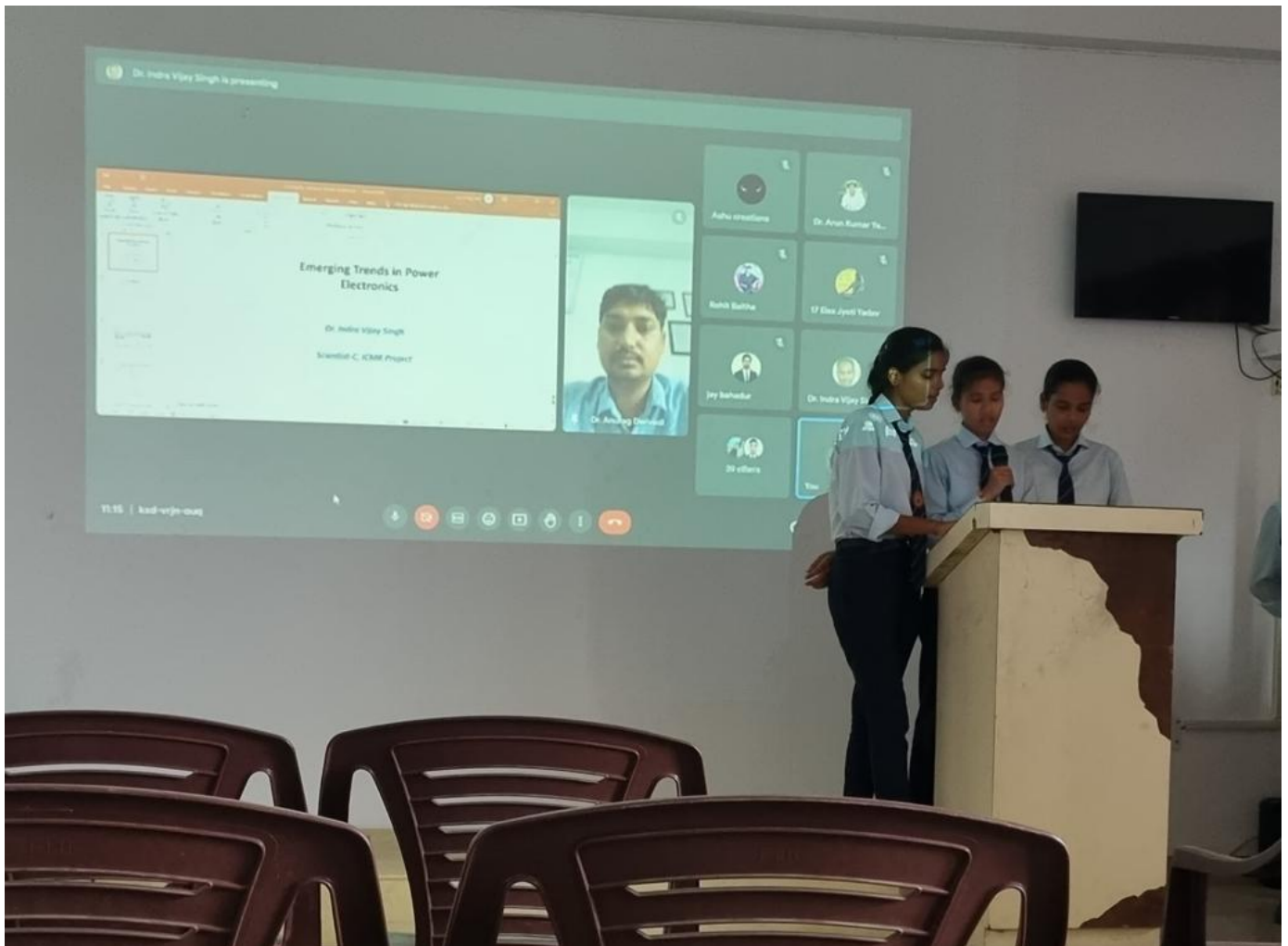
Dr. Anurag Dwivedi, Head EED, has welcomed all the delegates and participants to the Event. In his speech, Dr. Anurag Dwivedi has highlighted the main objective and importance of the Emerging Trends in Power Electronics and welcomes the Chief guest Dr. Indra Vijay Singh.

After that Dr. Indra Vijay Singh Chief guest of this event enlighten the participants about the role of Power Electronics and IEEE in current scenario of the world. At the last in his speech he gives best wishes for this PELS Day 2023.





Department of Electrical Engineering
Bansal Institute of Engineering & Technology, Lucknow



Inauguration Function_Saraswati Vandana by Jyoti, Madhuri and Shanvi



Department of Electrical Engineering Bansal Institute of Engineering & Technology, Lucknow

Keynote 1: 11:00AM – 12:45PM

Resource Person: Dr. Indra Vijay Singh, Scientist-C ICMR Mumbai

Topic: Emerging Trends in Power Electronics

The screenshot shows a Zoom meeting interface. The main window displays a PowerPoint presentation titled "Emerging Trends in Power Electronics - PowerPoint". The current slide is titled "Applications" and lists the following:

- Heating and lighting control
- Induction heating
- Uninterruptible power supplies (UPS)
- Fluorescent lamp ballasts: Passive; Active
- Electric power transmission
- Automotive electronics
- Electronic ignitions
- Motor drives
- Battery chargers
- Alternators
- Energy storage
- Electric vehicles
- Alternative power sources: Solar; Wind; Fuel Cells
- And more!

The Zoom interface shows a list of participants on the right, including Rachit Srivastava (You), 17 Elex Jyoti Yadav, Ankit Rai, Anubhav shukla, Anuj Verma, Anuradha Tiwari, Arman Malik, Ashok Kushwaha, Ashu Awasthi, Ashu creations, and Ashwani Pandey. The bottom status bar indicates the time is 11:36 AM on PELS Day 2023.

The screenshot shows a Zoom meeting interface. The main window displays a PowerPoint presentation titled "Emerging Trends in Power Electronics - PowerPoint". The current slide is titled "Rectification referring to conversion of ac voltage to dc voltage" and lists the following:

- AC-to-DC conversion
- DC-to-AC conversion
- DC-to-DC conversion
- AC-to-AC conversion

The Zoom interface shows a list of participants on the right, including Rachit Srivastava (You), 17 Elex Jyoti Yadav, Ankit Rai, Anubhav shukla, Anuj Verma, Anuradha Tiwari, Arman Malik, Ashok Kushwaha, Ashu Awasthi, Ashwani Pandey, and avdesh kumar. The bottom status bar indicates the time is 11:36 AM on PELS Day 2023.

Day 1_Keynote by resource person Dr. Indra Vijay Singh



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Keynote 2: 02:00 PM- 04:00 PM

Resource Person: Dr. Sourabh Ghosh, Research Associate, MNNIT, Allahabad

Topic: Overview of Renewable Energy Assisted Electric Vehical Charging Infrastructure

Sourabh Ghosh is presenting

Overview of Renewable Energy Assisted Electric Vehicle Charging Infrastructure

Mr. Sourabh Ghosh
Ph. D. Research Scholar
Electrical Engineering Department
Motilal Nehru National Institute of Technology Allahabad
Prayagraj, Uttar Pradesh

2:10 PM | PELS Day 2023

People

IN MEETING

Contributors 36

Rachit Srivastava (You) Meeting host

17 Elex Jyoti Yadav

Ankit Rai

Ankit Rai

Ashok Kushwaha

Ashu Awasthi

Ashu creations

avdhesh kumar

BELAL AHMAD

Buddhipriy Gautam

Dr. Anurag Dwivedi

Sourabh Ghosh is presenting

Prospects of Electric Vehicles

- Lower running costs
 - Per kWh cost of electricity is much lower than per litre cost of petrol/ diesel.
- Low maintenance cost
 - EVs have fewer moving parts which don't need as many fresh fluids or filters.
- Zero Tailpipe Emissions
 - EVs have no issue of emission as compared to internal combustion engine vehicle
 - Although the emission from tailpipes is nil, one needs to consider the emission at thermal plant power plants
 - The amount of oil around 5 million barrels, and the emissions of around 700 Mt CO₂ equivalents will be displaced per day by EVs till 2030

Ref. [3] "5 benefits of buying an electric car - Analyse cost-benefit ratio | The Economic Times," The Economic Times.

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2:38 PM | PELS Day 2023

People

IN MEETING

Contributors 29

Rachit Srivastava (You) Meeting host

17 Elex Jyoti Yadav

Ankit Rai

Anubhav shukla

Anuj Verma

Ashok Kushwaha

Ashu Awasthi

Ashu creations

avdhesh kumar

BELAL AHMAD

Buddhipriy Gautam

Day 1_Keynote 2 by Dr. Sourabh Ghosh



Department of Electrical Engineering
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Day 2: 21/06/2023

Keynote 3: 11:00 AM- 12:45 PM

Resource Person: **Dr. Shailendra Kumar Dwivedi**, Assistant Professor, IIT Bhilai

Topic: Integration of Multi-Spot EV-based Charging Infrastructure

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "Integration of Multi-Spot EV-based Charging Infrastructure" by Dr. Shailendra Kumar Dwivedi, Assistant Professor at the Department of Electrical Engineering, Indian Institute of Technology Bhilai. The slide includes a logo of the Indian Institute of Technology Bhilai and a list of EV Stations earmarked as per FAME II Scheme, showing a map of India with various states and their corresponding station counts. The meeting controls at the bottom show the time as 11:20 AM on 21/06/2023. A sidebar on the right lists participants, including Rachit Srivastava (Meeting host), 17 Elex Jyoti Yadav, Ankit Rai, Anuj Verma, Ashok Kushwaha, Ashu Awasthi, Ashu creations, Ashutosh, BELAL AHMAD, Dr. Anurag Dwivedi, and Dwarika Chaudhary.

Shailendra Kumar is presenting

Integration of Multi-Spot EV-based Charging Infrastructure

Dr. Shailendra Kumar Dwivedi, SMIEEE, MIAE
Assistant Professor
Department of Electrical Engineering
Indian Institute of Technology Bhilai

EV Stations earmarked as per FAME II Scheme

A total of 314 electric vehicle charging stations have been installed during the FAME I scheme. (For period of 2 years in 2015)

On the other hand, the government installed a total of 2867 stations under the FAME II scheme. This is an impressive increase of over 900 per cent. (dated 8th March 2019 for a period of 3 Years. outlay of Rs. 10,000 Crore.

Participants: 39

- Rachit Srivastava (You) Meeting host
- 17 Elex Jyoti Yadav
- Ankit Rai
- Anuj Verma
- Ashok Kushwaha
- Ashu Awasthi
- Ashu creations
- Ashutosh
- BELAL AHMAD
- Dr. Anurag Dwivedi
- Dwarika Chaudhary

Day 2_Keynote 3 Presentation by resource person Dr. Shailendra Kumar Dwivedi



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Valedictory Session

On the Valedictory Session, **Dr. Shailendra Kumar Dwivedi**, Assistant Professor, IIT Bhilai, India joined the session as a Chief Guest along with Dr. Anurag Dwivedi, HOD, EE Department and Co-coordinator of Event, Dr. Arun Kumar Yadav, Associate Professor EED, Bansal IET Lucknow, UP, India and Dr. Rachit Srivastava, Assistant Professor, EE Department, co-coordinator of event. Valedictory Session of the event was anchored by Mr. Vaibhav Tripathi 2nd year EE.

Dr. Anurag Dwivedi, Head, EED, Bansal IET Lucknow, in his valedictory addressing, thanked every participant for spending their valuable time and attending event. Also congratulated the Program co-coordinator Dr. Arun Kumar Yadav and Dr. Rachit Srivastava, faculty member of department Ms. Priyanka Goswami, Mr. Jay Bahadur Singh, and Mr. Tej Prakash Verma, for organizing the event in a successful manner. Further, he appreciated all the Non-Teaching Staff Members of EE Department for promoting such kind of programme.

At the end of the valedictory session, vote of thanks was given by Mr. J. B. Singh, organizer of the event in which he has been paid his gratitude towards all the participants who has spared their valuable time for attending this event. He also expressed the gratitude to the all Resource Persons for giving his valuable time for our participants and sharing his knowledge to them. Nevertheless, he expressed his sincere thanks to Sri. G. S. Agrawal, Chairman Bansal IET Lucknow, Dr. Sushil Kumar Agrawal Director and Dr. Anurag Dwivedi, HOD, EE Department.

“We are highly thankful to the Management, Director and Head of the Department for giving us an opportunity to organize this event in our campus and hope we will find the support in future also for organizing such kind of activities.”