भारतीय प्रौद्योगिकी संस्थान
काशी हिन्दू विश्वविद्यालय
IIT INDIAN INSTITUTE OF TECHNOLOGY
BANARAS HINDU UNIVERSITY

Presents

DRIVING THE FUTURE: Confluence of Data Analytics and Electric Mobility

Empowering India with E-mobility: Strengths & Roadmap

16-17 DECEMBER 2023

Overview of the Conclave

- The Conclave 2023 is a dynamic platform that brings together **academia, industry, start-ups, policy-makers,** and **stakeholders** of the EV ecosystem to foster collaboration, knowledge exchange, and innovation in the electric vehicles (EVs) sector.
- For academia, the Conclave offers the forefront of conducting research and developing cutting-edge technology and algorithms for data analysis in the EV sector, contributing to innovation and knowledge dissemination.
- Industry leaders are leveraging data analytics to optimize battery performance, charging infrastructure, and vehicle design, leading to increased efficiency and range.

About IIT (BHU) Varanasi

The institute completed its 100 years in 2019, and we wish to take forward the legacy with rejuvenated Vigor and sheer dedication with a commitment to nation building. The *Indian Institute of Technology (Banaras Hindu University) Varanasi* owes its existence to Bharat Ratna Mahamana Pandit Madan Mohan Malviya, the founder of the first residential University of modern India, Banaras Hindu University (BHU), who could foresee the vital role of technical education in strengthening independent India. IT-BHU became IIT (BHU) Varanasi on June 29, 2012, by an Act of Parliament. Following its conversion to IIT, the Institute has quickly established procedures and practices as per the standards of IITs.

Our partners

National Mission on Interdisciplinary Cyber-Physical Systems NM-ICPS

I-DAPT HUB FOUNDATION

IAS IEEE Industry Applications Society Linking Research to Practice

IEEE Advancing Technology for Humanity

IEEE UP Section (India)

Industrial partners

Mitsubishi Electric Changes for the Better

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About I-DAPT HUB FOUNDATION IIT(BHU) Varanasi

I-DAPT- HUB FOUNDATION is a non-profit initiative at IIT (BHU) Varanasi acting as a nodal center and a Technology Innovation Hub (TIH) for technology development and entrepreneurial activities in “Data Analytics and Predictive Technologies (DAPT)” and other related areas under National Mission on Interdisciplinary Cyber-Physical Systems (NMICPS), DST, Govt. of India.

Key Highlights

- Session on Energizing India: Unveiling Electric Vehicle Trends, Policy Initiatives, and Roadblocks.
- Session on high power density components for electric vehicles.
- Session on next-gen Charging Technology for Electric Vehicles
- Session on smartening Up the Roads: Data-Driven Insights for Electric Vehicle Technology
- Session on batteries and battery management system (BMS)

Event Conveners

Dr. Rajeev Kumar Singh
Department of Electrical Engineering

Dr. V. N. Lal
Department of Electrical Engineering

Prof. Rajnesh Tyagi
Department of Mechanical Engineering

DELEGATE REGISTRATION

Industry Delegate	**3000**
Academia	**2000**
Students	**1000**

For any query contact: rksingh.eee@iitbhu.ac.in ; 7317640777 / 9451890026

Registration Link: https://forms.gle/o9JKEC6bH6DkNaE4A

Schedule

16 December 2023

- **10:00 AM - 11:00 AM – Inauguration & Welcome Address**
- **11:00 AM – 11:30 AM – Tea Break**
- **11:30 AM - 01:45 PM – EV Market, Policy & Tender Overview**
  - **Session 1 Title: TBA**
  - **Session 2 Title: TBA**
  - **Session 3 Title: TBA**
- **01:45 PM – 02:45 PM – Networking Lunch**
- **02:45 PM – 05:45 PM - New Generation Charging Technologies for EVs**
  - **Session 1 Title: TBA**
  - **Session 2 Title: TBA**
  - **Session 3 Title: TBA**
  - **Session 4 Title: TBA**
- **05:45 PM – 06:15 PM – Panel Discussion**

  Topic: Empowering India with E-mobility: Roadmaps and Strengths

Schedule

17 December 2023

- **10:00 AM - 11:30 AM – Theme: Next Generation Battery Technologies**
  - **Session 1 Title: TBA**
  - **Session 2 Title: TBA**
- **11:30 AM – 12:00 PM – Tea Break**
- **12:00 PM - 01:30 PM – Theme: Opportunities Startup and Entrepreneurship in EVs**
  - **Session 1 Title: TBA**
  - **Session 2 Title: TBA**
- **01:30 PM – 02:30 PM – Networking Lunch**
- **02:30 PM – 05:30 PM - Theme: Renewable Integrated Data Driven Smart EV Infrastructure**
  - **Session 1 Title: TBA**
  - **Session 2 Title: TBA**
  - **Session 3 Title: TBA**
  - **Session 4 Title: TBA**
- **05:30 PM – 06:15 PM – Panel Discussion**
  Topic: Strengthening E-mobility: Policy, Business and Techno-Commercial Roadmap
- **06:15 PM – 06:45 PM – Valedictory**

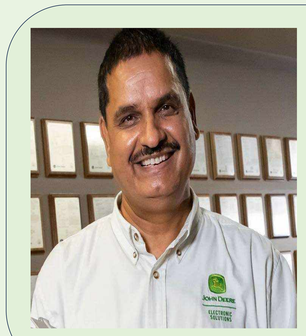
Speakers

Electrical motor drives and control for hybrid/electric Vehicles

Andrew M. Knight, IEEE IAS Society President
Professor and Head (Electrical and Software Engineering Dept)
University of Calgary, Canada

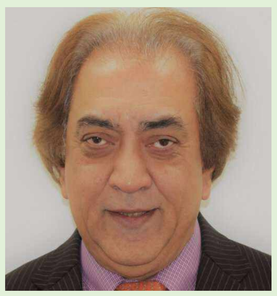
Next generation power electronics for EVs

Frede Blaabjerg, Life Fellow, IEEE (past IEEE PELS President and EiC IEEE Transactions on Power Electronics)
Aalborg University, Denmark



Heavy duty hybrid electric vehicles for agricultural farms

Brij. N. Singh, IEEE Fellow and IEEE PELS Distinguished Lecturer
John Deere, Fargo, ND, USA



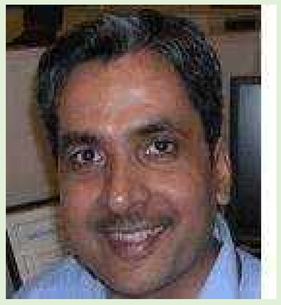
Wide band gap (WBG – SiC & GaN) semiconductor devices for EV power electronics systems

Gourab Mazumdar, IEEE Fellow and IEEE PELS Distinguished Lecturer
Senior Fellow Mitsubishi Electric Corporation
Fukuoka, Japan

Speakers

Current-fed Switched Boost Converters for EVs

Santanu Kumar Mishra,
Professor, Center for Automotive Research and Tribology (CART)
Indian Institute of Technology, New Delhi, India



System and method to control harmonics and oscillations in power grid due to large scale integration of EVs

Arvind Kumar Tiwari
Program Manager (General Electric Research)
Niskayuna, NY, USA

Optimal EV Charging: Planning and Scheduling

Bijay Ketan Panigrahi
Founder Head, Center for Automotive Research and Tribology (CART)
Indian Institute of Technology, New Delhi, India

Power conversion systems and start-up opportunities for Indian EVs

Akshay Kumar Rathore, IEEE Fellow and co-EiC (IEEE Trans on IE)
Professor and Program Leader (Electrical Power Engineering)
Singapore Institute of Technology, Singapore

Speakers

Green hydrogen technology for fuel cell vehicles

Sanjeet Dwivedi
Technology Project Manager
EVERFUEL, Denmark

Vehicle-to-vehicle (V2V) power transfer

Vinod Khadkikar,
Professor and IEEE Fellow and IEEE IAS Distinguished Lecturer
Khalifa University, Abu Dhabi, UAE

Smart battery technologies for future EVs

Abhijit Kulkarni
Assistant Professor (Energy)
Aalborg University, Denmark

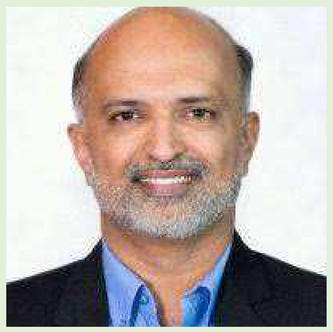
Electric vehicles

Tapan Sahoo
Executive Director (Maruti Suzuki India Limited)
New Delhi, India

Speakers

Power Grid

Sushil Kumar Soonee, IEEE Fellow
Former and founder CEO POSOCO
Former ED Power Grid



Real Time Simulators help in Grid Readiness for EV adoption

Girish Nanjundaiah
Managing Director, OPAL-RT India
Bengaluru, Karnataka, India

Hitesh Bhardwaj
Business Head- Semiconductor & Devices at Mitsubishi Electric
Mitsubishi Electric Asia Pte Ltd
Gurgaon, India

To be announced

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Silver Sponsor	25,000/-	YES	NO	YES	1