INTERNATIONAL TRANSPORTATION ELECTRIFICATION CONFERENCE INDIA

ICAT CONVENTION CENTRE, MANESAR
DECEMBER 16 - 18, 2021.

AN HYBRID EVENT
IN PERSON & VIRTUAL

4th EDITION

ITEC INDIA 2021
E-Mobility for AatmaNirbharBharat

INTERNATIONAL TRANSPORTATION ELECTRIFICATION CONFERENCE
The past decade has seen a revolution in mobility technologies and COVID-19 has changed the way we perceive personal mobility. Developed economies are adopting mobility solutions based on Autonomous, Connected, Electric and Shared (ACES) technologies.

Emerging economies like India must forge their own paths to meet the goals of sustainable development in the context of our energy security, economic development and growing aspirations of all citizens.

There is a need to redefine ACES for India as Affordable, Connected & Shared, Environment Friendly (incl. Electrification) and Safe.
SAEINDIA:

SAEINDIA is India’s leading resource for mobility technology. As an individual member-driven society of mobility practitioners, the ownership of SAEINDIA rests with its members who are individuals from the mobility community, which includes Engineers Executives from Industry, Government Officials, Academicians and Students.

SAEINDIA is a strategic alliance partner of SAE International registered in India as an Indian nonprofit engineering and scientific society dedicated to the advancement of the mobility industry in India.

IEEE IAS:

Institute of Electrical and Electronics Engineers – Industry Applications Society

One of the largest special interest societies within the Institute of Electrical and Electronics Engineers (IEEE), the IAS focuses specifically on the unique needs of industry and commerce. IAS is a source of professional power to its nearly 14,000 worldwide members.

Through a network of over 370 chapters globally, regional events and national and international conferences, the society keeps members abreast of current developments in the area of technology in electricity and electronics. IAS enriches both its individual members and the industry as a whole through the sharing of specific industry-related solutions.
**Ansys EV Workshop**

**Learn to Validate Electric Powertrain Design Using Physics-based Simulation**

**Date:** December 15, 2021  |  **Time:** 9:00 am - 4:30 pm (IST)

**Venue:** Bhawan Hall, ICAT Convention Centre, Manesar

Electric Powertrain development has challenges of addressing the complex design requirements within stringent development time. Engineers across the world are increasingly adopting the physics-based simulation in their design workflows. With new advances in simulation techniques, the physics-based simulation has even found to be very effective for sub-system and system validation.

**Course Outline and Content:**

**Topic 1:**
- Improving battery reliability and performance through electro-thermal analysis.
  - Pack Configuration extraction and chemistry selection
  - Cell Characterization through HPPC Data
  - Module Thermal Management using CFD Analysis
  - Drive cycle thermal analysis for battery pack
  - BMS Integration and validation

**Topic 2:**
- Improving battery reliability and performance through electro-thermal analysis.
  - Pack Configuration extraction and chemistry selection
  - Cell Characterization through HPPC Data
  - Module Thermal Management using CFD Analysis
  - Drive cycle thermal analysis for battery pack
  - BMS Integration and validation

**Topic 3:**
- Electric Vehicle Performance validation (System Simulation) using Reduced Order Models (ROM) from physics
  - Battery & Motor ROM Integration in System Model
  - Drive cycle definition and system definition
  - System performance analysis

**Agenda:**

- **Preparatory Webinars (Online)**
  1. Electric Machine Sizing and Analysis - December 8, 2021 (11:00 am - 12:00 pm IST)
  2. Battery Electro-Thermal Modeling - December 13, 2021 (11:00 am - 12:00 pm IST)

- **Workshop:**
  09:00 - 10:00: Overview of EV Component, Subsystem and System Validation
  10:00 - 11:30: Topic 1: Improving battery reliability and performance through electro-thermal analysis
  11:30 - 12:30: Topic 2: Design of robust and efficient electric machines
  12:30 - 13:45: Lunch Break + Other Sessions
  13:45 - 15:00: Topic 3: Design of robust and efficient electric machines Contd...
  15:00 - 16:00: Topic 3: Electric Vehicle Performance validation (System Simulation) using Reduced Order Models (ROM) from Physics Based Simulation
  16:00 - 16:30: Open Discussions and Q&A

Visit the registration page for pre-conference workshop details in ITEC INDIA 2021 · https://saeindia.glueup.com/event/registration-for-itec-india-2021-hybrid-physitul-event-44470/
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