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1ST BIENNIAL INTERNATIONAL CONFERENCE

HEAT '21

HYBRID AND ELECTRIC AUTOMOTIVE TECHNOLOGIES

OCTOBER 29 & 30, 2021

VIRTUAL CONFERENCE

PES UNIVERSITY

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CONFERENCE TRACKS

ELECTRICAL AND ELECTRONICS IN EV/ HEV

- EV motor drives and controllers
- Battery Management System
- EV high voltage wiring
- Innovations in EV energy storage solutions
- EV systems modeling, simulation, and testing
- AC and DC conductive charging, wireless charging, smart charging, fast charging
- Power grid and renewable energy resource interfacing for EV mass deployment
- Design for manufacturing for EV mass production
- EV fleet and infrastructure asset management
- Design for EV maintainability
- Information Technology and Communication services for the EV ecosystem
- Global standards development for EVs and their impact on EV deployment, R&D and manufacturing
- Trends in EV deployment, supply chain and manufacturing
- EV-related educational programs for engineers, legislators, and the public
- Sensors used in EV/ HEV

AUTONOMOUS VEHICLES

- Artificial Intelligence
- Artificial Neural Networks & Deep learning
- Augmented reality and virtual reality
- Big Data analytics
- Cloud computing
- Cognitive computing
- Computational learning theory
- Computer graphics
- Condition monitoring
- Cyber-physical systems
- Digital Thread and Twins
- Evolutionary Computing
- Hybrid machine intelligence techniques
- Hybrid systems modeling and simulation
- Image processing
- Intelligent Decision Support Systems
- Intelligent Robotics
- Machine learning
- Machine Vision and Industry 4.0
- Night Vision Technology in Automobile
- Navigation and Sensor Network

FLUID AND THERMAL ENGINEERING IN EV/ HEV

- Cooling of computer chips
- Cooling Systems
- Porous Media and Phase Change Materials for cooling of electronics
- Energy Conservation
- Energy Conversion
- Aerodynamics of automobile components
- Heating and cooling systems for EV's
- Fluid Structure Interaction in Vehicles
- Case Studies in Thermal Engineering
- Combustion Engines
- Applications of Computational Fluid Dynamics (CFD) in Automobiles
- Heat Exchangers and Heat Transfer Systems
- Refrigeration and HVAC Systems
- Renewable Energy
- Pollution Control

MATERIALS, PROCESS, AND DESIGN IN EV

- Tire Dynamics
- Vehicle Dynamics
- Innovations in EV component design
- Behavior of Solids and Structures
- EV system architecture concepts for passenger, service, and utility vehicles
- Failure AnalysisMulti-Body Dynamics
- Noise, Vibration, and Harshness
- Raw Materials
- Composite Materials
- Battery Materials
- Advanced Manufacturing
- Green Manufacturing
- Industrial Automation and Robotics
- Metal Joining and Forming Processes
- Lean and Agile Manufacturing

Authors are requested to submit their conference papers through EasyChair:

tinyurl.com/HEAT2021

For registration details, visit: **heat.pes.edu**

IMPORTANT DATES

Deadline for Submission of Full-Length Paper	October 4, 2021
Notification of Acceptance of Paper	October 10, 2021
Deadline for Submission of Camera-Ready Paper	October 25, 2021
Registration	October 25, 2021
Conference	October 29&30, 2021

DEPARTMENT OF MECHANICAL ENGINEERING

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