



SPECIAL SESSION III

Innovations in Electric Mobility – Technical, Environmental, and Social Challenges of the Transition

ORGANIZED BY

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Electric mobility is revolutionizing the transportation landscape by offering sustainable alternatives to traditional fossil fuel-powered vehicles. The increasing adoption of Electric Vehicles (EVs) has several implications, not only for the automotive industry but also for urban infrastructure, citizens lifestyle, markets, and power grids. This transition presents both opportunities and challenges, requiring innovative solutions to balance the increased energy consumption with grid reliability and efficiency. Understanding the implications of electric mobility on the grid is crucial for shaping policies, fostering technological advancements, and creating sustainable urban environments. This special session intends to provide an insight on the research status in the field of electric mobility, focusing on its impact on the electrical grid and the strategies adopted to mitigate these effects.

Topics of interest include, but are not limited to:

- **System Planning and Grid Integration**
- **Design of Electric Vehicle Supply Equipment**
- **Communication Systems for EV Charging Infrastructures**
- **Vehicle-to-Grid Models and Technologies**
- **Integration Between EVs and Renewable Energy Sources**
- **Demand Response Programs for EV Charging**
- **Ancillary Services Provisioning from EVs**
- **Smart Urban Mobility and Smart Cities**
- **Driving Factors and Barriers for EVs Adoption**
- **Light Electric Mobility and Micro-Mobility**