## 8<sup>th</sup> International Conference on Clean Electrical Power



Special Session on Electrification for transport vehicles and components

Environmental concerns due to sustained consumption of fossil fuel worldwide have been driving the trend towards less polluting alternatives, but ultimately seeking clean energy technologies and sources for carbon net-zero emission. Responsively, governments worldwide have set ambitious plans to transfer industrial, domestic and transport sectors to be carbon-free producers, e.g., plans for clean transport system by 2050 to 2070. To help implementing this vision, some closer actions are also in place to encourage the production and use of electric and clean-energy vehicles with long plans to decarbonise all types of vehicle systems. As such, technologies that enhance the production and utilization of electricity and hydrogen as clean energy carriers in transport systems are highly supported. The aim of this special session is to attract contributions from different authors and presenters within the area of transport vehicles' electrification and to create a conference forum of presenters and audience to effectively discuss and debate various aspects in vehicle electrification and their advanced components and systems. The scope covers system and component modelling, control, management, simulation and implementation in ships, road, air, and rail vehicles in addition to their electrical-grid or network connection (e.g., V2G), charging infrastructure, batteries, short-term energy storage, and lab prototyping and testing. Session topics include, but not limited to:

- Management system, simulation, and testing of vehicle batteries and ultra-capacitors
- Charging infrastructure, electrification stats and prediction
- V2G and electric vehicle energy networking
- On-board Short-term energy storage and power systems
- Advanced power-electronic and propulsion systems
- Renewable and clean energy systems for transport vehicles
- On-board microgrids, smart grids, and charging units
- Grid-connected or front-end charging converters
- System integration, analysis, optimisation, modelling, and control.

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