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Invited session: New trends of Electrified Vehicles

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Description: Electrified vehicles have the great potentials to reduce energy consumption and emissions. Since there are various types of power sources for electrified vehicles, how to globally optimize the energy and emissions for electrified vehicles in a large area is still challenging. With the quick development of computational technology such as the cloud computing, it is possible to deal with the challenge in the short near future. Therefore, we organize a special issue on new trends of electrified vehicles.

Topics of the Session:

- Modeling and control of electrified vehicles
- Prediction/estimation of energy system states in terms of available capacity, power, energy, temperature, etc.
- Thermal and electrical safety management
- Fault prognosis and diagnosis for energy systems and their associated sensors
- Charging strategy analysis, optimization, and control
- Cell and module balancing/reconfiguration algorithms and hardware design
- Vehicle-level and utility-scale energy integration and automatic control
- Cyber-physical system design in energy storage

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Potential contributors: 10+ submissions from different universities