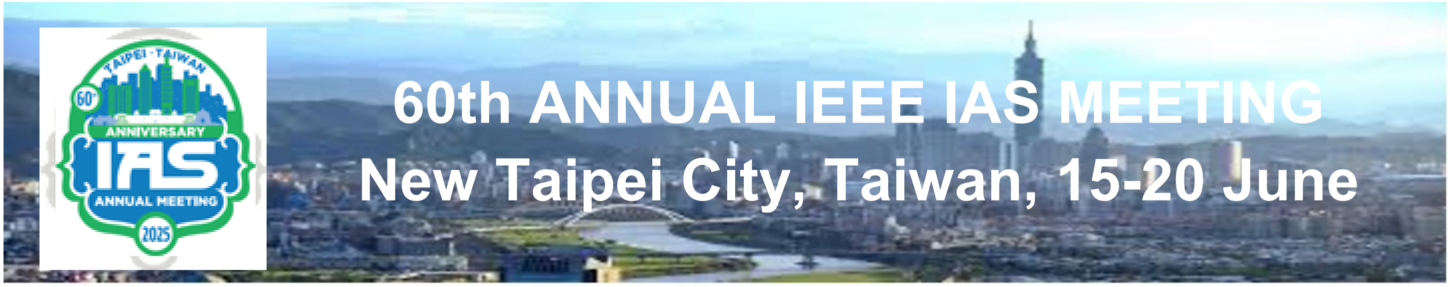

Special Session on

Future Technologies for Sustainable Transportation

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Technical Outline of the Session and Topics:

The future of sustainable transportation hinges on groundbreaking advancements in control systems, energy management, and power electronics. Imagine a network of autonomous vehicles seamlessly navigating smart city infrastructure, guided by AI-powered control algorithms that optimize traffic flow and minimize energy consumption. Advanced energy management systems will intelligently distribute power across the transportation grid, dynamically balancing supply and demand while maximizing the use of renewable energy sources. Enabling ultra-fast charging for electric vehicles, developing highly efficient motor drives, and integrating vehicle-to-grid that allow EVs to serve as distributed energy resources. These interconnected technologies will pave the way for a transportation ecosystem that is not only environmentally friendly but also highly efficient, safe, and convenient.

The scope of this Special Session includes but is not limited to the topics below:

- **Advanced Batteries Technologies**
- **Efficient Electric Motor control**
- **Smart and Intelligent Charging Solutions**
- **Energy Management Systems**
- **Battery Lifecycle and Environmental Impact**
- **Decarbonizing Transportation: Improving air quality, Energy efficiency, energy security**
- **Intelligent control mechanisims**

Submission of papers: deadline follows the deadline for the regular papers. All the instructions for paper submission are included in the conference website: https://ias-am.ieee.org/2025/