



**IEEE International
Conference on Power
Electronics and
Energy (ICPEE 2025)**



Special Session 05 (SS 05)

SS 05: Cyber-Physical Systems and Smart Urban Infrastructures for Sustainable Future Cities

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Call for Papers

Technical Outline of the Session:

With continuous increase in urbanization, and population growth, leads to escalating resource demands, the cities of tomorrow must integrate advanced cyber-physical systems (CPS) to develop smarter, more sustainable infrastructures. The advanced CPS merges computational, networking and communication, and physical processes to offer transformative solutions for urban planning, infrastructure management, and environmental sustainability. These systems are quite essential for addressing key challenges in areas such as traffic management, energy efficiency, water resource optimization, waste management, and public safety. By leveraging real-time data collection, intelligent algorithms, and interconnected infrastructures, CPS enables cities to become more adaptive, resilient, and responsive. The application of artificial intelligence, machine learning, and the Internet of Things (IoT) within CPS allows for a more seamless and efficient urban environment, improving the quality of life for city dwellers, reducing operational costs, and minimizing environmental impact. Smart infrastructures driven by CPS ensure the dynamic and flexible management of resources while enhancing sustainability. This session will explore the role of CPS in creating smarter, more livable cities by focusing on technological advancements in transport, energy, and healthcare, offering insights into how these systems can foster a secure and sustainable urban future.

Topic of the Session includes, but are not limited to:

- ❖ Smart Urban Mobility Solutions and Charging Infrastructure
- ❖ Energy-efficient Smart Grids
- ❖ IoT-enabled Urban Infrastructure
- ❖ Cybersecurity in Urban Infrastructures
- ❖ AI and Machine Learning for City Management

Important Dates:

Special Session Paper Submission Due Date: 15.08.2025

Notification of Paper Acceptance Date: 31.08.2025

Camera Ready Paper Submission Due : 15.10.2025

Author guidelines areas per regular paper submission.

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