



IEEE

**The Seventh International Symposium
on Computer, Consumer and Control**
June 27 - 30, 2025, Taichung, Taiwan

Special Sessions Call for Papers

The Seventh International Symposium on Computer, Consumer and Control, 2025

Session organizer : Prof. Cheng-I Chen¹ and Prof. Yu-Jen Liu²

Institution : National Central University¹ and National Chung Cheng University²

E-mail : cichen@ee.ncu.edu.tw¹ and azenliu@ccu.edu.tw²

Session title: *Power Quality and Energy System (SS-04)*

With the ideas of energy saving and protection of power system, many smart technologies have been proposed in the field of power and energy. Recently, the concept of smart grid and microgrid have been proposed to meet these new requirements through integrated communications, advanced components, advanced control methods, sensing and measurement, and improved interfaces and decision support. Since the technology of advanced metering infrastructure is the fundamental early step to grid modernization, the accurate and efficient monitoring of power quality and system states becomes a crucial task. The wide-area measurement is then the conceptual extension of remote monitoring through the numerous integrated communication technologies. Power quality at the grid interface is one of important parts in power purchase contracts between utilities and distributed generations. With the widespread use of rectifier/inverter for power conversion and related power electronic devices for operation control, many power-quality problems are present. Since the modern equipments are sensitive to these power-quality disturbances, power utilities and their consumers start to pay much attention to the improvement of power quality in recent years. To promote the developments of technologies for power quality and energy system, this session would focus on the smart grid, microgrid, renewable energy, power electronics and control techniques, modernization of power system, energy storage, and their various applications. Prospective authors are invited to submit original papers to the Special Session.

Topics/Areas

The topics of interest include, but are not limited to

- Analysis and Modeling (Networks, Devices, Loads etc.) of Power Grid
- Measuring and Monitoring Techniques

- Sources of Disturbances (Converters, Traction Systems, Network Harmonics etc.)
- Power Conditioning (Active and Passive Filters, Var Compensation, UPS, Surge Protection Devices, Phase Balancing etc.)
- Standards and Recommended Practices
- Prediction Techniques, Diagnostic Systems, and Expert System Applications
- Power Quality in Distribution System
- Power Quality, Economics and Liability
- Impact of Distributed Generation on Power Quality
- Quality Aspects of Industrial, Commercial and Residential Consumers
- Power Definitions and Measurements under Nonsinusoidal and Unbalanced Conditions
- Power Quality in a Deregulated Electricity Market

All papers accepted and registered for presentation will be published in the conference proceedings, and excellent papers will be recommended for publication in the special issue of SCI(E)/ EI journals. Please note that papers must submit via the submission system website and meet the format of IS3C2025.