

iCAST 2017 Special Session Proposal

Session Title:

Advanced Technologies for Green Energy and Electric Vehicles (ATGEEV)

Session Chair with Contact Information:

Prof. Ching-Ming Lai, National Taipei U. Tech., pecmlai@gmail.com

Session Organizers:

Prof. Ching-Ming Lai, Prof. Yu-Huei Cheng, Prof. Wen-Chung Tsai, Prof. Teh Jiashen

Aim:

Since the industrial revolution, the development of global science and the continuous improvement and progress of industrial technology have improved quality of people's life. However, the long-term and large amount of access and abuse of the earth resources, the world has been facing a crisis of gradual depletion of energy. In addition, the extensive use of energy, emissions of many harmful greenhouse gases, has caused global warming, climate anomalies, iceberg melting, sea level rise and other unusual phenomena. Serious environmental pollution problems caused by fossil energy are growing. According to statistics, the global power industry-related greenhouse gas emissions account for about one-third of the total global greenhouse gas emissions. The total number of global vehicles estimated at least more than 1 billion, and it is not to be underestimated for emissions problems. Distributed generation (DG) can be sustainable and stable economic operation through the energy management and optimization control of microgrids. Electric vehicles can reduce fuel consumption and emissions by advanced control technology, i.e., the use of effective energy management and control strategies. Renewable energy systems and electric vehicles of emerging technologies and applications can soothe some of the energy crisis and global warming issues.

This special session will be focusing on (but not limited to) the following topics:

- Battery management systems, charging and discharging techniques
- Communication and control networks
- Communication systems oriented to microgrids
- Control and management strategy
- Decentralized, distributed and centralized controllers for microgrids
- Energy management systems for microgrids
- Energy optimization
- Energy storage systems for microgrids
- Internet of things in energy and utilities
- Internet of vehicles
- Modeling and control of electric vehicles
- Optimization and advanced heuristics
- Power electronic systems- converters and emerging technologies

- Power system analysis, control, and optimization
- Reliability analysis of power system
- Reliability for power supply
- Reliability of power system
- Remote Monitoring & Reliability
- Renewable energy
- Vehicle to grid, vehicle to building interactions and control
- Voltage and frequency control in power systems

Special session submission:

Papers should be submitted in PDF format through the Paper Submission System:

<https://conference.iis.sinica.edu.tw/Conference-Submission/servlet/SignInHandler>

Each paper should follow the iCAST 2017 format. The length of the final camera-ready paper is 4-6 pages. A maximum of 2 extra pages is permitted with overlength payment, USD\$100 (NTD\$3,000) per page.

The submission procedure is different from the regular sessions. Please submit to the track:

Advanced Technologies for Green Energy and Electric Vehicles (ATGEEV)

Any further information, please contact: yhcheng@cyut.edu.tw

Important dates:

The deadline for paper submission: July 15, 2017

The date for notification: August 15, 2017

The deadline for camera

-ready paper submission: September 15, 2017

Session organizers:**Prof. Ching-Ming Lai**

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