

IEEE Technical Committee on Power Generation

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The IEEE-CSS Technical Committee on Power Generation addresses all aspects of modeling, simulation, control and optimization of energy generation and energy utilization systems, and is organized around four thrusts: Nuclear Energy Generation, Fossil Energy Generation, Renewable Energy Generation and Efficient Energy Utilization. We summarize below our activity during the last six months.

LEADERSHIP GROUP

We have continued our effort on establishing a Leadership Group within the Technical Committee by inviting Prof. Jihong Wang (University of Warwick, UK) and Prof. Kwang Y. Lee (Baylor University, USA) to join us in this endeavor. The Leadership Group is now composed by:

Nuclear Energy Generation: Didier Mazon, Alfredo Pironti, Eugenio Schuster, Michael Walker

Fossil Energy Generation: Joseph Bentsman, Xinsheng Lou, Jihong Wang, Kwang Y. Lee

Renewable Energy Generation: Kathryn Johnson, Rush Robinett III, Cecilia Mazzaro

Efficient Energy Utilization: Alessandro Beghi, Luca Cecchinato

WEB-PAGE DEVELOPMENT

A dedicated web-page has been created to cover the activities by the Technical Committee:

<http://www.lehigh.edu/~intcpgc/ieeetcpge.html>

The web page summarizes the mission, scope, organization and activities of the Technical Committee. The web page also lets people interested in the Technical Committee register as members. A list of members is permanently updated. Users also have the possibility to submit announcements that are posted on the web and disseminated by e-mail among the members of the technical committee in the form of an electronic newsletter.

CONFERENCES

- One invited session on “Control of Fusion Plasmas in Tokamaks” and three invited sessions on “Control of Energy Systems” were proposed by Prof. Alessandro Beghi, Dr. Xinsheng Lou, Dr. Rush Robinett III and Prof. Eugenio Schuster for the IEEE Multi-conference on Systems and Control, September 28-30, 2011, Denver, Colorado, USA. The four invited sessions (23 papers) were accepted for presentation. In addition, several regular papers by members of the Technical Committee will be presented during the conference.
- One invited session on “Control of Fusion Plasmas in Tokamaks” and two invited sessions on “Control of Energy Systems” were proposed by Prof. Alfredo Pironti, Prof. Kwang Y. Lee and Prof. Eugenio Schuster for the IEEE Conference on Decision and Control, December 12-15, 2011, Orlando, Florida, USA.

WORKSHOPS

- A workshop on “Nonlinear Power Flow Control Design: Utilizing Exergy, Entropy, Static and Dynamic Stability and Lyapunov Analysis” was organized by Dr. Rush Robinett III and Dr. David G. Wilson within the IEEE Multi-conference on Systems and Control, September 28-30, 2011, Denver, Colorado, USA.

OUTREACH ACTIVITY

We have actively worked on letting the Controls/Energy community know about the creation of the IEEE-CSS Technical Committee on Power Generation as well as on integrating researchers around the world in the activities organized by the technical committee. The Technical Committee has now more than 90 registered members.

MEETINGS

The Technical Committee had its first meeting during the IEEE Conference on Decision and Control, Atlanta, GA, December 15-17, 2010, where most of the members of the Leadership Group were present. The Technical Committee will formally meet again during the upcoming IEEE Multi-conference on Systems and Control (September 28-30, 2011, Denver, Colorado, USA).