



Call for papers: IEEE Transactions on Automation Science and Engineering Special Issue on “Automation and Optimization for Energy Systems”

Introduction

As innovative energy-related technologies are fast developing, new elements -such as unpredictable renewable energies (RE), plug-in electric vehicles (EV), smart electrical home appliances, energy efficient homes/buildings, distributed energy storage- are populating the electrical power grid. All these elements induce paradigm shifts in power grids, from producer-controlled structures to large, distributed and customer-interactive ones, enhancing the coupling between the physical and the information layers. In order to be effectively employed on a large scale, all these elements must rely on automation, as well as on optimization methods for efficient management and consumption of energy resources in variable and stochastic conditions. Driven by these emerging technological changes, power grids will become complex and large-scale platforms with a growing need for automation and optimal energy management services.

Scope, Description, and More Information

The goal of this special issue is to provide a forum of interaction between researchers and practitioners in the area of automation and optimization for energy systems. In this special issue we invite original papers with novel contributions in all aspects of automation and optimization for energy systems. Topics of interest for this special issue include, but are not limited to:

- Energy management systems for smart home/building automation
- Demand response control and optimization for large-scale energy systems
- Stochastic optimization methods for energy management in large-scale systems
- Data-driven identification and big data analytics for large-scale energy systems
- Communication and automation in energy management systems
- Automation of energy management systems for microgrids
- Energy management applications

Application domains may include (but are not limited to) the following:

- Smart homes/building automation
- Plug-in electric vehicles
- Power grids
- Renewable energy sources
- Electrical energy storage systems

Important Dates

- January 1, 2016: paper submission opening;
- March 1, 2016: paper submission deadline;
- July 1, 2016: completion of first round of reviews;
- October 1, 2016: completion of second round of reviews;
- January 15, 2017: final acceptance/rejection decisions;
- February 1, 2017: final accepted manuscripts submission deadline;
- April 1, 2017: tentative publication date.

Special Issue Guest Editors:

All enquiries about the special issue should be sent to any of the guest-editors:

Prof. Mariagrazia Dotoli (Politecnico di Bari, Italy), lead guest editor, email mariagrazia.dotoli@poliba.it

Dr. Sergio Grammatico (Eindhoven University of Technology, The Netherlands), email S.Grammatico@tue.nl

Mr. Nicola Ciulli (Nextworks, SME, Italy), email n.ciulli@nextworks.it

Submission Information

Papers should be submitted to <http://mc.manuscriptcentral.com/t-ase> with a cover letter including the statement “This manuscript is submitted for the special issue on Automation and Optimization for energy systems”. Authors must refer to the IEEE Transactions on Automation Science and Engineering author guidelines at <http://www.ieee-ras.org/publications/t-ase/information-for-authors> for information on content and formatting of submissions.

For information purposes, prospective authors are encouraged to email to one of the guest editors abstracts of possible contributions including a cover letter with authors’ contact information.