

# CEMiSG 2015

## 2<sup>nd</sup> International Workshop on Computational Energy Management in Smart Grids

12-17 July 2015, Killarney, Ireland

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[www.cemisg2015.org](http://www.cemisg2015.org)

[www.ijcnn.org](http://www.ijcnn.org)

### Scope

The exploitation of natural resources by the increasing world population represents an urgent issue to face for humanity. Electrical Energy represents a relevant example from this perspective and the strong demand coming from developed and developing countries shoved the scientists worldwide to intensify their studies on renewable energy resources, especially in the last two decades. At the same time, we have also registered a remarkable increment of the complexity of the electrical grid at diverse levels in order to include variegated and distributed generation and storage sites.

As a consequence of these aspects, a growing interest has been oriented in the last few years to the development of smart systems able to optimally manage the usage and the distribution of energy among the population with the objective of minimizing wasting and the economic impact, considering the different needs of the heterogeneous grid costumers and the different peculiarities of energy sources. Several ways of intervention are feasible, as the ones indicated in the US Energy Independence and Security Act of 2007.

This motivated the recent spread of advanced technological solutions developed with the objective to introduce intelligence within the energy grid, both at academic and commercial levels. However, the social relevance of the topic makes the need of deepening the studies and providing more and more performing solutions always lively, thus asking for a constant multi-disciplinary coordinated action to the scientific communities operating in the Electrical and Electronic Engineering, Computational Intelligence, Digital Signal Processing and Communications research fields.

Narrowing the focus to the interests of our scientific community, the organizers of this Workshop, as inside the IJCNN2015 conference, wants to explore the new frontiers and challenges within the Computational Intelligence research area for the optimal usage and management of energy resources in Smart Grid applicative scenarios.

### Topics

- *Computational Intelligence for Smart Grids*
- *Neural Networks based algorithms for Complex Energy Systems*
- *Deep Learning strategies for Energy Efficiency*
- *Soft Computing based Algorithms in Energy Applications*
- *Learning Systems for Smart Grid Optimization*
- *Learning-based Control of Renewable Energy Generators*
- *Fast Optimization at diverse Grid levels*
- *Smart Home Energy Management*
- *Energy Resource Allocation and Task Scheduling*
- *Building Energy Consumption Forecasting*
- *Demand-side Management*
- *Short-term Load Forecasting*
- *Neural Networks for Time Series Prediction in Smart Grids*
- *Non-Intrusive Load Monitoring*
- *Hybrid Battery Management*

### Sponsors

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### Submission Guidelines

Prospective authors are invited to submit papers according to the IEEE format. All submissions should be according to the specifications of IJCNN2015. Accepted contributions will be part of the IJCNN2015 conference proceedings.

### Important Dates

- **5<sup>th</sup> February 2015**: Due date for paper submission
- **25<sup>th</sup> March 2015**: Notification to authors
- **25<sup>th</sup> April 2015**: Camera-ready deadline for accepted papers
- **12<sup>th</sup> - 17<sup>th</sup> July 2015**: Workshop Days