

**The 17<sup>th</sup> IEEE International Conference on Machine Learning and Applications  
(ICMLA-2018)**

**Special Session: Machine Learning in Smart Grids  
December 17-20, 2018, Orlando, Florida, USA**

**[www.icmla-conference.org/icmla18](http://www.icmla-conference.org/icmla18)**

### **Aim**

Classical electrical distribution systems have been used to transport electrical energy generated at a central power plant by increasing voltage levels and then deliver it to the end users by gradually reducing voltage level. Nowadays, along with the increase of the importance of renewable electricity generation especially, intelligent systems are needed in the electricity market using real-time pricing. Smart grid is an approach in which user safety should be ensured while monitoring, updating and continuously reliably distributing electricity grid by adding smart meters and monitoring systems to the power grid in order to ensure electronic communication between suppliers and consumers. Smart grid structure will offer opportunities to progress within a layout by providing many facilities and work to be done in the operation of the distribution network that is not limited to energy supply and demand balance, but to ensure providing the quality criteria of energy and energy measurement. One of the biggest challenge for Smart Grid application scenarios will be handling the massive amount of data that is expected to be collected from various sources and treated to optimize its operation. In this respect, different machine learning techniques such as artificial neural networks, fuzzy systems, evolutionary programming, and other artificial intelligence methods and their hybrid combinations can significantly contribute to solve problems in smart grid.

This special session will bring together researchers and developers from academia, industry and governmental sectors to share and exchange novel ideas, explore the inherent challenges in developing future smart grids, investigate novel designs, explore enabling technologies and share relevant experiences on machine learning methods in smart grid and its applications.

### **Scope**

Topics for this session include, but are not limited to:

- Enabling technologies for Smart Grids
- Smart Grids Impact on Distributed Energy Resources
- Smart Grids Impact on Storage Systems.
- Smart metering, Demand Response and Dynamic Pricing
- Intelligent Monitoring Systems.
- Control and Operation for Smart Grids
- Cyber Security and Privacy
- Smart Grid Impact on Isolation and Service Restoration
- Smart Grid Enhancement of Energy Management Systems
- Vehicle-to-Grid (V2G).
- Smart Grid Standards, policies and regulations.
- Data Management and Grid Analytics
- Web-based applications

## Submission Guidelines and Instructions

Papers submitted for reviewing should conform to IEEE specifications. Manuscript templates can be downloaded from [IEEE website](#). The maximum length of papers is 8 pages. All the papers will go through double-blind peer review process. Authors' names and affiliations should not appear in the submitted paper. Authors' prior work should be cited in the third person. Authors should also avoid revealing their identities and/or institutions in the text, figures, links, etc.

Papers must be submitted via the [CTM System](#) by selecting the track "Special Session on Machine Learning in/for Smart Grids". All accepted papers must be presented by one of the authors, who must register. Detailed instructions for submitting papers can be found at [How to Submit](#).

### Paper Publication:

Accepted papers will be published in the ICMLA 2018 conference proceedings (published by IEEE). In addition, a selected number of accepted papers will be invited for possible inclusion, in an expanded and revised form, in special issue of International Journal of Renewable Energy Research, IJRER ([www.ijrer.org](http://www.ijrer.org)), that is cited by EBSCO, SCOPUS and Thomson Reuters.

### Important Dates:

Submission Deadline: September 7, 2018

Notification of Acceptance: October 7, 2018

Camera-ready papers & Pre-Registration: October 17, 2018

### Special Session Organizers

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**Important Dates:**

Paper Submission Deadline	<b>September 07, 2018</b>
Notification of Acceptance	<b>October 07, 2018</b>
Camera-Read Papers	<b>October 17, 2018</b>
The ICMLA Conference	<b>December 17-20, 2018</b>