Introduction:

Energy is still one of the most important issues in the World under its various aspects: production and renewability, transport and distribution, management and quality. The recent researches and developments in the production of energy have been focused on alternating and renewable sources as the fossil energy sources are reducing day by day. Therefore power system efficiency, power quality, renewable generation, growing number of interconnections, power exchanges among utilities, need for better improvements in energy and power system planning, operation and control have been very significant topics for the researchers. New challenges using the techniques such as pattern recognition, expert systems, artificial neural networks, fuzzy systems, evolutionary programming, and other artificial intelligence methods and their hybrid combinations can significantly contribute to solve problems in energy systems. Especially, advances in Machine Learning (ML) and recent web-based and mobile technologies provide new challenges in machine learning for energy applications.

The aim of this session is to provide a platform to present and discuss recent advancements on machine learning methods in energy and its applications.

Scope:

The special session opens to everybody as well as industrial partners to make contribution in this area. Topics for this session include, but are not limited to:

- Alternating energy sources
- Renewable energy sources
- Energy production
- Fault diagnosis, quality and maintenance in energy systems
- Distribution networks for power systems
- Parallel operations and interconnectivity of the power systems
- Hybrid power systems
- Energy efficiency and smart power saving solutions
- Energy conscious and intelligent power management
- Security issues in energy applications
- Computational methods
- Architectures and algorithms
- Web-based applications
- Test and recovery systems
- Education and training
**Submission Guidelines and Instructions**

Papers submitted for reviewing should conform to IEEE specifications. Manuscript templates can be downloaded from [IEEE website](http://www.ieee.org). 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](http://www.ctm-system.com) by selecting the track “Special Session on Machine Learning in Energy Applications”. 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](http://www.icmla.org/how-to-submit).

**Paper Publication:**

Accepted papers will be published in the ICMLA 2019 conference proceedings (published by IEEE). A selected number of accepted papers will be invited for possible inclusion, in an expanded and revised form, in some journal special issues.

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)), which is cited by EBSCO, SCOPUS and Emerging Source Citation Index.

**Important Dates:**

Submission Deadline: September 7, 2019  
Notification of Acceptance: October 7, 2019  
Camera-ready papers & Pre-Registration: October 17, 2019

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