

**The 21st IEEE International Conference on Machine Learning and Applications
(IEEE ICMLA'22), The Bahamas, Caribbean, USA
December 12-15, 2022
<https://www.icmla-conference.org/icmla22/>**

**Special Session on
Machine Learning in Energy Applications**

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 researchers in the area. New approaches using techniques such as pattern recognition, expert systems, artificial neural networks, fuzzy systems, evolutionary algorithms, and other artificial intelligence methods and their hybrid combinations can significantly contribute to solve problems in energy systems. In particular, new advances in Machine Learning (ML) and recent web-based and mobile technologies provide new challenges for machine learning in energy applications.

The aim of this session is to provide a platform to present and discuss recent advancements on machine learning methods and their applications to the energy sector. This special session is open to academics and industrial partners as well.

Scope:

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

- ❖ fault diagnosis, quality and maintenance in energy systems
- ❖ ML for distribution networks and power systems
- ❖ energy conscious and intelligent power management
- ❖ security issues in energy applications
- ❖ ML for energy efficiency and smart power saving solutions
- ❖ computational methods for energy systems
- ❖ ML for parallel operations and interconnectivity of the power systems
- ❖ alternating and renewable energy sources
- ❖ hybrid power systems
- ❖ web-based applications
- ❖ test and recovery systems

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 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](#).

Papers for this special session should be submitted by September 09, 2022, at the regular paper submission. paper submission website (<http://www.icmla-conference.org/icmla22/>). Papers should not exceed a maximum of **8 pages** (including abstract, body, tables, figures, and references), and should be prepared as a pdf in 2-column IEEE format. For detailed instructions please see the guidelines on the conference website. Accepted papers will be published in the conference proceedings, as a hardcopy. All accepted papers must be presented by one of the authors in order to be published in the conference proceedings.

Paper Publication:

Accepted papers will be published in the ICMLA 2022 conference proceedings (published by IEEE). A selected number of accepted papers will be invited for possible inclusion, in an expanded and revised form, in a special issue of the [International Journal of Renewable Energy Research, IJRER](#) (www.ijrer.org), that is cited by EBSCO, SCOPUS and Web of Science-Emerging Source Citation Index. Also, some papers will be invited to the International Journal of Smart Grid (www.ijSmartGrid.org)

Important Dates:

Paper Submission Deadline	September 09, 2022
Notification of Acceptance	October 07, 2022
Camera-Ready Papers	October 14, 2022
The ICMLA Conference	December 12-15, 2022

Special Session Organizers

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If you have any question about this session, please email Dr. ILHAMI COLAK (ilhcol@gmail.com)