

**The 15<sup>th</sup> IEEE International Conference on Machine Learning and Applications  
(IEEE ICMLA'16), Anaheim, USA  
18-20 December 2016  
[www.icmla-conference.org/icmla16](http://www.icmla-conference.org/icmla16)**

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

**AIMS AND SCOPE**

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.

Papers for this special session should be submitted by August 15, 2016, at the regular paper submission website ( <http://www.icmla-conference.org/icmla16/>). Papers should not exceed a maximum of **6 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.

**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 EBSCO, SCOPUS and Thomson Reuters.**

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

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### **Special Session Chair**

Prof. Dr. ILHAMI COLAK ([icolak@gelisim.edu.tr](mailto:icolak@gelisim.edu.tr)).  
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### **Special Session Co-Chair**

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### **Program Committee Members:**

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**Important Dates:**

Paper Submission Deadline **August 6<sup>th</sup>, 2016**  
Notification of Acceptance **September 7<sup>th</sup>, 2016**  
Camera-Read Papers **October 1<sup>st</sup>, 2016**

**If you have any question about this session, please do not hesitate to ask your question to Dr. ILHAMI COLAK ([icolak@gelisim.edu.tr](mailto:icolak@gelisim.edu.tr))**