

**The 16th IEEE International Conference on Machine Learning and Applications
(IEEE ICMLA'17), Cancun, Mexico
December 18-21, 2017
www.icmla-conference.org/icmla17**

Special Session on Machine Learning in Smart Grid

AIMS AND SCOPE

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. 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

Papers for this special session should be submitted by **August 31, 2017**, at the regular paper submission website (<http://www.icmla-conference.org/icmla17/>). 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), that is cited by EBSCO, SCOPUS and Thomson Reuters.

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Special Session Chair

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Important Dates:

Paper Submission Deadline	August 31, 2017
Notification of Acceptance	September 18, 2017
Camera-Read Papers	October 1, 2017
The ICMLA Conference	December 18-21, 2017

If you have any question about this session, please do not hesitate to ask your question to Dr. RAMAZAN BAYINDIR (bayindir@gazi.edu.tr; ramazanbayindir@gmail.com)