

Tentative Outline

Special Thematic Issue for the journal Current Chinese Computer Science (CCCS)

Big data analytics in photovoltaic / thermal hybrid solar system

Guest Editors: Dr. Jabar H. Yousif

Scope of the Thematic Issue:

Big Data has become a great interest research area for academic and business associations. Big data approaches help for promoting Photovoltaic / thermal hybrid solar power generation and ensuring efficient usage of renewable sources. Energy plays a vital role in the economy and environment. Therefore, the evaluation of energy production, capacity factor, and cost of power is a potential focus of research.

The transformation of renewable energy technology into the global economy process will encourage technological innovations to increase power production and reduce prices. This requires the application of new algorithms to improve the efficiency of solar cell production. As well as finding more efficient ways to store and transfer energy generated from the grid-connected system to sources of consumption quickly and cheaply. The application of the principles of big data, machine learning, and artificial intelligence will help to analyze problems and find practical solutions efficiently. This special issue aims to gather up-to-date original findings and solutions from leading researchers in the field of photovoltaic / thermal hybrid solar power using Big Data techniques.

Keywords: Big Data, Machine Learning, Solar Power, PV/T, grid-connected PV/T, Optimization Techniques, Power quality.

Sub-topics:

The sub-topics to be covered within the issue:

Data Mining Techniques, Artificial Intelligence, Machine Learning, PV/T, Grid-connected PV/T

Tentative titles of the articles and list of contributors:

- Examining and Optimizing PV/T Electricity production
- Forecasting PV/T Electricity production
- Power quality evaluation and enhancement of grid-connected PV
- Grid-connected PV/T management and production.

Schedule:

- ✧ Thematic issue submission deadline: 10 May 2020
- ✧ Peer Review Due: February 30, 2020
- ✧ Revision Due: March 15, 2020
- ✧ Announcement of acceptance by the Guest Editors: April 5, 2020
- ✧ Final manuscripts due: May, 2020

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Dr. Jabar H. Yousif is an Associate Prof. at Faculty of Computing and Information Technology, Sohar University, Oman. Ph.D. in Information Science & Technology, M.Sc. & B.Sc. in Computer Science. Postdoctoral fellowship in Virtual Reality. More than 25 years of teaching experience. I have published more than 70 papers & books in the fields of Artificial Intelligent, Cloud Computing, Soft Computing, Artificial Neural Networks, Natural Language Processing, Arabic text Processing & Virtual Reality. Editorial board & reviewer for many scientific journals and conferences.

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Dr. Mehdi Aliehyaei is an associate professor at Islamic Azad University. Ph.D. in mechanical engineering, postdoctoral from Ontario University in 2010. His research interested in the field of Renewable energy, exergy analysis Dispersed, power generation system, advanced exergy analysis, Fuel cell, Extended exergy analysis, Thermal cycle. Published more than 60 articles and editorial board and reviewer of several journals and conferences.