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Sensors and Materials
Special Issue on Artificial Intelligence and Advanced Technologies for Power and Renewable Energy Systems

I. AIM AND SCOPE

This Special Issue pertains to the 5th International Symposium on Computer, Consumer and Control (IS3C2020) (http://is3c2020.ncuteecs.org) to be held in Taichung, Taiwan, November 13-16 2020. This conference offers a great opportunity for scientists, engineers, and practitioners to present the latest research results, ideas, developments, and applications. IS3C, held every two years, is hosted and sponsored by National Chin-Yi University of Technology, Taichung, Taiwan. Original high-quality papers related to these themes are especially solicited, including scientific research, technology development, engineering, theories, methodologies, and applications in Computing, Consumer and Control. Excellent papers selected from IS3C 2020 will be recommended to be published on *Sensors and Materials* journal after an additional review process and need extra publication charge.

In recent years, power renewable energy issues in many countries have proposed increases in the proportion of renewable energy capacity in power generation and in order to reduce dependence on thermal power generation following the rise of environmental awareness. However, the fast increase in the penetration of intermittent renewable energy and various power generation combination will impact the existing power systems, it is important to consider the latest advanced technologies with artificial intelligence (AI) for power and renewable energy systems. To overcome the above-mentioned challenges and allow renewable energy to integrate safely to the grid, the proposed special issue needs state-of-art technologies in AI-related technologies for power systems must be considered so as to enhance the safe operation of the system and increase the flexibility of power grids.

This Special Issue discusses the potential of renewable energy technologies to enhance the integration of renewable energy capacity to the power grid. It also deals with new technologies for AI and advanced technologies for power and renewable energy systems including state of the art research in renewable energy technologies, AI fault detection and diagnostics, smart power systems and grids, power and energy systems, AI-based methods, sensor-based control, applications of power electronics in power systems, etc. Manuscripts dealing with the implementation and development of the latest AI-based technologies that are transferable to the above areas also fall within the scope of this Special Issue. Through these studies are established for improving the strength of power and renewable systems.

II. TOPICS

In this Special Issue, we sincerely invite the original submission of research results regarding AI and advanced technologies for power and renewable energy systems. Potential topics of interest for publication include but are not limited to the following:

- Renewable Energy Technologies
- Photovoltaic and Wind Energy Technologies
- Power Conversions
- Fault Detection and Diagnostics
- AI-based Methods
- Sensor-based Control
- Signal Analysis and Processing
- Big Data and Machine Learning
- Applications of Power Electronics in Power Systems
- Intelligent Control and Applications
- Smart Grids

III. SUBMISSION

Manuscript should be prepared according to the "Instruction for Authors" *Sensors and Materials* journal and should be submitted through the online submission system on the journal website.

https://myukk-org.ssl-xserver.jp/form/

The title of "Special Issue on Artificial Intelligence and Advanced Technologies for Power and Renewable Energy Systems" should be specified in the message field of the system. Manuscripts should be submitted by the deadline. All papers will be peer-reviewed. Accepted papers will be published in the journal and will be listed together on the special issue website. Research articles, review articles as well as letters are invited.

Submitted manuscripts should not have been published previously, nor be under consideration for publication elsewhere. All manuscripts are thoroughly refereed through a single-blind peer-review process. A guide for authors and other relevant information for submission of manuscripts is available on the Instructions for Authors page. *Sensors and Materials* is an international peer-reviewed open access monthly journal published by MYU KK.

Please visit the Instructions for Authors page before submitting a manuscript. The publication fee of this journal is JPY 99360 for 9 or 10 pages in *Sensors and Materials* format, as of 2020. For manuscripts whose English quality does not satisfy the journal standards, the authors should bear a proofreading fee (JPY 10000–15000, depending on the amount of corrections). Submitted papers should be well formatted and written in precise English. Authors may use MYU KK English proofreading service prior to submission or during author revisions.

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