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Special Session on ADVANCED TECHNIQUES FOR FAULT DETECTION AND DIAGNOSIS OF PHOTOVOLTAIC PLANTS

A selected number of the highest scored papers will be invited to prepare an extension version for possible consideration in the refereed **Renewable Energy journal**.

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Call for papers

In 2018 the global photovoltaic capacity reached about 500 GWp corresponding to several millions of photovoltaic (PV) systems installed worldwide. Thus, the operation and maintenance activities of such plants are today important for a great number of professionals working in this solar sector. As a single fault occurring in one of the components of a PV system can seriously compromise its performance and yield, the capability to detect, localize, isolate, and fix the fault is crucial in order to avoid unnecessary loss of money and safety issues. A number of international standards, equipment and monitoring systems have been developed and commercialized, but most of them are expensive or at a prototype level. Another issue related to the commercial products is related to the fact that these are usually closed source and thus unlikely able to adapt to different location and operation conditions. In the direction of fault detection and diagnosis for PV plant a great research effort is then expected in the future, and already the number of paper published in this field is increasing very rapidly. This special issue aims at attracting scholars and professionals working in the photovoltaic sector, and is focused (but not limited to) on the following topics:

- Automatic monitoring and supervision for PV systems
- Smart monitoring for PV systems
- IoT-based remote sensing of PV systems
- Al techniques based-fault diagnosis of PV systems
- Fault tolerance in PV systems
- Fault prediction and diagnosis approaches
- New techniques for fault detection and diagnosis
- Fault localization techniques in PV systems
- Real-time implementation of fault diagnosis techniques
- Challenges and future directions in real-time applications
- Machine and deep learning in fault diagnosis forPV systems