

24<sup>th</sup> IMEKO TC-4 INTERNATIONAL SYMPOSIUM

22<sup>nd</sup> INTERNATIONAL WORKSHOP ON ADC AND DAC  
MODELLING AND TESTING

PALERMO, ITALY - SEPTEMBER 14-16, 2020

# CALL FOR PAPERS

for the Special Session on

# RENEWABLE ENERGY AND METROLOGY (REM)

## ABSTRACT

The energy from renewable sources has been continuously increasing in the worldwide scenario, but the prediction and the assessment of the performance of power plants still remains a challenge. The specifications of the components of a power plant are often stated only at nominal conditions and reliable models that allow performance at operating conditions to be estimated are rarely available. Another crucial aspect of renewable-source components is the estimation of their degradation along medium-long time intervals, thus enabling plant managers to obtain a reliable estimation of economic and energy pay-back times. A better characterization of power plants based on renewable sources requires the measurements of electrical and non-electrical quantities by means of techniques that are reproducible and that ensure metrological traceability and uncertainties that are tailored to the final goal.

## TOPICS

The topics of this special session include, but are not limited to, the following:

- measurement of electrical and environmental quantities of power plants based on renewable sources;
- techniques for the characterization of components of power plants;
- identification of models of single components or of whole power plants based on renewable sources;
- experimental characterization of photovoltaic and wind power plants under mismatch with respect to the rated conditions;
- investigations on degradation and failure factors of power-plant components;
- reliable estimation of economic and energy pay-back times of power plants.

## ORGANIZERS



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