



### Special Session on

## Simulation, Modeling and Optimization of Renewable Energy Systems

### Organized and chaired by:

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### Call for Papers

#### Outline of the Session:

With the current climactic trend necessitating the decrease of CO<sub>2</sub> emissions in compliance with Paris Agreement and Kyoto protocol, the shift to renewable energy becomes inevitable. However, the main concern which the latter imposes is its insufficient yields and high costs due to the challenges which its facilities enact for implementation. In this sense, acknowledging that fossil fuel systems are no longer the winning bargain, the development of consistent and sustainable energy supply processes can be a transformational approach, where advocating for the design, control, modeling and optimization of such systems becomes the major pillar in individual research. Hence, addressing the environmental issue via proposing optimized simulations for various renewable energy technologies including biofuel, solar, wind power and geothermal energy is beneficial. Process simulation becomes key since multiple software including Aspen HYSYS, Aspen Plus, PV F-chart, pvPlanner, PVsyst, RETScreen, Solar Pro, Homer Pro, Pro/II, Prosim, CHEMCAD, Scilab, Matlab, Modelica, DWSIM, Python, COCO, and others permit the enhancement of the ongoing research. Thus, using modeling techniques in order to predict the performance of the energy systems in terms of practicality, control, energy production, efficiency and cost analysis remains crucial.

We are pleased to invite you to submit your paper to the special session “**Simulation, Modeling and Optimization of Renewable Energy Systems**” in the 3<sup>rd</sup> International Conference on Smart Grid and Renewable Energy.

Topics of interest include, but are not limited to, the following:

- Green energy production
- Numerical methods for process control
- Wind, hydraulic and photovoltaic systems
- Systems pertaining algae growth
- Biomass steam gasification
- Biogas production from wastes
- Green hydrogen systems
- Economic evaluation of renewable energy systems

- Discrete-event simulation
- System dynamic
- Artificial intelligence
- Renewable energy for buildings

**Author's schedule:**

Deadline for submission of special session papers                      December 1, 2021

Notification of acceptance                                                              January 1, 2022

Deadline for submission of final manuscripts                                      1 February 2022

All the instructions for paper submission are included in the conference website:

<http://www.sgre-qa.org/>