



# The 21st IFAC World Congress

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## Call for Papers

OPEN INVITED TRACK

### **Modeling, Control and optimization of Power Generation Systems: from Conventional to Renewable (Code: it332)**

**IFAC Technical Committee for Evaluation: TC6.3. Power and Energy Systems**

#### **Organizers:**

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#### **Abstract:**

The past decade witnessed the booming growth of the renewable energy in the electricity market, such as solar, wind and tidal power generation. However, the intermittency of these renewable energy sources inevitably imposes great challenges on the reliability of the utility grid. To accommodate the renewables, some efforts can be made from either the renewable energy side or the conventional power plant side. A high flexibility of the power system requires a reasonable configuration of the dispatchable power sources and energy storage systems, such as coal-fired power plant, fuel cell and battery, hydro or pumped storage hydro systems.

Efficient utilization of all of these power generation sources and energy storage devices relies on accurate modelling, active control and operational optimization. Cutting edge modeling and control research are great enablers of the renewable integration progress in this area.

This track aims to provide an open forum for the researchers in this area to discuss the benefits, advancement and latest progress in this field. The following topics (but not limited to these) are welcome:

- Modeling and Control of Fossil-Fueled Power Plants;
- Combined cycle plants;
- Fuel-cell plants;
- Modeling and Control in Renewables Power Generation;
- Wind power generation;
- Solar power generation;
- Geothermal generation;
- Ocean-based power generation;
- Modeling and Control in Nuclear Power Generation;
- Modeling and Control of Hydro and Pumped Storage Hydro Power Plants.

#### **Submission:**

Prospective authors are invited to submit original contributions (standard two-column IFAC format and up to 6 pages) to this Open Invited Track with the Submission Code by the deadline, October 31, 2019.