



## The 20th IFAC World Congress

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### Call for Papers

OPEN INVITED TRACK

## Modeling and Control of Power Generation Systems

**(Submission Code: 5f8k1)**

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

#### Organizers:

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#### Abstract:

To satisfy the increasing world energy demand, while conserving the fuel consumption and preserving the environment, the relation between renewables, fossils, and nuclear needs to change dramatically and new clean fossil-based energy generation technologies, like chemical looping, need to come on board. Utilization of all of these energy sources relies on active control. Therefore, cutting edge modeling and control research are great enablers of progress in this area. Power generation at present has a number of hot topics. Fusion, wind-turbine, and solar/thermal power generation control are as hot as ever, clean fossil generation technologies, such as chemical looping and fuel cells, are slowly coming to fruition, and even the fossil-fueled power plant control has to cope now with enormous challenges of integration into a smart grid alongside renewables. The objective of this open invited track is to showcase the innovations in power generation modelling and control across the entire spectrum of power generation systems.

#### Topics:

Original contributions related to the following topics are welcome for submission to this open invited track:

- Modeling and Control of Fossil-Fueled Power Plants
  - Coal-fired plants
  - Combined cycle plants
  - Clean coal technologies
  - 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
  - Fission systems
  - Fusion systems
- Integration of Power Generation Systems into a Smart Grid

#### 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 **(5f8k1)** by the deadline, **October 31, 2016**.

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