Annual Conference of the IEEE Industrial Electronics Society (IECON 2021)

Special Session on

"Low inertia power grids and microgrids"

Organized by

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Call for Papers

Theme:

Renewable energies in many systems are hitting significant levels and there are many promising situations and targets. The world is now generating more than 20% of its electricity from renewable energies and targeting 100% renewable power generation by 2050 in order to face the climate change and to reduce carbon dioxide emissions. There are already a lot of excellent examples in the world like Iceland, Norway, Costa Rica, Kenya, Egypt, Denmark, Austria, etc. with a significant high level of electricity generation from renewables.

Anyhow, in order to reduce or eliminate emissions, the current share of inverter-based power systems will even further increase worldwide which leads to new technical challenges and economic disputes. Advanced technologies – tackled by this special session – such as artificial intelligence, modeling, design, validation approaches, real-time control and self-healing will maximize the potential of integration of renewable sources and power electronics in state-of-the-art power grids.

Topics of interest include, but are not limited to:

- Frequency and voltage control applications of low or zero inertia power systems / microgrids
- Smart grid technologies based optimal operation of low inertia power systems.
- Modern protection applications on grids with high share of renewables.
- Artificial intelligence applications on grids with high share of renewable energies.
- Challenges and opportunities of 100% renewable energy power grids.
- Role of energy storage in low / zero inertia power systems / microgrids.
- Advanced modelling and design of inverter based smart grids.

Good quality papers may be considered for publication in the IEEE Trans. on Industrial Electronics, subject to further rounds of review.

- Energy management systems of low inertia power systems.
- Ultra-high efficient and dynamic power electronics for enhanced services in smart grids.
- Integration of wide bandgap in renewables and smart grid applications.

Submissions Procedure: All the instructions for paper submission are included in the conference website**: https://attend.ieee.org/iecon-2021/**

Deadlines:

Full paper submission:	June 25, 2021
Paper acceptance notification:	July 30, 2021
Camera-ready paper submission:	Aug. 27, 2021

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