

The 38th Annual Conference of the IEEE Industrial Electronics Society

IECON' 2012



25-28 October, 2012 Montréal, Québec, Canada

Proposal for IECON 2012 Special Session Send your proposal to the SS chairs

Professors Kim Man: Email: EEKMAN@cityu.edu.hk; Juan José Rodriquez Andina, Email:

jjrodrig@ncsu.edu; and Mariusz Malinowski , Email : malin@isep.pw.edu.pl

Title of special session: "Industrial Electronics Applied to Induction Heating"

Technical Outline of the Session (100 words) and Topics:

Advances in power electronics have allowed a significant development of the induction heating systems, which is a key technology for both industrial processes and domestic appliances. Nowadays this technology is evolving towards more flexible, cost-effective, and efficient systems through the development of the power electronic converter, the control algorithms, and the inductor optimal design. This special session invites papers presenting recent advances in this field with special reference to the following topics.

Topics of interest include, but are not limited to:

- 1. Power converter topologies.
- 2. Digital control of induction heating systems.
- 3. Magnetic component design for induction heating systems.
- 4. Induction heating systems modeling and simulation.
- 5. Efficiency optimization of induction heating systems.
- New architectures of induction heating systems.
- 7. Applications of heating by electromagnetic sources: biomedical, industrial, and domestic devices.

Special Session Organizers (names and contact emails):

- Oscar Lucia (<u>olucia@ieee.org</u>)
- Claudio Carretero (ccar@unizar.es)