

CALL FOR PAPERS

Special Session on Nonlinear Dynamics of Power Converters

to be held in the frame of
IECON 2013 - The 39th Annual Conference of the IEEE Industrial Electronics Society
10th - 13th of November 2013, Austria Center, Vienna, Austria



TOPIC OF THE SPECIAL SESSION

Switching power converters are probably the most commonly used electronic devices as they can be found from simple domestic applications to military and space systems. The ever increasing need for higher efficiency, smaller size and lower cost make the analysis, understanding and design of such converters extremely important, interesting and even imperative. One of the most neglected features in the study of such systems is the effect of the switching action in the stability of the converter that is causing it to be highly nonlinear. Due to nonlinearity and complexity, these devices may exhibit undesirable irregular behaviours such as bifurcations and chaotic regimes which is in the focus of many researchers. Even though during the last 20 years a lot of research has taken place in this area, it is still a relative unknown topic to the mainstream power engineer. That research has demonstrated that the converter can get unstable with a direct result in increased losses, extra subharmonics and even uncontrollability/unobservability. Furthermore, the detailed study of these systems can help in the design of smaller, lighter and less expensive converters that are particularly important in new emerging areas of research like electric vehicles,

SPECIAL SESSION ORGANISATION

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The organizers look forward to welcoming you to Vienna, Austria from 10th to 13th November 2013.

Important Dates

Regular Paper submission:	April 01, 2013
Notification of acceptance:	June 15, 2013
Final submission:	August 01, 2013



smart grids, renewable energy sources and others. The aim of this special session is to cover nonlinear aspects of instabilities in switching converters: theoretical, analysis modelling and practical solutions. In this special session, we have invited a number of pioneer researchers in the area of nonlinear dynamics of power converters and they will present their most recent work which will be of highly interest to both academics but also industrialists. These works are complementary so that it is expected that they will give a broader view on the area and ideally fit the proposed topic of the session.

SUBMISSION OF PAPERS

The working language of the conference is English. Submit the full paper as PDF following the IEEE layout requirements by using the templates given at the conference web page. Accepted and presented papers will be published in an IEEE Proceedings volume and will be sent to IEEE Xplore. In addition, selected authors are encouraged to submit their papers for publication in the IEEE Transactions on Industrial Electronics or in the IEEE Transactions on Industrial Informatics.

THE CONFERENCE

IECON 2013 is the 39th Annual Conference of the IEEE Industrial Electronics Society, focusing on industrial and manufacturing theory and applications of electronics, controls, communications, instrumentation and computational intelligence. The objectives of the conference are to provide high quality research and professional interactions for the advancement of science, technology, and fellowship.

Papers with new research results are encouraged for submission. IECON 2013

will be held concurrently with the 7th IEEE International Conference on E-Learning in Industrial Electronics (ICE-LIE 2013). Participation in any of these events just requires a single conference registration fee. The world's industry, research, and academia are cordially invited to participate in the wealth of presentations, tutorials, special sessions and social activities, and furthermore, enjoy beautiful Vienna.