

CALL FOR PAPERS

Special Session on High-performance power supplies

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

Various areas of applications such as medical instrumentation, aero-space, deep sea exploration, and complex particle-physics facilities like the Large Hadron Colliders (LHC) require highly accurate and stable Power Supplies (PSs) of the embedded equipment to avoid any hazard to human being or any mishandling of expensive experiments. PSs for such applications, where cost is often a secondary matter in meeting the strict specification norms, are termed as high-performance PSs.

Many associated issues must be considered by an engineer when he has to design high-performance PSs. They include efficiency, reliability, and robustness as well as electromagnetic interferences (EMI) and susceptibilities, and net-absorbed current harmonics. Thus, design of high-performance PSs is a complex multi-dimensional problem that requires balancing the demanded performance with the associated issues.

Recognition of the proper power circuitry topology, selection of application-tailored components, synthesis of suitable control algorithms, and effective H/S implementation can give the PSs the capability to meet the most stringent

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

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



performance while complying with the constraints posed by the associated issues. Focus of this special session is on the design of high-performance PSs, which are to be or being used in the critical areas. A central topic is the evaluation of the impact that the design solutions have on the issues of efficiency, reliability, robustness, and electromagnetic compatibility.

Research in this subject is important to push up the technology. This special session intends to be an opportunity for the specialists to present their recent work on the high-performance PSs and to debate the challenging issues in the subject.

Topics of interest include but are not limited to:

- Advanced topologies of power supplies (hard & soft switching)
- Modeling and simulation of power supplies
- New design approaches of power supplies
- Optimum components design for power supplies
- Cutting-edge control systems for power supplies
- Intelligent control systems of power supplies
- S/H reliability of power supplies
- Electromagnetic compatibility of power supplies
- Power supplies for aero-space and deep sea exploration equipment
- Power supplies for particle-physics laboratory

Authors are kindly invited to present their recent research activities in these areas.

Experimentation of prototypal PSs and validation of new PSs for selected high-performance applications will be also welcome to this special 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.