



CALL FOR PAPERS

“VOLTAGE AND CURRENT CONTROL OF POWER CONVERTERS”

The Theme: 30 years of intense research on pulse width modulation for power converters, 20 years devoted to the study of current control of voltage source inverters, and the vast range of residential and industrial applications for PWM and CC-PWM converters, make these two topics fundamental and basic knowledge for electric engineers. However the continuing application of signal processing and control concepts to the field, the availability of low cost computational hardware, the interest in converter structures such as multilevel, matrix, innovative ac/ac converters and the revitalized interest in the field of renewable energies, maintain the attention of the researchers to develop open loop modulation and closed loop current regulation strategies. Hence it seems timely and appropriate to propose a special issue to attract contributions dealing with theoretical innovations, with design strategies, and with applications valuable for engineers, to offer a state-of-the-art of review of the most recent advancements in modulation and current regulation of switched converters. Topics of interest of this Special Section include, but are not limited to:

- Modulation strategies for multilevel and matrix converters, current source converters, and other novel or unusual power converter topologies.
- Modulation strategies for common mode elimination and harmonic elimination
- Other modulation strategies such as random pulse width modulation.
- Leading edge techniques (such as DSP, FPGA or ASIC) for implementing modulation and control algorithms
- Hysteresis regulation strategies, particularly for multilevel and matrix converters
- Synchronous reference frame and P+ resonant current control
- Current regulation using internal model strategies (resonant, repetitive, DFT-based)
- Closed loop regulation strategies for particular applications, such as:
 - Power quality conditioners,
 - renewable energy applications,
 - single and three power factor correction,
 - active filters
 - high frequency modulation strategies for dc and ac converters

Manuscript Preparation and Submission

Follow the guidelines in “Information for Authors” in the IEEE Transaction on Industrial Electronics <http://tie.ieee-ies.org/tie/>
Please submit your manuscript in electronic form through Manuscript Central web site: <http://mc.manuscriptcentral.com/tie-ieee>. On the submitting page #1 in popup menu of manuscript type, select: VOLTAGE AND CURRENT CONTROL OF POWER CONVERTERS.

Timetable

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