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Control and Nonlinear Dynamics on Energy Conversion Systems

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Message from the Guest Editors

Power electronics such as switching power converters are probably the most commonly used electronic devices, as they can be found in applications ranging 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 causes it to be highly nonlinear. Due to nonlinearity and complexity, these devices may exhibit undesirable irregular behaviour such as bifurcations and chaotic regimes, which are the focus of many researchers.

The aim of this Special Issue is to cover control and nonlinear aspects of instabilities in switching converters: theoretical, analysis modelling, and practical solutions. In this Special Issue, we wish to solicit novel research work in the area of control and nonlinear dynamics on energy conversion systems which will be of highly interest to both academics and industrialists.



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Special Issue



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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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