Special Issue

Application of Signal Processing and Computational Intelligence in High-Energy Calorimeter Systems

Message from the Guest Editors

High-energy physics experiments rely on calorimeter systems to provide better measurements of the subproducts of particle collisions. In modern HEP experiments, calorimeter readout electronics need to cope with increases in the data rate and complexity of the experiments through the use of advanced digital signal processing (DSP) techniques and computational intelligence approaches.

In this Special Issue, we invite submissions of theoretical and experimental studies, as well as comprehensive review and survey papers, exploring cutting-edge research and recent advances in the following topics related to high-energy calorimetry:

- Data acquisition strategies
- Signal conditioning circuits
- Noise estimation methods
- Signal estimation and detection
- Optimal filtering methods
- Nonlinear strategies for signal estimation
- Linear and nonlinear computational modeling
- Statistical signal processing
- Optimization methods
- Neural network systems
- Artificial intelligence applications
- FPGA solutions for signal processing
- Real-time applications

Guest Editors

Dr. Bernardo Peralva
Computational Modeling Department, Polytechnic Institute, Rio de Janeiro State University, Rio de Janeiro 20550-900, RJ, Brazil

Dr. Gustavo Barbosa Libotte
Computational Modeling Department, Polytechnic Institute, Rio de Janeiro State University, Rio de Janeiro 20550-900, RJ, Brazil

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Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

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