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Deep Learning Approaches for Brain-Computer Interfaces

Guest Editor:

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Deadline for manuscript submissions:
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Message from the Guest Editor

Brain–computer interfaces (BCIs) decipher and translate brain signals into commands for the surrounding environment. Different types of brain signals, e.g., EEG and fMRI, have been used as a means to decode intended user commands, and various machine learning approaches have been tested in such a task. With the advent of the deep learning (DL) era, new studies have emerged that exploit the advantages of the deep network architectures for BCI systems and depict more efficient and reliable brain signal decoding systems.

The aim of this Special Issue is to provide a collection of forefront works investigating the deployment of various deep network types in different BCI applications using a variety of brain signals either of unimodal or multimodal signal processing framework. Topics of interest include but are not limited to the following:

- Deep network architectures for BCIs;
- Transfer learning in BCIs;
- Big data for DL-based BCIs;
- Fusion of multiple brain signals for BCIs using DL methods.

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Message from the Editor-in-Chief

Our primary goal is to encourage scientists and engineers to publish their theoretical results and developed methods in as much detail as possible. There is no limit to the maximum length of papers. Whenever possible, authors are encouraged to provide relevant data and developed code so that the results can be reproduced. Our goal is to provide a platform for scientists and engineers to share new approaches to signal processing in various application domains.

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