Advances in Seizure Prediction and Detection

Guest Editor:

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Deadline for manuscript submissions:
closed (15 April 2022)

Message from the Guest Editor

Seizure prediction based on EEG/iEEG is complicated by two factors. The first is that preictal and interictal EEG/iEEG patterns across patients vary substantially. The second is that EEG/iEEG is highly complex and varies over time, and no single measure of EEG/iEEG has yet been predictive on its own. Therefore, high sensitivity is possible using a patient-specific classification method based on multiple features extracted from EEG/iEEG.

Technological advances have focused on various feature extraction approaches to seizure prediction. Feature extraction approaches include, but are not limited to, univariate linear and nonlinear measures, and bivariate linear measures. In terms of advancements in classification, support vector machines are currently the most popular approach in supervised machine-learning and have been adopted in a large number of seizure-prediction studies. Other classifiers that have had a reasonably high degree of success are artificial and cellular neural networks.

The overall aim of this Brain Sciences Special Issue is to disseminate and discuss recent advances in seizure prediction methodologies.

mdpi.com/si/85856

Special Issue

Editor-in-Chief

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Message from the Editor-in-Chief

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