

# Effect of feature and channel selection on EEG classification.

[Al-Ani A<sup>1</sup>](#), [Al-Sukker A.](#)

## Author information

### **Abstract**

In this paper, we evaluate the significance of feature and channel selection on EEG classification. The selection process is performed by searching the feature/channel space using genetic algorithm, and evaluating the importance of subsets using a linear support vector machine classifier. Three approaches have been considered: (i) selecting a subset of features that will be used to represent a specified set of channels, (ii) selecting channels that are each represented by a specified set of features, and (iii) selecting individual features from different channels. When applied to a brain-computer interface (BCI) problem, results indicate that improvement in classification accuracy can be achieved by considering the correct combination of channels and features.