

عنوان مقاله:

Classification of human brain EEG signals for orientation detection in visual stimulus

محل انتشار:

کنفرانس دو سالانه بین المللی مکانیک جامدات تجربی (سال: 1396)

تعداد صفحات اصل مقاله: 2

نویسندگان:

Samaneh Badri - M.Sc. Student, Biomechatronics and Cognitive Engineering Research Lab, School of Mechanical Engineering, IranUniversity of Science and Technology, Tehran, Iran

Borhan Beigzadeh - Assistant Professor, Biomechatronics and Cognitive Engineering Research Lab, School of Mechanical Engineering, IranUniversity of Science and Technology, Tehran, Iran

خلاصه مقاله:

Visual information such as orientation, colour, and shape of the objects are analyzed separately in the primary visual cortex of the mammalian brain. The purpose of this project is to classify the signals taken through the EEG by four different orientation stimuli (horizontal, vertical, and ± 45 degrees). The number of subjects in this experiment was six, which according to the secondary studies on the signals, the data of the four subjects were selected. After the removal of the eyelid movement and muscle effects, signals are entered into the feature extraction and classification step. The comparison of ERP signals for each subject in each of the four orientation shows an interesting result. The results of these analyzes indicate that, after viewing the images, a stimulation is observed in the signals, which are placed on the four orientation with a slight difference in the attitude of the signals. These results can be attention effect in the subject. After the appearance of the attention peak, some time intervals can distinguish different orientations from each other.

کلمات کلیدی:

primary visual cortex, orientation colours, signal processing, classification

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/739220>

