عنوان مقاله:

An EEG Based Control of Rehabilitation Robot

محل انتشار:

اولین کنفرانس بین المللی دستاوردهای نوین پژوهشی در مهندسی برق و کامپیوتر (سال: 1395)

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خلاصه مقاله:

Rehabilitation robots is popular in kinds of therapy. This paper presents a novel algorithm to assist patient in robotic rehabilitation based on EEG signals. Generally intelligent control of this robot will be presented in which a pre-determined path for the patient is considered using virtual reality and the patient should pass the path. When the patient's response isn't good, robot acts as a donor to patient and according to the information of the patient's brain supplied by the Brain Computer Interface (BCI), detects a move that patient is going to do but actually is unable to, and robot helps patients to do the same move and go through the optimum route well. This is occurred while the patient thinks he/she has found the ability him/herself and it will have a positive influence on his/her attitude and it will make the recovery faster and this sequence is continued to the point the patient gains this ability. In fact, this improve performance criterion based on brain signals will be improved which is important for rehabilitation.

کلمات کلیدی:

BCI; EEG signals; P300; rehabilitation robots; virtual reality

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