

عنوان مقاله:

Fuzzy Tracking Control of the ۳PRR Parallel Rehabilitation Robot

محل انتشار:

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خلاصه مقاله:

In this study, a couple of ۳PRR parallel robot is used for the rehabilitation process of a patient to eliminate a walking disability and leads to his treatment. The ۳PRR robot has three degrees of freedom, provided by three prismatic actuators. Also using a couple of them, can quickly rehabilitate and provide the rehabilitation movements of a patient in the walking process. In this study, the extraction of kinematic and dynamic Equations of the robot was investigated, and a fuzzy-logic-based controller is performed. This controller has the ability to repel unwanted disturbances to follow the desired path. All modelling was simulated by MATLAB software. The simulation results show that using the mathematical model and controller, it is easy to go any desired path in the workspace; and this controller will be able to repel environmental disturbances like the sudden movement of patients.

کلمات کلیدی:

fuzzy tracking control, Modeling, ۳PRR parallel robot, Rehabilitation, walking operation

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