



Title

PARALLEL ROBOTIC SYSTEM FOR BILATERAL SHOULDER MEDICAL REHABILITATION



Inventor/s - Contact

Tucan Paul-George-Mihai, Pîslă Doina Liana, Vaida Liviu-Călin, Pîslă Adrian,
Gherman Bogdan George, Bîrlescu Iosif
CESTER-TECHNICAL UNIVERSITY OF CLUJ-NAPOCA, ROMANIA



Patent/ Application number

Patent Application OSIM no.: A/00683/12.11.2021



Short presentation

The invention describes a robotic system based on end-effector configuration for bilateral recovery of shoulder joint movements. The robot has 3 active joints needed to achieve flexion/extension, adduction/abduction of the shoulder and pronation/ supination movement of the forearm. The system is intended for patients with brachial monoparesis resulting from an injury to the central nervous system or peripheral nervous system. The robotic system is suitable for rehabilitation of both upper limbs. The robotic system works with the help of three degrees of mobility achieved with the help of three active rotation joints whose axes intersect at the same point, which is materialized in the form of the center of rotation of the patient's shoulder undergoing robotic assisted medical rehabilitation.



Applicability

The invention is applicable in the medical field, more specifically in the medical recovery of the upper limbs of patients suffering from brachial monoparesis. The robotic system is not limited only to this type of patients, its degree of use can also be extended to patients suffering from various neurological diseases whose recovery requires the remobilization of the shoulder joint.



Images

