

Restoring Human Functions after Neural Impairments: Challenges and Opportunities in the field of Rehabilitation Robotics

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Abstract

Robotics is emerging as an important tool in the area of rehabilitation, for retraining of impaired motor functions, improving human skills and to provide assistance during functional movement. Stroke limits a subject's ability to walk normally and carry out functions necessary for activities of daily living. Incomplete spinal cord injury limits the ability of human subjects to ambulate. Children born with cerebral palsy, spina bifida, and others have limited ability to be mobile, impacting their cognitive and social developments in early years. While robotics is potentially a transformative technology in the field of rehabilitation medicine, there are many challenges in its successful integration within current healthcare. This talk will provide a perspective of this emerging field, its successes, and challenges