

BEST FUTURE STRATEGIES FOR NEUROREHABILITATION - NEUROTECHNOLOGY

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Over the last 20 years there has been a tremendous increase of knowledge in the field of applied neuroscience accompanied by large progress in “neuro-technologies” Neurorehabilitation can make successful use of the new technologies which help to increase the armatorium of therapeutic interventions . In this presentation we will outline the impact and relevance of hi-tech mechanical and computer systems to improve various aspects of motor as well as cognitive rehabilitation.

In motor rehabilitation the use of computer controlled mechanical assistive devices comes more and more into everyday practice. These devices offer best feedback and allow for optimal task difficulty shaping . The fact that these devices ,often referred to as “therapy robots”, can be used in severely affected patients has opened a new therapeutic windows. Another example is the refinement of “serious games” for cognitive retraining and patient education. These and other neurotechnology” advancements will be critically discussed as to their theoretical basyis and clinical efficacy. Finally “neurotechnology “ will be contrasted with refineg “neurobiology” in their relative therapeutic importance and impact.