

## **Brain-Computer Interface for Stroke Rehabilitation**

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### **Abstract**

Brain-Computer Interface (BCI) provides a direct link between central nervous system and a computer. Motor imagery based BCI using non-invasive EEG device is particularly promising for stroke rehabilitation, as it provides a contingent feedback to reinforce the neural pathway of motor movement, and the real-time feedback also helps motivate stroke patients. In this talk, we will present several systems we developed which combine BCI with robotics and stimulation. Clinical studies involving over 60 patients show these systems are safe and acceptable by patients, and significant clinical outcomes were observed.