

# **Asynchronous brain machine interface-based control of a wheelchair**

## **Abstract**

A brain machine interface (BMI) design for controlling the navigation of a power wheelchair is proposed. Real-time experiments with four able bodied subjects are carried out using the BMI-controlled wheelchair. The BMI is based on only two electrodes and operated by motor imagery of four states. A recurrent neural classifier is proposed for the classification of the four mental states. The real-time experiment results of four subjects are reported and problems emerging from asynchronous control are discussed.