

# **Towards a real-time, configurable, and affordable system for inducing sensory conflicts in a virtual environment for post-stroke mobility rehabilitation: vision-based categorization of motion impairments**

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## **ABSTRACT**

Upper body motion impairment is a common after-effect of a stroke. A virtual reality system is under development that will augment an existing intervention (Mirror Box therapy) with a method of inducing a body illusion (Rubber Hand) in order to enhance rehabilitation outcomes. The first phase of the project involved developing algorithms to automatically differentiate between normal and impaired upper body motions. Validation experiments with seven healthy subjects simulating two common types of impaired motions confirm the effectiveness of the proposed methods in detecting impaired motions (accuracy >95%).

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**Full papers will be published in the Conference Proceedings and will be available to delegates at the conference on Sept. 10.**

**Full papers will be released on-line in the ICDVRAT archive on March 15.**

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