

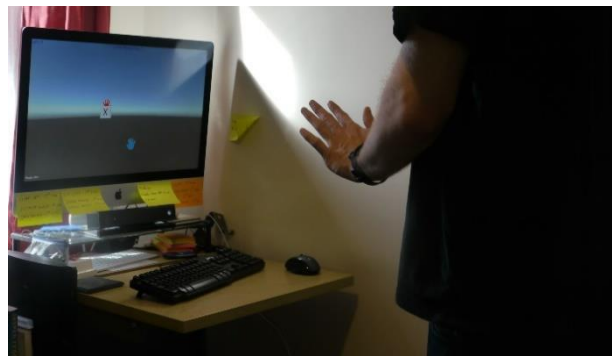
## **Use of the Kinect for Motor Rehabilitation following Stroke or other Brain Injury**

Matthew Roberts

BSc in Computer Science with Industrial Year

### **ABSTRACT**

The task that was set out was to create a variety of games that could be used in a home environment to help with stroke rehabilitation, using the Microsoft Kinect sensor. The project has an additional system where the Occupational Therapist could see how the patient is progressing, that compliments the game application. Overall the application includes two different game mechanisms with a few variations of the game. It incorporates a different way to log in using a Quick Response (QR) code, instead of the traditional username and password. The outcome of this project was an application where patients are able to interact with and receive real time feedback. It also provides a web portal for occupational therapists to check how the patients are improving.



**Figure 1.** User playing the card reaction game



**Figure 2.** Feedback with particle system

M Roberts, Use of the Kinect for Motor Rehabilitation following Stroke or other Brain Injury, *Proc. 13<sup>th</sup> School Conf. for Annual Research Projects*, V F Ruiz (Ed), pp. xx–yy, University of Reading, 24th May 2016.