

“Tracking the Body for Movement Training in Stroke”



Dr Alan Cummins, (left) is a Researcher and Lab Manager at the Movement Innovation Lab, School of Psychology, Queen’s University Belfast. He explains what’s involved in an exciting new research project currently being funded by Northern Ireland Chest Heart & Stroke.

“In the short term this research could deliver a bespoke low cost system designed to help rehabilitation of upper arm stroke. Long term it will increase understanding on how to develop and design programmes which will be more engaging and motivate patients to continue their treatment plan.

The problem with traditional exercise programmes is motivation tends to level off after a while. This is because post-stroke, recovery can initially produce very encouraging results, but as time goes on gains are less obvious and demotivation sets in. Conventional exercises can be tedious and people can struggle to complete them. But we believe computer gaming will offer a more appealing and personalised way to motivate users to continue their exercise regimes, whatever their age.

Our research idea is to create a computer game specifically for those affected by stroke that’s motivational and fun. We plan to do this in conjunction with users and the professionals involved with their care to explore how game play can be designed to encourage the type of movement needed for upper arm rehabilitation.

We hope our research will show that computer gaming could become part of a very cost-effective exercise treatment plan for stroke recovery. The only equipment involved will be low cost body-tracking sensors and an iPad to monitor movement and performance at home. We are very excited by this potentially life-changing research and we hope others will be too.”



Demonstrating how the game works.

The research process

