

## Fully Funded PhD studentship at the University of Essex

The School of Sport, Rehabilitation and Exercise Sciences (SRES) is offering a fully funded PhD studentship to conduct research;

*“How does gait and functional movement differ in older people who have fallen?”*

This fully funded studentship will bring together the outstanding research and educational expertise in sports and exercise science, physiotherapy and sports therapy in SRES. It offers an annual stipend of £12,500 plus Home/EU tuition fees, for a maximum of 36 months. Start date is the 1<sup>st</sup> Oct 2017.

### Overview

Falls are a leading cause of injury and death in older adults and a financial burden upon health services. The purpose of this project is to understand the gait and functional movements of older people who have fallen using three-dimensional motion analysis. These data will be compared to our database of healthy (non-fallers) older adults which currently includes 158 participants all of whom have undertaken a three-dimensional analysis of their gait. The student will be expected to add to this database. The project will recruit people who have been referred to falls prevention services. The information gained from this first wave will be used to inform falls prevention training programmes.

### Study Aims

The principal aim of this study is to understand the biomechanics of gait and functional movements of older people who fall and use these data to inform falls prevention training programmes. The student will be using a 12 camera three-dimensional motion analysis system synchronised to a force plate to capture the joint kinematics and kinetics of walking, obstacle avoidance, and turning gait.

### Objectives

- 1) The gait and functional movements of older people who have fallen will be compared to those within our ‘healthy’ database.
- 2) We will also compare gait before and after the completion of falls prevention training to see what impact this has on a person’s gait and functional movement.
- 3) The results from both these studies may highlight changes in gait which can provide stronger evidence to inform the design of falls prevention training protocols.

### The Student

The project will suit an applicant with a good science based degree (have or expect to receive a minimum of UK 2:1 honours degree), in addition to a specific interest in rehabilitation, biomechanics, physiotherapy, sports therapy, or sports science. The student will develop a range of research and practical skills and will have the opportunity to work with leading experts in the field. The successful candidate will gain experience in state-of-the-art methodologies applied to clinical populations. This includes exposure to technologies to measure motion analysis. The research findings will address a significant gap in the evidence base.

The project will be supervised by [Dr Matthew Taylor](#) and [Prof Jo Jackson](#). For informal discussions about this studentship, please contact Dr Matthew Taylor at ([mtaylor@essex.ac.uk](mailto:mtaylor@essex.ac.uk)) and / or Prof Jo Jackson at ([jo.jackson@essex.ac.uk](mailto:jo.jackson@essex.ac.uk))