



Mobilising the elderly

» Protocols and test environments for assessment of mobility (walking) in the older person

Academics: Professor David Ewins, Dr Khim Horton

The well-being and independence of older people will have a huge impact on healthcare costs in the future. A project assessing the mobility of over 65s has provided important data for the development of new robotic solutions.

This IAA project was conducted in partnership with Blatchford & Sons Ltd (Basingstoke, UK), a company specialising in rehabilitation solutions for the healthcare industry. Blatchford is one of the key partners in the EU AAL EXO-LEGS project, aimed at developing lower body exoskeletons to help older people move around and perform normal daily living tasks.

The project had three main outcomes:

- A systematic review was conducted of published work on mobility in the over 65s.
- A suite of tools was created to facilitate assessment of mobility over a range of terrains, such as steps, ramps and uneven ground for this age group.
- Focus groups were held with older people and their carers and partners to identify the key issues affecting their mobility, and their perceptions on how technology could address these issues.

Professor Ewins comments: "This IAA project has facilitated and given direction to academic-industrial collaboration in a rapidly growing area of healthcare."

Professor Saeed Zahedi, Technical Director at Blatchford adds:

"The University team has done an excellent piece of work. The IAA project has raised a number of important issues that Blatchford needs to review with colleagues in the company and with the EXO-LEGS consortium. The outcome of the IAA project is proving pivotal in the design and acceptability of future external walking-assistance device assistive technology products, as well as in identifying key functional characteristics that need to be addressed at a fundamental biomechanical level."

Research into mobility is continuing at Surrey using the assessment tools developed as part of this project, with help from Research and Enterprise Support.

EXO-LEGS is a European project funded by the Active Assisted Living Programme. The project brings together end-users, industrial companies and research organisations to specify the indoor and outdoor mobility needs of elderly people, to help them continue living independently for as long as possible.