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University  
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Engineering.

## **Sheffield Engineering Scholarships**

### **PhD full-fees scholarship for China Scholarships Council scholars from Zhejiang University**

**Project:** *Human behaviour recognition and monitoring of elderly people in home environments*

The elderly population is expected to grow dramatically over the next decades. The number of people requiring care will grow accordingly, while the number of people able to provide this care will decrease. Without receiving sufficient care, elderly are at risk of losing their independence. Thus an intelligent monitoring system allowing elderly people to live safely and independently at home is needed.

In this project, we will investigate algorithms and system design for automatic monitoring and recognition of human behaviour and events of interest using networked video cameras. Recognising human behaviour/activity has become a popular research area recently. The existing techniques can only recognise simple actions with fixed lighting condition, no complex background clutter and little camera motion. How to infer the information of behaviour and activity from a series of actions is a challenging problem. Another challenge is the coordinating and fusion of video data from multiple cameras and other sensors. To make a reliable system, many computer vision algorithms, e.g. people detection and tracking, background subtraction, body part detection and localisation, and feature extraction and description have to be utilised and refined.

The proposed monitoring system will provide the elderly people support in handling and preventing critical incidents and the care provider will be able to monitor the health trends of the elderly people through understanding their daily behaviours and activities.

**Supervisors:** Dr Ling Shao (Electronic and Electrical Engineering)

**Scholarship:** Sheffield Engineering scholarships cover the full cost of PhD registration fees for 3 years

**Eligibility:** Sheffield Engineering scholarships are available to students who secure a CSC scholarship. Applicants must meet the University of Sheffield English Language requirements, full details of which are available at:

<http://www.shef.ac.uk/postgraduate/info/englang.html>

**Applications:** Please send a CV together with a brief covering letter to Dr Catherine Biggs, Faculty of Engineering Head of Research Studies at [c.biggs@sheffield.ac.uk](mailto:c.biggs@sheffield.ac.uk) by **17<sup>th</sup> Feb 2010**. Include the title of the project in your covering letter and any English language test results.