

## Project proposal template

### Graduate School studentships

### March 2015

<i>Project title</i>	Smart (4G) mobile broadband and augmented reality technologies for tele-rehabilitation of after stroke Patients in Community Settings
<i>First Supervisor</i>	Dr <input type="text" value="Nada Philip"/>
<i>Second Supervisor</i>	Fiona Jones
<i>School</i>	Computing and Information Systems <input type="text"/>
<i>Other member of supervisory team (no more than three KU supervisors in total)</i>	<input type="text"/>
<i>Specific requirements beyond 2:1 degree</i>	First (or equivalent) or MSc degrees in Life Sciences, Health and social care, Information and Computing Technologies or equivalent degree.

**Project summary**  
**(max 4,000 characters)**

The global prevalence of stroke is still rising, the World Health Organisation (WHO) has estimated there are now 5 million people left permanently disabled from stroke and improved methods are urgently required to reduce disability and the long term impact felt by individuals, families and the community. The NHS stroke care services are as facing similar increase on demand for after stroke care services.

Rehabilitation is an important component of post stroke care and a number of promising rehabilitation interventions are emerging including early task specific activities. However stroke has traditionally been viewed as an acute condition and most rehabilitation is provided in the first six months post stroke. To date there has been minimal focus on relevant strategies and mobile technologies that could be used to support after stroke patients to practice more in their longer term and self-management rehabilitation programmes and research in this area.

New mobile broadband and wireless technologies (4G) an increasing part in alleviating healthcare provision challenges across the board. In recent years, there has been a major increase in the use of mobile and smart phone technologies by UK populations and also the adoption of these technologies for some of the key healthcare delivery services within the NHS.

The proposed work aims to investigate the use of new 4G and beyond wireless and broadband smart mobile technologies for new mobile telerehabiliations for after stroke patients. The study will also investigate the role of 4G mobile augmented reality technologies to provide the best tele-rehabilitation to enhance self-practice for after stroke patients who are unlikely to access additional physiotherapy.

The interdisciplinary proposal brings together the necessary blend of leading supervisory expertise in areas of wireless and mobile health technologies (Dr. Philip) and leading experts in stroke rehabilitations (Dr.Jones) together with NHS clinical collaborators ( St. George's Medical school).

This collaborative project will be jointly run between the MINT centre (one of the key centres of research excellence within Kingston University) and the joint faculty of health sciences of St. George's and Kingston University

This interdisciplinary project is suitable for a graduate in Life Sciences, Health and social care, Information and Computing Technologies or equivalent degree.

