PhD in Acoustic Analysis of Sleep Disorders

University of Sheffield | Department of Computer Science | Sheffield | United Kingdom

Project description

Applications are invited for a PhD studentship starting in September 2017 (or earlier). You will join a team within the Speech and Hearing Research Group of the Department of Computer Science, which has an international reputation for its work on speech technology and developing "machine hearing" systems that extract information from complex mixtures of sound.

This PhD project will focus on the problem of identifying and analysing sleep disorders through acoustic means. The eventual goal of the project is to develop a low-cost solution, running on a smartphone, which can screen for snoring, obstructive sleep apnoea and other forms of disordered breathing during sleep. This is an interesting and challenging problem, made especially difficult by the need to adapt to different room acoustics and sources of environmental noise, and the presence (in many cases) of a bed partner who will also be a source of interfering noise.

The PhD is part-funded by Passion For Life Healthcare (UK) Limited (PFLH), a leading developer and supplier of over-the-counter healthcare products. It is anticipated that you will work closely with PFLH, translating your research into applications that will be evaluated by the company and made available to their customers.

The Department of Computer Science, within the Faculty of Engineering, was established in 1982 and has since attained an international reputation for its research and teaching. In REF2014, the Department was ranked 5th out of 89 computer science departments in the UK, indicating that the large majority of our research is nationally or internationally leading. Further information about the Department can be found at http://www.sheffield.ac.uk/dcs.

This PhD studentship will cover tuition fees at the UK/EU rate and provide a tax-free stipend at the standard UK Research Council rate (currently £14,296 for 2016/17) for three years. Additional funds will be provided for travel and equipment. If you are an international student, you are eligible to apply but you must have the means to pay the difference between the UK/EU and overseas tuition fees.

You will have an excellent first degree in Computer Science, or a closely related subject, and have excellent programming skills. Prior experience of software development in an object-oriented programming language is essential, and some experience of machine learning and audio signal processing is highly desirable. Previous experience of carrying out research and working closely with an industrial partner (for example, during an internship or year in industry) would be an advantage.

Potential candidates are welcome to discuss their application informally with Prof. Guy Brown (g.j.brown@sheffield.ac.uk)

Applicants should apply using the University of Sheffield application system online at:
http://www.sheffield.ac.uk/postgraduate/research/apply/applying