Marie Curie Early Stage Researcher in Quantitative Brain MRI in UK

PhD Staff Candidate on acceleration of Diffusion Weighted MRI

CISTIB Centre for Computational Imaging & Simulation Technologies in Biomedicine - www.cistib.org

University of Sheffield - Faculty of Engineering

Qualification type: PhD

Location: Sheffield

Funding for: EU Students, International Students

Funding amount: £32,855 per annum. This includes a non-pensionable Mobility Allowance of £4,992 (available to all post holders). An additional Family Allowance of £4,160 is available to those in a legally recognised partnership

Hours: Full Time Closes: 31st May 2018 Reference: UOS019011

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Contract Type: Fixed term for three years

Applications are invited for a 3 year full-time Marie Curie Early Stage Researcher in Quantitative Brain MRI (Staff PhD candidate). This unique opportunity will enable an exceptional candidate to work in an international research-training network, for the European H2020 MSCA ETN project, BQ-MINDED (www.bqminded.eu). The BQ-MINDED project aims to develop breakthroughs in quantitative brain MR imaging such as MR relaxometry and diffusion MRI. The project involves a cohort of 15 PhD students ac...
various institutions in Europe working on complementary aspects of brain MRI.

The successful candidate will be based at the University of Sheffield within the host centre, CISTIB, Centre for Computational Imaging and Simulation Technologies in Biomedicine, and will register as a Staff candidate PhD student. CISTIB performs cutting-edge research in areas of fundamental and applied biomedical imaging & modelling with impact in personalized minimally invasive therapies and active and healthy ageing (www.cistib.org).

As one of two related posts within this project at the University of Sheffield (ESR6), your specific research, titled “Parallel transmission/reception and simultaneous multi-slice (SMS) techniques for dMRI”, will aim to reduce the acquisition time for dMRI measurements using state-of-the-art hardware- and software-based methodologies. It will involve exploring the optimal integration of simultaneous multi-slice (SMS) into quantitative MRI (Q-MRI), such as relaxometry, dMRI, and derived microstructural models. This will include the accurate characterization of the noise distributions resulting in SMS for different multi-transmitter and multi-receiver configurations and parallel RF pulse transmission protocols, and its exploitation in the parameters fitting for obtaining dMRI and relaxometry images. Finally, an optimal Q-MRI SMS protocol will be implemented considering clinically acceptable acquisition times and the regulations on specific absorption rate.

In the spirit of the Marie Sklodowska Curie European Training Networks, all appointed candidates, must be willing and able to spend time in one of the other participating labs. All labs in the BQ-MINDED ITN are committed to facilitate the mobility of students during their PhD. Specifically, this post will involve two short-term research stays at the sites of partners within the BQ-MINDED project.

We are seeking candidates with a master’s degree in physics, computer science, mathematics, engineering, or related field at the time of appointment. At the time of appointment, you should be in the first four years (full-time equivalent research experience) of your research career and not have been awarded a doctoral degree. Excellent computer programming skills/proven experience in scientific software development, particularly in computational imaging and modelling is essential.

Further details and a full description of the project can be found at www.bqminded.eu following the links for ESR6.

We’re one of the best not-for-profit organisations to work for in the UK. The University’s Total Reward Package includes a competitive salary, a generous Pension Scheme and annual leave entitlement, as well as access to a range of learning and development courses to support your personal and professional development.

We build teams of people from different heritages and lifestyles whose talent and contributions complement each other to greatest effect. We believe diversity in all its forms delivers greater impact through research, teaching and student experience.

For your application to be considered you must also submit an application via the University of Sheffield job application https://tinyurl.com/bqminded and BQ-MINDED websites - https://www.uantwerpen.be/en/projects/b-q-mininded/