

Postdoctoral Training Fellow in ultrasound physics and engineering

Closing Date 11 April 2020
Location Sutton, Greater London, United Kingdom
Contract 3,5 years, full time (35 hours per week), fixed-term contract
Salary range £32,200 - £39,350

The Joint Department of Physics conducts and translates research and development of medical physics into clinical practice. The department is a collaboration of academic and clinical staff from The Institute of Cancer Research and The Royal Marsden NHS Foundation Trust. Within the department we initiate the next generation of radiotherapy treatments by combining the most recent developments in cancer biology, cancer therapeutics and medical physics in a truly interdisciplinary approach.

For a new research program “Adaptive Data-driven Radiation Oncology” funded by CRUK we are looking for three enthusiastic Post-Doctoral training fellows to start as soon as possible.

The strong trend towards the implementation of Stereotactic Body Radiotherapy (SBRT) and hypofractionated treatments for most common localized cancer types makes the control of geometrical uncertainties a central issue for the safe and successful practice of modern radiotherapy (RT). This geometrical accuracy becomes even more important for reliable targeting of smaller biological tumour sub-volumes in which substantially increased radiation boost doses are delivered.

The successful candidates will use advances in physics, engineering and computer science to develop innovative dose delivery and patient imaging technologies aiming to provide the highest quality of precision RT treatments.

We are seeking a highly motivated and creative post-doctoral training fellow who is focused on a career in research to join our team. The post-doctoral training fellow will contribute to an exciting programme of work funded by CRUK, that will develop the next generation of 4D ultrasound imaging techniques to image and localise soft-tissues for the purpose of guiding advanced radiotherapy techniques, such as stereotactic body radiotherapy and adaptive radiotherapy. The successful candidate will work in an interdisciplinary team of medical physicists, computer scientists and clinicians in the Joint Department of Physics at the Institute of Cancer Research and the Royal Marsden NHS Foundation Trust and be part of a team of post-doctoral research fellows who will work on several different image guidance modalities for radiotherapy. She/He will develop a clinical demonstrator and ultrasound imaging solutions that drive forward the use of ultrasound in radiotherapy and exploit the complimentary nature of X-ray imaging (for bony anatomy) and ultrasound imaging (for soft tissue).

She/He will work with the Imaging for Radiotherapy Adaptation Team who are primarily focused on the development and application of novel imaging technology to guide radiotherapy and monitor treatment response to enable clinicians to adapt radiotherapy according to the individual to improve patient outcomes. The work will be conducted in collaboration with Professor Jeff Bamber’s Ultrasound and Optics Imaging team at the ICR who have extensive expertise in a number of ultrasonic imaging techniques. The teams have a number of clinical and research ultrasound scanners (Verasonics) and as part of this study will acquire a state-of-the-art imaging probe that will enable the implementation of novel beam forming and data acquisition strategies that will be developed within this project.

Applicants will hold a PhD in Physics, Engineering or another relevant field and ideally have experience in ultrasound hardware development and/or ultrasound image reconstruction.

Please contact Professor Uwe Oelfke (uwe.oelfke@icr.ac.uk) or Dr. Emma Harris (eharris@icr.ac.uk)

if you would like to discuss the job opportunity in more detail. To apply, please upload your CV and complete an application form with the supporting statement section (addressing how you meet the person specification and including the names and contact details of two referees) using the ICR's e-recruitment system, job reference 1022:

<https://icr.tal.net/vx/mobile-0/appcentre-ext/brand-0/candidate/so/pm/1/pl/1/opp/1022-Postdoctoral-Training-Fellow-in-ultrasound-physics-and-engineering/en-GB>