PhD Scholarship in Computational Methods for the Generation of Enhanced Diagnostic Outputs in Medical X-ray Imaging

The Department of Computer Science at Durham University is pleased to offer a PhD studentship for a collaborative project with industry, part funded by European Regional Development Funding, Durham University and IBEX Innovations Ltd.

This studentship will start from October 2018 and the successful applicant will receive a scholarship for three years (subject to satisfactory progression). The studentship includes:

- Domestic fees supported by the industry partner. Please note international students will need to pay the balance of their fees.

The successful applicant will be expected to work at both IBEX Innovations business premises and Durham University premises supporting the company research.

Project Description:

IBEX multi-absorption plate technology recovers spectral information from standard medical X-ray systems to generate new materials-based diagnostic outputs. The project aims to unlock the full potential of this technology by developing novel:

- **Data exchange formats** holding data hierarchically and adaptively in quantised form ranked by primary relevance.
- **Hierarchical computation algorithms** of increased computational efficiency building upon established techniques such as iterative smoothing and wavelet based image analysis.
- **Machine learning algorithms** based on deep neural networks to extract more information than the current software components.

Entry Requirements:

For entry to the PhD you will be required to have achieved a 2:1 Bachelor's degree in an appropriate subject, from a recognised university (or equivalent).

EU students would also require a minimum overall IELTS 6.5 score of which no element of less than 6.0 (or equivalent).

Further information can be found at https://www.dur.ac.uk/computer.science/postgraduate/research/

How to apply:

For informal enquiries please contact Dr Tobias Weinzierl or Dr Ioannis Ivrissimitzis (tobias.weinzierl@durham.ac.uk, ioannis.ivrissimitzis@durham.ac.uk).
Please apply before the **15 July 2018** deadline by submitting the following to ioannis.ivrisimtzis@durham.ac.uk:

- Your CV.
- Transcript for your most recent qualification.
- Copy of the certificate of the most recent qualification (if available).
- Two reference letters (if available).