

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.
- A stipend equivalent to the Research Councils UK National Minimum Doctoral Stipend (£14,777 as of 2018).

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 Ivrisimtzis (tobias.weinzierl@durham.ac.uk, ioannis.ivrisimtzis@durham.ac.uk).

Please apply before the **15 July 2018** deadline by submitting the following to ioannis.ivrissimtzis@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).