Applications are invited for a research studentship in the field development of advanced non-destructive evaluation (NDE) techniques leading to the award of an Engineering Doctorate (EngD) degree. The post is supported by a bursary and fees (at the UK/EU student rate) provided by EPSRC, together with a generous top up by the sponsor company, Rolls-Royce. The total tax free bursary will be in excess of £18,000pa. EPSRC candidates should fulfil the eligibility criteria for the award.

The aim of this doctoral research is to develop new simulation tools for NDE techniques used for the inspection of safety critical components. It is expected that the research will primarily involve the use of hybrid finite element techniques for the simulation of ultrasonic wave scattering; however, the development of other techniques may also be appropriate.

The project is sponsored by Rolls-Royce Submarines, involving the design, manufacture and maintenance of the nuclear power plants at the heart of these submarines. Safety critical reactor components are inspected both during manufacture and periodically in-service, using a range of non-destructive evaluation (NDE) techniques. This project will deliver simulation tools and results which will be directly used to aid in the verification and validation of these techniques.

The student will work at Imperial College London before relocating to Rolls-Royce Submarines in Derby for a significant portion of their studies, where they will work within the NDE Research team, with frequent trips to Imperial College. The student will work alongside engineers developing inspections and will have the opportunity to influence how inspections are justified.

The studentship is offered through the EPSRC Doctoral Training in Quantitative NDE; a partnership between a select group of universities and companies offering a 4-year industrial doctorate designed to launch outstanding graduates into an engineering career. With close links to the related UK Research Centre in NDE, students are part of a vibrant community of more than 200 researchers and have access to a range of technical training courses delivered by world leading experts.

You will be an enthusiastic and self-motivated person who meets the academic requirements for enrolment for a doctorate at Imperial College London. You will have at least an upper 2nd class honours degree in mechanical engineering, physics or a related subject, and an enquiring and rigorous approach to research together with a strong intellect and disciplined work habits. Good team-working, observational and communication skills are essential.

To find out more about research at Imperial College London in this area, go to: [http://www.imperial.ac.uk/nde/](http://www.imperial.ac.uk/nde/) and for information about other projects available through the Doctoral Training centre go to: [https://www.rcnde.ac.uk/how-to-apply/](https://www.rcnde.ac.uk/how-to-apply/)
Interested applicants should send an up-to-date curriculum vitae to Nina Hancock
n.hancock@imperial.ac.uk +44 (0)20 7594 7068. Suitable candidates will be required to complete
an electronic application form at Imperial College London in order for their qualifications to be
addressed by College Registry. The student will also be required to obtain UK security clearance.

Closing date: until post filled

*Imperial Managers lead by example.*

Committed to equality and valuing diversity. We are also an Athena SWAN Silver Award winner,
a Stonewall Diversity Champion, a Two Ticks Employer, and are working in partnership with
GIRES to promote respect for trans people