Applications are invited for a research studentship in the field of advanced non-destructive evaluation (NDE) techniques leading to the award of a PhD degree.

The aim of this doctoral research is to exploit the significant recent modelling and simulation advances made at Imperial College, to build tools to enable the reliability of ultrasonic NDE techniques to be assessed. This will involve the use of the finite element method, running on a set of high performance graphics cards, to develop models capturing the full physics of wave interaction with defects; this marks an exciting move beyond the reliance on highly simplified models or the need to make many test pieces.

The project is sponsored by Rolls-Royce Submarines and Wood Plc. Rolls-Royce is responsible for the design, manufacture and maintenance of the nuclear power plants at the heart of these submarines, and Wood provides consultancy support to the nuclear industry. Understanding how likely the various inspection techniques are to detect particular defects is an important task and will directly benefit the industry.

The work will primarily be carried out in the Imperial College NDE group in the Department of Mechanical Engineering, with opportunities for placements at both companies. The NDE group has an excellent record in fundamental and applied research, from the theoretical foundations through to technology transfer to industry. It is well funded by many industrial partners and public grant bodies and has a world-renowned reputation. 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/

This is a 4-year iCASE PhD studentship; you will study primarily at the university but spend some time with Wood plc (whose relevant office is located in Warrington, and / or Rolls-Royce Submarines, who are located in Derby. For further details of the post contact Dr Peter Huthwaite (p.huthwaite@imperial.ac.uk). Interested applicants should send up-to-date curriculum vitae to (Ms. Nina Hancock at n.hancock@imperial.ac.uk). 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.

Closing date: 10 June 2018

_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.