Applications are invited for a research studentship in the field of computational modelling in tribology, leading to the award of a PhD degree. The post is supported by a full bursary and fees (at the UK/EU student rate) provided by the Baker Hughes GE linked to the Theory and Simulation of Materials (TSM) EPSRC CDT. The position is open to UK and EU students.

The project’s aim is to conduct molecular simulations to investigate the interactions between lubricants and the surfaces in shear with relevant surfaces and systems of interest for advanced industrial applications. Computer simulations would be first conducted on existing systems with known representation of the lubricants and the surfaces under thermomechanical loading in rock drill systems to study their effectiveness and breakdown. Understanding the interaction mechanisms and breakdown is essential to develop new and effective formulations and surfaces. Once the modelling frameworks are developed, it could be used to accelerate future development and yield effective formulation and engineered surfaces. More on the project is available at the following link: [http://www.imperial.ac.uk/theory-and-simulation-of-materials/programmes/phd-studentships-for-ukeu-students/](http://www.imperial.ac.uk/theory-and-simulation-of-materials/programmes/phd-studentships-for-ukeu-students/)

You will be an enthusiastic and self-motivated person who meets the academic requirements for enrolment for the PhD degree at Imperial College London. You will have a 1st class honours degree in Mechanical/Chemical Engineering, Physics, Material Science, Chemistry, Computing or related subjects, and an enquiring and rigorous approach to research together with a strong intellect and disciplined work habits. An interest in theory and simulation of materials and application of computational methods to engineering problems is essential. Good team-working, observational and communication skills are also essential.

To find out more about research at Imperial College London in this area, go to:
http://www3.imperial.ac.uk/mechanicalengineering
http://www.imperial.ac.uk/tribology
http://www.imperial.ac.uk/theory-and-simulation-of-materials

For information on how to apply, go to:
http://www.imperial.ac.uk/mechanical-engineering/study/phd/how-to-apply/

For further details of the post contact Prof. Daniele Dini d.dini@imperial.ac.uk +44 (0)20 7594 7242. Interested applicants should send an up-to-date curriculum vitae to Prof. Dini. 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: 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.