

Imperial College London

Department of Mechanical Engineering

PhD Studentship in Computational Heat Transfer

Applications are invited for a research studentship in the field of heat transfer and artificial intelligence leading to the award of a PhD degree. The post is supported by a bursary and fees (at the UK/EU student rate) provided by EPSRC and Arup. Candidates should fulfil the eligibility EPSRC criteria for the award. Please check your suitability at the following web site:

<http://www.epsrc.ac.uk/skills/students/help/Pages/eligibility.aspx>

The research, named INERSKIN, will develop a toolkit for fire safety optimisation of building façades. With a drive for thermally efficient buildings and sustainability, flammable insulation materials like polymers are more frequently introduced in the design of façades system. Because of the importance of façades and the increased number of high rise buildings worldwide, it is critical that the interaction of materials and their performance in the event of a fire is understood, modelled and improved. INERSKIN will use artificial intelligence techniques and the state of the art of computational heat transfer to optimize the fire safety. It will explore new designs autonomously, assisting the engineers and also offering possible design improvements. Furthermore it will be able to give answers within a short time to the effects of changes in the system or fire scenario, such as the response to a new material or a thicker section within the façade system. The toolkit will optimize known façade systems to produce superior design solutions.

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 engineering or physics, and an enquiring and rigorous approach to research together with disciplined work habits. Interest in heat transfer and artificial intelligence are essential. Good team-working and communication skills are essential. Interest in fire science and building design are encouraged but not essential.

To find out more about research at Imperial College London in this area, go to:

<http://www3.imperial.ac.uk/mechanicalengineering>

For information on how to apply, go to:

<http://www3.imperial.ac.uk/mechanicalengineering/research/phdopportunities/>.

For further details of the post contact Dr Guillermo Rein g.rein@imperial.ac.uk +44 (0)20 7594 7036. Interested applicants should send an up-to-date curriculum vitae to Dr Rein. 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: 31st December 2015

[*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