Applications are invited for a research studentship in the field of temperature and strain rate effect on mechanical properties of chocolate, 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 the EPSRC CASE award, sponsored by Mondelez. EPSRC candidates should fulfil the eligibility criteria for the award. Please check your suitability at the following web site:

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

Chocolate is a highly complex, multi-phase composite biopolymer. Its mechanical properties have a strong temperature dependence, which transition from brittle to malleable within a short temperature range. Strain-rate dependence – which becomes increasingly relevant while analysing breakage in products during transportation and handling – adds another layer of complexity. As a result, the mechanical behaviour of chocolate at meso and macro-scale is poorly understood. As part of this research you will characterise and model the temperature dependent deformation and fracture behaviour of chocolate at varying strain rates. The study will combine state-of-the-art material characterisation techniques with advanced analytical/numerical simulation methods.

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 minimum 2:1 or preferably a 1st class honours degree in mechanical engineering or a related subject, and an enquiring and rigorous approach to research together with a strong intellect and disciplined work habits. An interest in mechanics of materials is essential, as is the ability to write excellent technical reports leading to journal publications. 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://www3.imperial.ac.uk/mechanicalengineering

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 Maria Charalambides, m.charalambides@imperial.ac.uk, +44 (0)20 75947246. Interested applicants should send an up-to-date curriculum vitae to Prof Charalambides. Suitable candidates will be required to complete an electronic application form at Imperial College London 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