



## Marie Curie Research Position on Thermoacoustic Instabilities



A post-doctoral position is available for candidates interested in the area of thermoacoustic instabilities, starting on or after 1 December 2006. The position will be part of AETHER (AEro-acoustical and THERmo-acoustical Coupling in EneRgy Processes), a Marie Curie Early Stage Research Training Network (RTN) focused on thermoacoustic instabilities in gas turbines, industrial and domestic combustion heating installations. Combustion instabilities are not only detrimental to the performance and lifetime of the equipment, but also lead to increased emissions of pollutants species, some of which are strong contributors to the greenhouse effect.

Acoustically-coupled combustion oscillations are a concern in industrial gas turbines, where they have led to long commissioning times, unplanned maintenance and gaps in operation. Such oscillations are also expected in current and next generation fuel-lean aeroengine combustors. Control strategies are needed to minimize the amplitude of the pulsations in order to achieve cleaner power production.

The candidate will perform most of her/his research activities in the Cambridge Centre for Combustion Research<sup>1</sup>. Cambridge has a long tradition of work in the area of combustion instabilities, a large (25 PhDs, 9 Post-docs) group in the overall area of combustion, and state of the art experimental facilities. The group is sponsored by various industrial and governmental partners, including Rolls-Royce, MHI and Ford. The candidate will also benefit in his/her research activities from the network organised by AETHER, gathering prestigious universities across Europe.

The proposed research activities will focus on experimental measurements on the effect of cooling and effusion heat transfer on the thermoacoustic response of flames. The ideal candidate should hold a PhD in mechanical, chemical, aerospace or related discipline, with experience in laser imaging diagnostics (PLIF, PIV). Please note that this post is available primarily to European nationals subject to the criteria laid out in Section 5 of the Marie Curie Research Training Networks Handbook<sup>2</sup>. This means that in general candidates who have recently obtained their PhDs in the UK, or that are not EU permanent residents would not generally be considered. Within these constraints, the position is open to all candidates, and women are especially encouraged to apply.

The appointment will be for 3 years, starting on 1 December 2006 or as soon as possible thereafter. Basic salary is determined by the RTN at £23,457 p.a. net. Additional monthly contributions towards cost of living and travel within the EU, as well as a one time moving allowance are available. Further details may be obtained from Prof. Simone Hochgreb, Department of Engineering, Trumpington Street, Cambridge, CB2 1PZ, (Tel +44 1223 764098, email: [sh372@cam.ac.uk](mailto:sh372@cam.ac.uk)), to whom a letter of application and CV should be sent as soon as possible.

---

<sup>1</sup> [http://www-g.eng.cam.ac.uk/energy/energy/CCRC\\_about.html](http://www-g.eng.cam.ac.uk/energy/energy/CCRC_about.html)

<sup>2</sup> [ftp://ftp.cordis.europa.eu/pub/fp6/docs/calls/mariecurie-action/r\\_rtn\\_200501\\_en\\_pdf.zip](ftp://ftp.cordis.europa.eu/pub/fp6/docs/calls/mariecurie-action/r_rtn_200501_en_pdf.zip)