

EPSRC Industrial Case Award 'Terminal Region operation of Unmanned Air Systems'

Loughborough University – Department of Aeronautical and Automotive Engineering

The Department of Aeronautical and Automotive Engineering of Loughborough University is offering a fully funded EPSRC Industrial CASE studentship for a suitably qualified individual to undertake a PhD research project in collaboration with BAE Systems. The project will investigate autonomous control algorithms to enable unmanned aircrafts operating in a terminal region. Due to Research Council funding restrictions, only UK residents will be considered for this position. The award will pay UK student fees plus a stipend of £15,990 per annum for a total of 42 months (subject to satisfactory progress) and has an anticipated start date of: **01 December** 2011 or soon after. The successful candidate will have an opportunity in working in BAE Systems for a few months during the PhD study period.

The successful candidate will investigate the operation requirements and specifications for unmanned aircraft operating in a terminal region (incorporating with other manned and unmanned aircraft), and develop and validate new autonomous control methods/techniques to reduce the risk and improve the safety of the unmanned aircraft operation in particular in a terminal region. The development of situational awareness and decision making tools under uncertainty (i.e. probability) is particularly relevant. The developed techniques will be assessed in a synthetic air traffic management environment with a possible support of experimental tests.

The successful candidate will have completed a degree in a relevant subject (e.g. electrical engineering). Applicants with a background in applied mathematics or computer science are particularly welcome. There is no requirement in aeronautical engineering, although a reasonable understanding in aviation would be looked upon favourably as would the appreciation of safety and risk. The ideal candidate will be a driven, hard worker with a proven ability to self-motivate and to come up with new ideas to solve problems.

Please make enquiries to Dr Wen-Hua Chen at w.chen@lboro.ac.uk.

Applications should be made through Loughborough University's online application system: <http://www.lboro.ac.uk/study/postgraduate/essentialinformation/howtoapply/>. Please specify "Dr Wen-Hua Chen, Department of Aeronautical and Automotive Engineering" and clearly state the research project topic on the form. Use the space provided for project description to explain your motivation as to why you want to undertake this project.

The closing date for applications is: **1st October, 2012**