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## MSc Research Studentship on Fatigue Performance of Laser Peened Aluminium Alloys, Cranfield University, UK

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Supported by Airbus, a studentship up to £14,000 p.a. for 1 year plus fees is available. [Cranfield University](#), in collaboration with Airbus and [the Open University](#), has an exciting research opportunity for a motivated [graduate](#). This research aims to understand and model the role of residual stresses produced by the laser peening process in determining the fatigue performance obtained in [aerospace](#) structures.

Laser peening is a new generation process for treating the surface of metallic [engineering](#) components to produce exceptional improvements in fatigue properties. So far the process has been applied to a limited number of aerospace components as a process of last resort. In this research the possibility of treating the relatively thin aluminium structures used in aircraft fuselages will be explored. The work will explore the improvements fatigue performance laser peening can produce in aluminium alloys, looking in particular at the benefits to structures which have been damaged in various ways during service use and maintenance operations.

If this project is successful it is possible that additional funding for more extensive research towards a PhD could be made available.

### **Technical Schools Research Students Training Programme**

The successful candidate will attend Cranfield University's Technical Schools Research Students Training Programme which is designed to equip students with research skills required during their research studies and in their future careers. This programme consists of a series of one-day events, coupled with smaller interactive group sessions.

### **For further details please contact**

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### **Entry Requirements**

Applicants should have a first or upper second class UK honours degree, or equivalent, in a relevant discipline such as [mechanical](#) or [materials](#) engineering. A background in fatigue and [mechanics](#) of materials is also desirable.

### **Funding**

Supported by Airbus, this studentship will cover tuition fees at the UK/EU rate only and provide a bursary of up to £14,000p.a. for one year dependent upon qualifications and experience.

### **How to apply**

If you are eligible to apply for this research studentship, please complete the Application Form or you can request that we post one to you. Alternatively you may wish to apply online. For further information contact us today:

School of Applied Sciences  
T: +44 (0)1234 754086  
E: [appliedsciences@cranfield.ac.uk](mailto:appliedsciences@cranfield.ac.uk)

Please note that we are unable to consider submissions for specific research [studentships](#) that fall outside of the stated eligibility criteria.

Application deadline: 30 September 2009

Supervisor: [Professor](#) Phil Irving

Useful links:

Technical Schools Research Students Training Programme:

<http://www.cranfield.ac.uk/soe/esrstp/>

Application form:

[http://www.cranfield.ac.uk/students/Applications/apply\\_pgresearch.pdf](http://www.cranfield.ac.uk/students/Applications/apply_pgresearch.pdf)

Apply online:

<http://www.cranfield.ac.uk/prospectuslinks/course.jsp?course=MSc by Research School of Applied Sciences>

For further details please go to webpage below:

<http://www.cranfield.ac.uk/sas/postgraduatestudy/researchopportunities/page43693.jsp>

For more information please visit our website: <http://scholarshipsbank.com/msc-research-studentship-on-fatigue-performance-of-laser-peened-aluminium-alloys-cranfield-university-uk/>

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