UNIVERSITY OF BIRMINGHAM

UNIVERSITY OF BIRMINGHAM
School of Mechanical Engineering

Research Associate/Research Fellow in Laser Processing/Machining (Depending on qualifications and experience)

Salary for a Research Associate from £24,520 to £30,122 a year. Salary for a Research Fellow from £27,578 to £38,140 a year.

Post is available immediately for a period of up to 30 months.

The post holder will work on tasks associated with two projects funded by the EC, in particular the FP7 project "High performance Production Line for Small Series Metal Parts" (Hyproline) and the INTERREG NEW project "Eco-efficient Laser Technology for Factories of the future" (ECO-LASERFACT). The work will be focused on:

- designing, implementing and validating hybrid process chains that integrate laser processing and other complementary technologies;
- conducting research on characterisation and development of laser ablation technology and its interfaces with complementary micro machining technologies;
- studying and validating CAD/CAM solutions for "adaptive" laser machining of large 3D surfaces and automate datum set-up operations;
- carrying out a quantitative analysis of parameters affecting process-material interactions, e.g. materials' microstructure, removal rates, etc., in laser machining.

The successful applicant should have a good first degree in Mechanical, Materials or Electrical Engineering, and for the Research Fellow a higher degree in Mechanical, Materials or Electrical Engineering or equivalent qualifications. This post will require a high level of competence and experience in:

- laser processing, e.g. laser ablation technology, modeling of laser-material interactions, designing laser-based manufacturing solutions, the use of different surface characterization/measurement technologies for process optimization
- planning and conducting complex empirical studies.

The postholder should have a high level of analytical capability, knowledge of industrial manufacturing practices and processes and also experience in collaborating with national and, international industrial and academic partners. In addition, it is desirable for the candidate to have familiarity with some complementary micro machining technologies, experiance in the use of CAD/CAM systems, especially in the context of laser machining and other machining technologies and, experience in designing and implementing complex process chains that employ laser processing as a component technology.

The successful candidate will join the Advanced Manufacturing Centre in the School of Mechanical Engineering at the University of Birmingham. Informal enquiries about this position should be directed to Prof. Stefan Dimov (s.s.dimov@bham.ac.uk, +44 (0)121 414 7224).

Further information about the School of Mechanical Engineering is available at http://www.birmingham.ac.uk/schools/mechanical-engineering/index.aspx