

FULLY-FUNDED 4-YEAR-LONG PHD STUDENTSHIP - FLUID DYNAMICS/LUBRICATION

Department of Mechanical Engineering

The University of Sheffield, United Kingdom



The student will join a team of other researchers working on lubrication and wall-bounded flow problems within the Department of Mechanical Engineering and the Leonardo Tribology Centre. More information about our research work can be found here:

Dr Pierre Ricco's website: <http://www.pierre-ricco.co.uk>

and here Prof. R. Dwyer-Joyce's website.

Topic of research: Theoretical and numerical research on computation and measurement of oil viscosity in journal bearing. The objective is to develop the theory and to write a numerical code to compute the viscosity of the oil in *in-situ* conditions, for which classical measuring techniques cannot be used. The computations will be validated by laboratory experiments. The research project will be supervised by Dr Pierre Ricco and Professor Rob Dwyer-Joyce FREng.

More information on the project can be found here:

<https://www.sheffield.ac.uk/mecheng/phd/phd-studentships/in-situ-measurement-oil-viscosity>

Duration: 4 years.

Nationality The studentship is available for a student from the United Kingdom or from the European Union with 3 years residency in the UK.

Education A good 4-year degree or Master degree in Mechanical, Aeronautical, Civil, Chemical Engineering, Applied Mathematics or Physics.

Knowledge, skills

Fluid mechanics; desirable: wall-bounded shear flows.

Numerical analysis, in particular Computational Fluid Dynamics.

Excellent programming skills in C, Fortran, or any other high level language.

Desirable: final-year project on a fluid mechanics problem.

Other requirements

Unique self-motivation and passion for fluid mechanics and, desirably, in thin shear layer dynamics and lubrication.

Excellent communication of research results and writing skills.

Deadline: as soon as and until position is filled.

Apply: please send a letter expressing your interest and a copy of your CV with the contacts of three academic referees as a single pdf file to

Pierre Ricco

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Email: p.ricco@sheffield.ac.uk

or through this website:

<https://www.sheffield.ac.uk/mecheng/phd/phd-studentships/in-situ-measurement-oil-viscosity>