

**Two years Post-Doc position**  
in the  
I-SITE / Région Haut de France / Métropole de Lille  
« **Computational Prediction of Turbulent Flows** » (CoPreFlo)  
project of  
Professor J.C. Vassilicos

**Subject:**

The Post Doctoral Fellow will have expertise in experimental measurements of turbulent flows and/or advanced analysis of turbulent flow data. There are a number of candidate flows to study and a number of problems to concentrate on so that the Post Doctoral Fellow will be able to choose. Flows of interest include stirred tanks, zero-pressure gradient and adverse pressure gradient turbulent boundary layers, turbulent wakes and jets and grid-generated turbulence. Non-equilibrium and non-homogeneity are central issues so that unsteady interscale energy transfer rates and turbulent transport rates in space will both be important elements of the research project. Questions will also revolve around the roles and effects of large-scale coherent structures and turbulent/non-turbulent but also turbulent/turbulent interfaces. The overall project aims at a fundamental understanding of non-stationary non-homogeneous turbulence and at using this understanding to develop new reduced order model approaches. The Post Doctoral Fellow will therefore be part of a team covering simulations, experiments and theory and carrying out concurrent studies of, comparisons between and modeling of various turbulent flows. Research directed towards industrial applications is also possible as the project is also concerned with new turbulent flow technology in various industrial sectors.

**Laboratory:** (<http://lmfl.cnrs.fr/>)

Laboratoire de Mécanique des Fluides de Lille – Kampé de Fériet (LMFL) is a joint laboratory between: ONERA, CNRS, Centrale Lille, University of Lille, Ecole Nationale Supérieure d'Arts et Métiers (ENSAM), where 35 faculties and engineers work in the fields of turbulence, aerodynamics and flight physics. The team hosting the Post-Doc is involved in fundamental study of turbulence, and optical measurement techniques.

**Fellowship:**

The gross salary is approximately 2900 € per month (depending of experiences) and the employer is CNRS. The 24 months fellowship will ideally start before June 2020.

**Candidate:**

The Post Doctoral Fellow will have expertise in experimental measurements of turbulent flows and/or advanced analysis of turbulent flow data. The candidate must have between 18 months and 6 years of experience after the PhD. Applications should be emailed to [john-christos.vassilicos@centralelille.fr](mailto:john-christos.vassilicos@centralelille.fr) and include a CV and publication list, names of at least two referees and a motivation letter.

**Contacts:**

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