

Workshop LESTAC
LES of Turbulence, Acoustics and Combustion
August 24-28, 2009, Marseilles, FRANCE

Large eddy simulation (LES) has evolved into a powerful tool of central importance in the study of turbulence not only because of its capabilities of predicting fluctuating quantities like the source term for aero-acoustic simulations, but also because of its improved accuracy compared to the numerically less expensive Reynolds Averaged Navier-Stokes Simulations (RANS). In this sense, LES can be regarded as key-technology for new developments in computational aero-acoustics (CAA), in fluid-structure interactions, fatigue analysis, aerodynamics, process technology etc.

The scope of the colloquium will cover recent developments in the field of LES of complex flows including: modelling and analysis of subgrid scales, numerical issues in particular for complex geometries, detached-eddy simulation technique DES and RANS-LES coupling, flows simulations in the fields of acoustics, aero-and hydro-dynamics, combustion and magnetohydrodynamics.

Moreover, discussions and cross-over comparisons will be performed around several generic configurations and practically relevant problems provided by the European French German research group CNRS/DFG GDRE benchmarks. The potential of approximate boundary conditions, LES/RANS coupling, newly developed SGS models and discretization schemes for useful predictions of complex flows will be compared with reference data from carefully designed experimental studies as well as databases from high-resolution numerical simulations provided by these test cases.

The Workshop LESTAC will deliver an up-to-date vision of the state of the art of LES in a broad range of applications. The Workshop will be co- held under the auspices of the ERCOFTAC, the European CNRS/DFG Network, and the AFM (Association Française de Mécanique), which has strong institutional links with Euromech, both on the Fluid Mechanics and Solid Mechanics sides. Thus, LESTAC will invite strong cross over discussions with the audience, hence a workshop-type event, not likely to compete with conferences and/or summerschools.

Authors wishing to contribute to the conference are invited to submit a short abstract of 500 characters directly on the web page of the CFM09 (<http://www.cfm2009.cnrs-mrs.fr>). The organizers will invite contributors to submit full length papers to an ERCOFTAC publication.

Co-organizers: Eric SERRE and Pierre COMTE

Registration cost: Reduced fee in the order of 10% will be charged to participants who are members of ERCOFTAC.

Co-organizing associations: GDRE, AFM, GST13 Turbulence and Fluid Mechanics

Scientific committee

Prof. N. Adams, Germany
Prof. C. Bailly, France
Prof. P. Comte, France
Prof. J. Froehlich, Germany
Prof. B. Geurts, Netherlands
Prof. D. Laurence, UK
Prof. O. Métais, France
Prof. P. Sagaut, France
Prof. R. Schiestel, France
Dr. E. Serre, France
Prof. J. Sesterhenn, Germany
Prof. L. Vervisch, France

Local organizing committee

Prof. P. Comte (ENSMA, Poitiers, France)
Dr. E. Serre (CNRS, Marseilles, France)