



4th Announcement



21-23 November 2016 at CERFACS, Toulouse



TILDA is an EU H2020 project coordinated by NUMECA Int. sa

Symposium Objectives

The ability to simulate aerodynamic flows using CFD methods has progressed rapidly over the last decades and has given rise to a change in design processes in aeronautics already. But more improvement is necessary to overcome the (still) existing lack in confidence in CFD usage, based on turbulence modelling.

The first "TILDA" symposium will offer a platform for presenting innovative methods and approaches combining advanced and efficient high-order numerical schemes (HOMs) with innovative approaches for LES and DNS in order to resolve all relevant flow features on several tens of thousands of processors. This will pave the way to get close to a full LES/DNS solution for levels of 1 to 10 billion degrees-of-freedom (DOF) not exceeding turn-around times of one to two day.

By this, an improved physical knowledge together with more accurate predictions of non-linear, unsteady flows will directly contribute to enhanced reliability of industrial CFD approaches in general.

The main highly innovative objectives, targeting at industrial needs read:

- Advances in high fidelity LES/DNS methodologies
- Advances on high order grid generation
- HPC issues on multiple platforms (CPU/GPU) for high fidelity LES/DNS simulations
- Test cases for industrial relevant applications – the TILDA partners will present results for a set of selected test cases treated as part of the project.

Moreover, the 1st TILDA Symposium offers the opportunity to communicate and exchange knowledge for academic researchers, graduate students, industrial engineers, as well as industrial R&D managers and consultants working in the fields of turbulent-flow modelling, simulations and measurements as well as multidisciplinary CFD applications.

Call for Contributions

Contributions by participants are expected according to the listed topics:

- Advances in high fidelity LES/DNS methodologies
- Advances on high order grid generation
- HPC issues on multiple platforms (CPU/GPU) at the range of 100k cores
- LES/DNS based on High Order Methods (HOM)
- TILDA test cases for industrially relevant applications

Invited Speakers

N. Sandham (SOTON, UK):

“High order simulations of shock-wave/boundary-layer interactions”

K. Fujii (Tokyo University of Science and Japan Aerospace Exploration Agency, Japan):

“Large-scale LES Simulations Analysis Required in Real Industrial Applications - Aero-acoustics and Flow Separation Control as two representative examples”

List of test cases available for participants

The following test cases are available to participants on request:

- T106C high-lift Cascade
- Dual nozzle (Noise suppressing, aeroacoustics case)
- Boeing Rudimentary landing gear
- NASA Rotor 37

Please note that **running a test case is not mandatory** neither for a suggested presentation nor for only participating to the symposium.

Location

The workshop will be hosted by CERFACS, Avenue Gaspard Coriolis 42, 31057 Toulouse, France. Hotel and travel information can be taken from the workshop web site (see below “Please visit”).

Date

21st to 23rd November 2016

Deadline for registration

15 November 2016

Please note that when considering a presentation at the symposium an **abstract** (1 page max.) is requested by **15 November 2016 at the latest**.

Workshop Fee

The **workshop fee is 350€** - and will contain a booklet-of-abstracts, coffee breaks, lunches and a workshop dinner. Moreover, we will try to make all presentations available to the participants - as PDF files - via the TILDA web site.

Please visit

<http://tilda-workshop-industrial-les-dns.eventbrite.de>

or use the QR-Code directly →



For further information,

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You may also have a look at the EU TILDA project web site: www.dlr.de/as/tilda.

