



CFD and Experiment – Integration of Simulation

Workshop des DGLR-Fachbereichs *Thermo- und Fluiddynamik*

05. - 06. April 2011
DLR Göttingen,
Institut für Aerodynamik und Strömungstechnik
Raum tba
Bunsenstr. 10, 37073 Göttingen

Bei Interesse - in Form eines Vortrags oder als Zuhörer - melden Sie sich bitte bis zum 31. Januar 2011 unter folgendem Link an: <http://events.dlr.de/index.php?cid=a4a7964x63>

Dienstag, 5. April 2011

- 13:00 Welcome & Introduction
K. Becker, Airbus, Bremen
- 13:15 Modelling of aircraft flow – experimental vs. numerical principles and links
Title
NN, Org, Ort
- 13:45 Modelling of aircraft flow – experimental vs. numerical principles and links
Title
NN, Org, Ort
- 14:15 CFD support to experiment – preparation of tests
Title
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- 14:45 CFD support to experiment – preparation of tests
Title
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- 15:15 Coffee
- 15:45 CFD support to experiment – preparation of tests
Title
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- 16:15 CFD support to experiment – preparation of tests
Title
NN, Org, Ort

16:45 Experiment to help CFD – validation of numerical simulation

Title

NN, Org, Ort

17:15 Experiment to help CFD – validation of numerical simulation

Title

NN, Org, Ort

17:45 Specific project presentation

Title

NN, Org, Ort

18:00 End of Day 1

19:00 Dinner

Ort

Mittwoch, 6. April 2010

09:00 CFD to fill some gaps – limitations to experiments

Title,

NN, Org, Ort

09:30 CFD&experiment - merged results

Title

NN, Org, Ort

10:00 CFD&experiment - merged results

Title

NN, Org, Ort

10:30 Coffee

11:00 Extrapolation to free flight – the common task

Title

NN, Org, Ort

11:30 Improved physical understanding and modelling – DES/LES & PIV

Title

NN, Org, Ort

12:00 Lunch

13:00 Presentation of specific projects (15 mins each)

Title

NN, Org, Ort

14:00 Wrap-up discussion – round table – next actions - statements
K. Becker, Airbus, Bremen

15:00 End of the Workshop

Explanation of 8 headlines:

- 1) *Modelling of aircraft flow – experimental vs. numerical principles and links*
Sb who can explain the principles of simulation – experimental and numerical side – and give a light on good areas of linkage/complementarity.
- 2) *CFD support to experiment – preparation of tests*
Here we need sb who is firm with the preparation of tests – showing how CFD can be used to prepare an experiment
- 3) *Experiment to help CFD – validation of numerical simulation*
This is a talk on validation principles and the key elements which have to be accounted for
- 4) *CFD to fill some gaps – limitations to experiments*
Here we can see how CFD may extrapolate experimental results – e.g. ground effect down to ground, or small scale CFD to resolve local phenomena
- 5) *CFD&experiment - merged results*
This is on POD/VFM methods to merge CFD and experimental results, e.g. surface pressure
- 6) *Extrapolation to free flight – the common task*
This could be about tunnel corrections, difficulties to extrapolate, and how CFD could help
- 7) *Improved physical understanding and modelling – DES/LES & PIV*
This is on investigations to gain deep physical understanding.
- 8) *Presentation of specific projects*
This could be a presentation on a running project – where we can see some of the principles being applied. (e.g. Large scale project HINVA)