

ERCOFTAC The Knowledge Network



Programme of Events, 2011 February 2011



Course: Uncertainty Management and Quantification in Industrial Analysis and Design Course Co-ordinator: Prof. C Hirsch Scope:

- Industry requirements and objectives for uncertainty quantification (UQ) and risk reduction with robust design
- Methodologies for UQ and for robust design under uncertainties
- Examples of applications and test cases with prescribed uncertainties
- Introduction to robust design methodologies
- Presents the state of the art and outlook for next Technology Readiness Level (TRL), including an introduction to a best practice guide for UQ

Date: A) 3- 4 March 2011 , B) Nov 2011

Location: A) GE Global Research Centre, Garching, Munich, Germany B) NASA, Langley, Virginia, USA



Course: Transition Modelling

Course Co-ordinator: Prof. E. Dick

Scope:

- An overview of transition modelling approaches
- A discussion of transition mechanisms
- Detailed discussion of approaches, dependent on the application area
- Recommendation for appropriate and effective application of transition models

Date: 25-26 May 2011 Location: GE Global Research Centre, Munich, Germany

Course: CFD for Dispersed Multi-Phase Flow In association with SIAMUF

Course Co-ordinator: Prof. M. Sommerfeld

Scope:

- Provide fundamental background knowledge on fluid mechanics of dispersed multi-phase flows
- Discuss engineering models for dispersed multi-phase flow problems and their translation into CFD problems for Euler-Euler and Euler-Lagrange formulations
- Provide guidance on best practices

Date: 7-8 June 2010 Venue: Innventia, Stockholm, Sweden



Course: Flame Stabilization for Industrial Burners Course Co-ordinator: Prof. D. Roekarts

Scope:

- General principles of burner design
- Scaling rules for different burner designs
- Relation between flow-chemistry interaction and extinction and ignition
- Modeling methods
- Experimental techniques
- Modern developments

Date: 26-27 September 2011 Location: GE Global Research Centre, Munich, Germany



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Programme of Events, 2011 February 2011



Course Co-ordinator: Prof. K Giannkoglu/ Dr. Werner Haase

Scope:

- An overview of modern design optimisation methods
- Comprehensive discussions on the presented methods including their pros and cons, assisting industrial engineers to select the best-suited approach for solving their particular problems.
- Based on the latter topic, successfully treated examples in the areas of aeronautics, the automotive, and the turbo-machinery industry will be presented and thoroughly discussed.

Date: 15-16Nov 2011 Venue: Cassidian Air Systems, Manching, Germany



Course: RANS and Hybrid RANS-LES Methods in Industrial CFD Overview, Guidance and Examples

Course Co-ordinator: Prof. Anthony Hutton, and Dr. Charles Mockett

Scope:

- An overview of turbulence modelling
- A firm foundation in the theory and ideas underlying RANS, LES and Hybrid RANS-LES techniques
- Recommendations and guidance for the appropriate and effective application of RANS and Hybrid RANS-LES
- Examples from real-world engineering simulations

Date: October/November 2011 Venue: NASA, Langley, Virginia, USA (A 4 day event)

Event Fee Structure

Course: ERCOFTAC Members: 640 Euros, Non-Members: 995 Euros. Seminar : ERCOFTAC Members: 470 Euros, Non-Members: 590 Euros ERCOFTAC-SIAMUF: Members: 550 Euros, Non-Members: 995 Euros ERCOFTAC USA – TBD

For registration of interest please contact: Dr Richard E Seoud, Ind. Eng. Officer T: 0044(0)208 543 9343, E: <u>richard.seoud-ieo@ercoftac.org</u>



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