Registration

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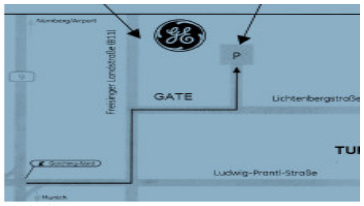
Location



GE Global Research Centre
Freisinger Landstrasse 50
D-85748 Garching b. Munich
Germany

The GE Global Research centre is located on the outskirts of Munich with excellent access to the centre and Munich Airport by the autobahn, ring road and train networks.

Seminar fees

€640 ERCOFTAC members
€995 Non-ERCOFTAC members

This fee includes: seminar registration, seminar material, lunch, refreshments and seminar dinner. Please note that accommodation is not included in this fee.

Registration

Please contact CADO-ERCOFTAC at the earliest opportunity to reserve a place:

Dr. Richard E. SEOUD
CADO - ERCOFTAC
Tel: +44 (0)207 559 1430
Email: richard.seoud-ieo@ercoftac.org

For further information : www.ercoftac.org

EUROTURBO european turbomachinery society

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Transition Modelling II

SIG 10

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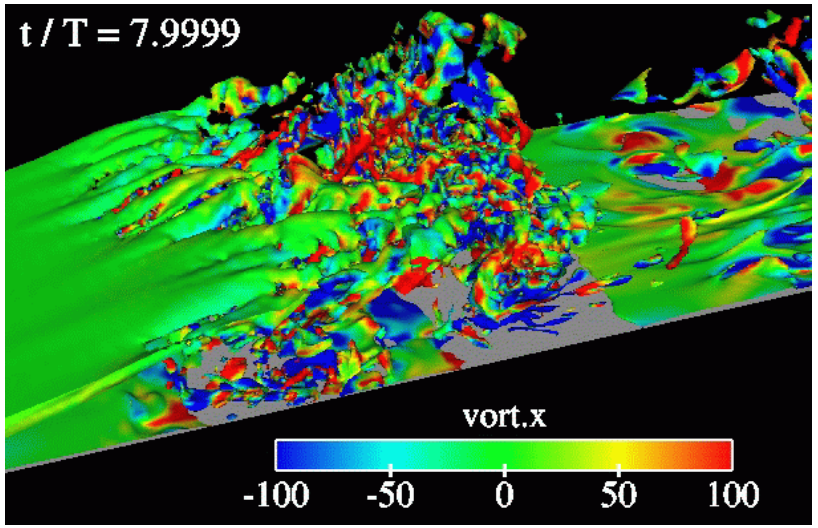

Course Coordinator: Prof. Erik Dick

22-23 May 2013

GE Global Research Centre, Munich, Germany

Information

ERCOFTAC, a leader in applied fluid mechanics, is proud to announce a two day course on *'Transition Modelling'*.

In the past three decades, significant progress has been made in the development of turbulence models, due to the effort of many research groups. However, in many applications, the important effect of laminar-turbulent transition has only been included in a very primitive way such as by tripping boundary layers based on empirical criteria. With the general growth of the use and importance of CFD methods and the increased wish for more accurate simulations, the need has grown for more reliable transition prediction methods. This has resulted in an intense development of transition modelling approaches in the last decade. The aim of the course is to discuss the physical phenomena in different transition processes and the appropriate approaches for modelling them. The focus of the course is on external aerodynamic flows and internal turbomachinery flows. In aerodynamic flows, transition is typically the result of flow instability of Tollmien-Schlichting type or cross flow type. In turbomachinery flows, the main transition mechanism is bypass transition imposed on the boundary layers by high levels of free stream turbulence.

Specifically, the course aims to provide:

- 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

Lecturers

Prof. Wolfgang Rodi,
Karlsruhe Institute of Technology
Germany

Dr. Jan Wissink
Brunel University, UK

Prof. Rolf Radespiel,
Technische Universitat
Braunschweig, Germany

Dr. Florian Menter
Ansys, Germany

Dr. Mark Johnson
University of Liverpool, UK

Dr. Sylvain Lardeau
CD-Adapco, UK

Dr. Andreas Krumbein
DLR, Germany

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Programme

Wednesday 22 May 2013

9:00	General introduction to transition modelling	Prof. W. Rodi
10:15	Refreshments	
10:45	Physics of transition I	Dr. M. Johnson
12:00	Lunch	
13:00	Physics of transition II	Dr. M. Johnson
14:00	DNS and LES of transition modelling I	Dr. J. Wissink
15:15	Refreshments	
15:45	DNS and LES of transition modelling II	Dr. J. Wissink
16:45	**Q & A Session**	

Thursday 23 May 2013

9:00	RANS modeling of transition in external flows I	Prof. R. Radespiel Dr. A. Krumbein
10:15	Refreshments	
10:45	RANS modeling of transition in ecternal flows II	Prof. R. Radespiel Dr. A. Krumbein
12:00	Lunch	
13:00	Rans modelling of transition : Intermittency based models	Dr. F. Menter
14:15	Refreshments	
14:45	Rans modelling of transition : RANS turbulence models and laminar kinetic energy methods	Dr. S. Lardeau
16:00	**Q & A Session**	
	Close	

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