

European Research Community on Flow, Turbulence and Combustion

SCHEDULE

ERCOFTAC COMMITTEE MEETINGS

Friday 2nd October 2009

EPFL, Lausanne, Switzerland.

9:00-12:00	<i>SPC Committee meeting.</i> Room CO 122 <i>IPC Committee meeting</i> Room CO 123
12:00-14:00	Buffet lunch
14:00-17:00	<i>Managing Board and General Assembly meetings</i> Room CO 122

Documents attached

1. Agendas for the SPC, IPC and MB-GA meetings
2. Minutes of the Ercoftac Committee meetings held in Budapest on 5th May 2009
3. Ercoftac Workshop and Summerschool status report
4. Applications for ERCOFTAC event sponsorship and overdue reports
5. Applications for SIG funding

European Research Community on Flow, Turbulence and Combustion

AGENDA

SCIENTIFIC PROGRAMME COMMITTEE MEETING

2nd October 2009, Lausanne, Switzerland.

9:00 **Scientific Committee meeting, chaired by Prof. Leschziner**

1. Approval of the agenda
2. Approval of minutes from the SPC meeting held in Budapest on 5.5.2009
3. Action items from the from the SPC meeting held in Budapest on 5.5.2009
4. Special Interest Groups
 - i. Current status report
 - ii. SIG funding requests
5. Pilot Centres
6. Workshops and summer schools
 - i. Status of reports from previous events
 - ii. Consideration of new proposals
7. Status of ETMM8
8. Review of the ERCOFTAC Autumn Festival and 2009 DaVinci Award
9. ERCOFTAC publications
 - i. FTAC Journal
 - ii. ERCOFTAC Book series
 - iii. ERCOFTAC Bulletin
 - iv. QNET-CFD Knowledge Base
10. Any Other Business
11. Dates and location of the next SPC meeting

12:00 **End of meeting**

AGENDA

INDUSTRIAL PROGRAMME COMMITTEE MEETING

2nd October 2009

Room CO 123, EPFL, Lausanne, Switzerland

09:00 Meeting chaired by Chris Lea

1. Apologies for absence
2. Approval of the agenda.
It is proposed that the meeting focuses its time on item 4ii
3. Minutes of IPC meeting held in Budapest on 5th May 2009
4. ERCOFTAC industrial strategy
 - i. Recap on the aims and objectives of the strategy (Chris Lea)
 - ii. Development and agreement of the forward programme of events (Richard Seoud)
 - iii. IEO support assistant (Chris Lea)
5. QNET-CFD Wiki
 - i. Present status (Wolfgang Rodi and Anthony Hutton)
 - ii. Future plans
6. Best Practice Guidelines
 - i. Dispersed Multi-Phase Flow BPG (Rene Oliemans and Richard Seoud)
 - ii. Industrial CFD BPG, 2nd edition (Chris Lea)
 - iii. Other BPG: Heat transfer, Combustion (Richard Seoud)
7. Next IPC meeting
8. Any Other Business

12:00 End of meeting, lunch break

European Research Community on Flow, Turbulence and Combustion

AGENDA

MANAGING BOARD – GENERAL ASSEMBLY MEETINGS

2nd October 2009, Lauasne

14:00 Managing Board meeting, chaired by Prof. Hutton

1. Approval of the agenda
2. Approval of minutes of the EC meeting held in Budapest on 5th May 2009
3. Action items from the EC meeting held in Budapest on 5th May 2009
4. The evolution of ERCOFTAC and its future operation
5. Election of new Managing Board members
6. Financial report
7. Report from Administration and Development Office
8. Report from Coordination Centre
9. Report from Scientific Programme Committee
10. Report from Industrial Programme Committee
11. Composition of the SPC, IPC and MB
12. Status of ERCOFTAC products and services
 - i. ERCOFTAC Website
 - ii. QNET-CFD Knowledge Base
 - iii. ERCOFTAC Bulletin
 - iv. ETMM8
 - v. FTAC Journal
 - vi. ERCOFTAC Book series
 - vii. ERCOFTAC Best Practice Guidelines
 - viii. ERCOFTAC Classic Database
13. Any Other Business
14. Dates and location of the next MB-GA and EC meetings

16:45 End of meeting

16:45 General Assembly meeting, chaired by Prof. Hutton

1. Opening
2. Election of Managing Board members
3. Approval of 2008 accounts and the 2009-10 budget

17:00 End of Meeting

European Research Community On Flow, Turbulence and Combustion

SCIENTIFIC PROGRAMME COMMITTEE MEETING

5th May 2009, Budapest, Hungary

ATTENDANCE

Bodnar, T.
Borhani, N.
Cambon, C.
Choi, K-S.
Comte, P.
da Silva, C.
Gergely, K.
Geurts, B.J.
Geuzaine, P.
Hämäläinen, J.
Hanifi, A.
Hirsch, C.
Hutton, S.
Hutton, T.

Jakirlic, S.
Kuhlmann, H.
Lea, C.
Leschziner, M.
Nicolleau, F.
Redondo, J.
Rodi, W.
Seoud, R.
Sibilla, S.
Sommerfeld, M.
Tomboulides, A.
Von Terzi, D.
Wallin, S.

APPOLOGIES

Andersson, H.
Braza, M.
Castilla, R.
Dick, E.
Gauger, N.
Martelli, F.

Oliemans, R.
Tardu, S.
Theofilis, V.
Van Steenhoven, A.
Von Rohr, P.

SUMMARY OF ITEMS ARISING FROM THE MEETING

- *Prof. Leschziner to write to all SIG Coordinators in order to clarify their duties.*
- *The SPC approved the continuation of negotiations with Boeing to germinate a US PC as part of ERCOFTAC's global expansion plans.*
- *SPC members stated that users of the QNET-CFD Knowledge Base should be urged to reference the database if its contents were used in publications.*
- *Event wishing to carry only the ERCOFTAC Logo can seek approval in a fast track application process.*

MINUTES

The meeting was opened by the SPC Chairman, Prof. Leschziner, at 9:00.

1. Approval of the agenda

The agenda was approved.

2. Approval of minutes from the SPC meeting held in Brussels on the 20.11.2008

The minutes were approved.

3. Matters arising and review of action items from the SPC meeting held in Brussels on the 20.11.2008

- The Managing Board approved the choice of Prof. Geurts as the new SPC Vice-Chairman and Chairman Designate (as of 1st Jan 2010).
- The Managing Board decided to keep the ERCOFTAC Bulletin as a quarterly publication.
- Prof. Leschziner wrote to all PC Coordinators to inform them that funds were available for specific PC activities on application to and approval by the Executive Committee. However, no requests have been received.

4. Special Interest Groups

Prof. Redondo requested a clear definition of a SIG Coordinator's responsibilities. Prof. Leschziner replied that SIGs should promote their specific research interests and visibility as they see fit. He added that the SPC should not dictate to SIGs what they should do, apart from obligations outlined in the concordat agreement or for specifically funded items.

** Prof. Leschziner to write to all SIG Coordinators in order to clarify their duties.*

i. Current status report

Recent SIG activities were reviewed using information posted on their ERCOFTAC website pages. Some specific comments and decisions were:

SIG 5 Environmental CFD: The SPC voted to accept Dr. Morvan's offer to relinquish leadership of SIG 5. Prof. Leschziner will search for a suitable replacement.

SIG 8 Turbomachinery: No developments since its closure at the SPC Meeting in Brussels. Dr. von Terzi offered to look for a new coordinator.

SIG 36 Swirling flows: Prof. Leschziner will contact Dr. Braza to encourage her to reactivate the SIG, close the SIG, or identify a new coordinator.

SIG 39 Aeroacoustics: Prof. Leschziner is still looking for a new coordinator.

SIG 41 Fluid-structure interactions: Prof. Leschziner will contact Dr. Longatte to encourage her to reactivate the SIG, close the SIG, or identify a new coordinator.

ii. SIG funding requests

Based on their submitted proposals, the SPC voted to recommend to the Executive Committee that the following SIGs should be funded up to 3000 Euros for 2010:

SIG 12 Dispersed turbulent two-phase flows

SIG 15 Turbulence modelling

SIG 33 Transition mechanisms prediction and control

SIG 40 Smoothed particle hydrodynamics

SIG 43 Fibre suspension flows

Requests for reimbursements by these funded SIGs should be made to the ERCOFTAC ADO in Brussels. For invoiced items, the ADO should be provided with receipts, a short justification, and bank details. All reimbursement requests will be audited by the ADO before payment. After discussions, the SPC's stated its clear preference that the 3000 Euros should be paid in full by the ADO in advance, with future funding dependent on the submission of annual progress reports. Prof. Redondo hoped that the reimbursements would be made quickly. Dr. Gergely suggested that SIG funding should be based on an 'impact factor' merit system dependent on its activities, bulletin publications, and ERCOFTAC webpage contents.

Prof. Choi and Prof. Redondo enquired if funded SIGs could automatically use the ERCOFTAC Logo for their events. Prof. Leschziner responded that they could not, and that formal permission had to be sought from the SPC for each event, see item 6(iii).

5. PC Centres

i. Creation of a North American PC in collaboration with Boeing

Prof. Hutton summarised recent discussions with Boeing to become a multisite industrial member of ERCOFTAC, and thus the germination of a US PC.

**The SPC approved the continuation of negotiations with Boeing to germinate a US PC as part of ERCOFTAC's global expansion plans.*

6. Workshop and summer schools

i. Status of reports from previous events

Dr. Borhani reported that the ADO and the terms of the event funding agreement require that all event reports should be submitted within 6 months of its closing date. Funding approved for events that do not satisfy this requirement will be cancelled.

ii. Consideration of new proposals

After discussions, the SPC voted to recommend the following actions to the Executive Committee regarding sponsorship of future events:

W2009-11 '*DLES8*', Eindhoven, The Netherlands, 7-9.7.2010.

Application for use of the ERCOFTAC logo was approved.

A scholarship of 2000 Euros was awarded.

W2009-12 '*Unsteady and coupled phenomena in aeronautical applications*', Toulouse, France, 9.2010.

Application for use of the ERCOFTAC logo was rejected. However, the organisers are invited to: (i) submit a more detailed application for future consideration, and (ii) to become members of ERCOFTAC.

W2009-13 '*Synthetic turbulence and vortex flows*', Warsaw, Poland, 1-3.7.2009.

Application for use of the ERCOFTAC logo was approved.

A scholarship of 2000 Euros was awarded.

W2009-14 '*14th Workshop on turbulence modelling*', Rome, Italy, 18.9.2009.

Application for use of the ERCOFTAC logo was approved.

A scholarship of 2000 Euros was awarded.

W2009-15 '*Global flow instability and control*', Crete, Greece, 28-30.9.2009.

Application for use of the ERCOFTAC logo was approved.

A scholarship of 2000 Euros was awarded.

iii. Fast track applications for use of the ERCOFTAC Logo

Prof. Leschziner reported that any event wishing to carry only the ERCOFTAC Logo could seek approval in a fast track process. This process requires emailing of the formal application forms to the SPC Chairman and the ERCOFTAC Coordination Centre. A quick decision would then be made after consultations with the Executive Committee to ensure the event was compatible with the mission of ERCOFTAC. The organisers would then be informed.

7. Status of ETMM8

Prof. Leschziner reported that the organisation of ETMM8 was progressing. He added that he will make a second call for papers once the ETMM8 website was active in June.

8. The 2009 da Vinci Award

Prof. Leschziner will distribute an invitation for nominations to PC Coordinators, as well as publishing details on the ERCOFTAC website. Presentations by the four chosen finalists will be given on the 2nd October 2009 in Lausanne. The deadline for submission of abstracts is the 15th July 2009. Prof. Leschziner invited members of the SPC to sit on the da Vinci jury; Profs. Geurts, Comte and Redondo, as well as Dr. von Terzi accepted.

9. Presentation on C-AERO and its implications for ERCOFTAC

Prof. Hirsch gave a presentation on ERCOFTAC's involvement in the European Commissions' C-AERO proposal to coordinate the dissemination of scientific information in the field of aeronautics. The aim of this proposal is to minimise the overlap between such courses and activities. Partners in the C-AERO proposal include: ECCOMASS, ERCOFTAC, CEAS, EUCASS, EUROMECH and EUROTURBO. ERCOFTAC has a 12k Euro budget in this proposal. Prof. Hirsch urged the SPC and the SIGs to submit suitable proposals in connection with the presented C-AERO agenda and work plan. Prof. Dick expressed his interest by email to Prof. Leschziner that SIG 10 be involved in the definition of a 'Best Practice Guidelines on Transition modelling' in conjunction with EUROTURBO. This would also involve holding a workshop in 2010 and a thematic conference in 2011.

10. ERCOFTAC publications

i. FTAC journal

Prof. Rodi reported that the FTAC journal was progressing well. There were 2 volumes of 4 issues published in 2008 with a total of 1100 pages. To date in 2009, there have been 3 issues. This volume will be completed by a special issue on the '2nd ECCOMASS Thematic Conference on Computation and Combustion'. The next volume will comprise 3 normal issues and a special issue on ETMM7. At present, there is a backlog of 33 papers published online that are waiting to be printed. Furthermore, Springer has agreed to increase the future page allocation of the journal to accommodate 7-8 papers.

ii. ERCOFTAC Book Series

Prof. Rodi reported that the Book Series was still not receiving sufficient contributions. Future planned issues include volumes on the QLES and the DLES7 workshops.

iii. ERCOFTAC Bulletin

Dr. Borhani reported that issue 78 of the Bulletin on 'Environmental Fluid Mechanics' had been submitted for printing. He added that the theme of issue 80 will be 'Transition Modelling'.

11. QNET-CFD: The wiki version of the knowledge base

Ms. Hutton gave a presentation on the role out schedule and features of the recently updated ERCOFTAC QNET-CFD database. This wiki based database is currently undergoing beta testing by volunteers. Each ERCOFTAC member will have a unique login ID for access.

** SPC members stated that users of the QNET-CFD Knowledge Base should be urged to reference the database if its contents were used in publications.*

12. Dates and location of the next SPC meeting

The next SPC meeting will be held at EPFL Lausanne on the 2nd October 2009.

Navid Borhani
Lausanne, 8.2009

European Research Community On Flow, Turbulence And Combustion

MINUTES

INDUSTRIAL PROGRAMME COMMITTEE

Budapest, May 5th 2009

Attendance

Philippe Geuzaine	CENAERO
Charles Hirsch	NUMECA International
Anthony Hutton	Airbus UK
Sarah Hutton	BAE Systems
Chris Lea	Lea CFD Associates
Wolfgang Rodi	University of Karlsruhe
Richard Seoud	ERCOFTAC
Stefan Wallin	FOI

The meeting was formally opened, late, at 10-15 by Chris Lea - IPC Chairman, who also took the minutes.

The main actions are underlined below.

1. Apologies for absence

None received.

2. Approval of the agenda

Approved without comment.

3. Minutes of IAC meeting held in Brussels on 20th November 2008

The minutes of the IAC meeting in Brussels on 20th November 2008 were circulated and agreed without comment.

4. Wiki version of QNET-CFD Knowledge Base

Sarah Hutton presented the Wiki to the meeting. Sarah has been working on the development and transfer of content from the QNET-CFD database to the Wiki whilst on under-graduate placement at BAE Systems. The contributions of Sarah, Wolfgang Rodi (technical content and quality review) and David Ellacott (Wiki support and development) in producing the Wiki were recognised and appreciated by the Committee.

Sarah Hutton and Wolfgang Rodi provided an overview of recent developments with the Wiki. The current status was clarified and actions agreed as follows:

- It was agreed that David Ellacott would be retained to support the development and running of the Wiki, at a fee of £20/hr up to a maximum of £10k per annum. This arrangement to be recommended to the Executive Committee for their approval. The agreement is to be reviewed after one year.
- Terms and conditions for use of the Wiki to be circulated by Sarah Hutton to all members of the IPC, for comment - following an open discussion on the issue of copyrighted material.

- Wolfgang has reviewed all 32 QNET-CFD Application Challenges (AC); reporting that 14 are of 'gold' standard, 5 are of 'silver-plus' standard, 7 are of 'silver' standard, and that 6 have been removed altogether.
- Wolfgang has also reviewed all 40 QNET-CFD Underlying Flow Regimes (UFR); reporting that 15 are of 'gold' standard, 8 are of 'silver-plus' standard, 13 are of 'silver' standard, and that 4 have been removed altogether.
- There was agreement with Wolfgang Rodi's review of the split of content for the Wiki between 'gold' and 'silver' - very roughly 50:50. The gold content will be fully accessible to ERCOFTAC members only.
- It was agreed that new 'gold' content would initially be labelled as 'silver-star', for a period of six months, before being uplifted to the gold area.
- It was agreed that **Chris Lea** would re-iterate the financial commitment for two new UFR and one AC being developed for the Wiki, and pass this information to Charles Hirsch.
- A final target launch date of July 2009 was agreed for the wiki. **Action: Sarah Hutton, David Ellacott and Wolfgang Rodi.**

5. ERCOFTAC Industrial strategy

Dr Richard Seoud – Industry Engagement Officer, provided a presentation on his activities implementing ERCOFTAC's business plan. His presentation summarised planned and future activities, their schedule for delivery, industrial membership development, cash flow and closing balance actuals and forecasts. The presentation is available upon request from the IPC Chairman or Dr Seoud. The following detailed suggestions and actions arose during the ensuing discussion:

- It was agreed that **Richard** should develop a more complete programme of industrial events and activities for the year ahead, for scrutiny and comment by the Executive Committee as soon as practicable, with the aim of agreeing a final programme by the time of the Autumn Festival.
- Philippe Geuzaine proposed that **Richard** should investigate VKI's programme of events, for ideas.
- Agreed that **Richard** should draw on the more active involvement of SIG & PC coordinators in devising industrial activities.
- Charles Hirsch suggested that **Richard** try a trial in which Technology Awareness Seminar take place over one-a-half days, rather than one day at present.
- Charles Hirsch proposed that **Richard** should make efforts to substantially increase the size of his mailing lists for events.
- Agreed that **Tony Hutton** would provide Richard with guidance on the scope of discussions on joint activities with SIAMUF.
- **Tony** to provide feedback to Richard on his drafts of publicity material for ERCOFTAC.

6. Best Practice Guidelines (BPG)

- It was agreed that the Admin & Development Office would in future record full details of purchasers of ERCOFTAC BPG, for sharing electronically with Richard, etc.

(i) Dispersed Multi-Phase Flow BPG

- Agreed that Sarah Hutton would be brought into the planning of efforts to market the multi-phase flow BPG.

(ii) Preparation of second edition of BPG

Production of a 2nd edition of the original BPG is still envisaged. The team comprises Dr Mark Savill (University of Cranfield), Dr Chris Carey (ANSYS Europe), Dr Chris Lea (Lea CFD Associates), Dr David Standingford (BAE Systems), Prof Dr Ernesto Casartelli (Lucerne University) and latterly Prof Hirsch (NUMECA). This effort was initially led by Tony Hutton, but due to volume of work this activity was taken over by Chris Lea.

- Chris Lea to take forward the production of the 2nd edition of this BPG.

(iii) Other BPG

- It was agreed that Richard would explore the possibility of a BPG on combustion, with Ananias Tomboulides, with the aim of a proposal being produced.
- It was agreed that discussions on the possibility of a BPG on heat transfer should continue by 'phone during forthcoming Executive Committee meetings.

7. Next IPC meeting

The next IPC meeting is planned for Lausanne, October 2nd 2009.

8. Any Other Business

None.

Meeting closed at 12-00.

Chris Lea
September 2009

European Research Community On Flow, Turbulence and Combustion

EXECUTIVE COMMITTEE MEETING

5th May 2009, Budapest, Hungary

ATTENDANCE

Bodnar, T. *
Borhani, N.
da Silva, C. *
Geurts, B.J.
Hirsch, C.
Hutton, T.
Jakirlic, S.
Lea, C.

Leschziner, M.
Redondo, J. *
Rodi, W. *
Seoud, R.
Tomboulides, A. *

* non EC members

APPOLOGIES

Oliemans, R.

SUMMARY OF ITEMS ARISING FROM THE MEETING

- *The Executive Committee voted to pay a Bristol based IT specialist to run the QNET-CFD wiki. He will be paid at an hourly rate of 23 Euros from a 10k Euro total budget. His services will be reviewed after one year.*
- *An item will be added to the next Management Board meeting to discuss the composition of the SPC, IPC and MB committees; as well as the necessary changes to the ERCOFTAC by-laws that it would require.*
- *The EC voted to approve the creation of a new ERCOFTAC website with Duo Design, minus the automatic newsletter option. Prof. Hutton will write to Duo Design to officially accept the offer.*

MINUTES

The meeting was opened by the ERCOFTAC Chairman, Prof. Hutton, at 13:30.

1. Approval of the agenda

The agenda was approved.

2. Approval of minutes from the MB and GA meetings held in Brussels on the 20.11.2008

The minutes were approved.

3. Action items from the MB and GA meetings held in Brussels on the 20.11.2008

These will be addressed below.

4. The evolution of ERCOFTAC and its future operation

i. Creation of a North American PC in collaboration with Boeing

Prof. Hutton reported that discussions were underway with Boeing to germinate a North American PC. Furthermore, he added that the SPC had earlier approved continuation of these negotiations, which could lead to an official application to ERCOFTAC to create such a PC.

ii. Report from the Horizon 10 group

Prof. Jakirlic gave a short presentation on the activities of the Horizon 10 group that held its first meeting in Darmstadt on the 26th January 2009. One outcome of this meeting was the formulation of a questionnaire that will be circulated through out the ERCOFTAC community in the coming weeks. This is aimed at determining the reasons behind the present lack of motivation within the community regarding ERCOFTAC activities, and ways in which the value of ERCOFTAC's service to its members can be improved in the future. The results will then be used to suggest possible future development strategies for ERCOFTAC over the next 10 years. The responses to this questionnaire, as well as information collected from personal interviews, will be collated in June and discussed at a Horizon 10 meeting to be held in Darmstadt during July. They will then be presented at the Management Board meeting to be held in Lausanne on the 2nd October 2009. Prof. Hirsch said that the number of questions on the form should be limited thus encouraging greater participation. Prof. Hutton suggested that possible future candidates for the role of ERCOFTAC Chairman should be interviewed in person to assess ways in which they can be encouraged to accept the position.

iii. Discussions regarding the next ERCOFTAC Chairman

Prof. Hutton said that the next ERCOFTAC Chairman should be an academic. Prof. Leschziner added that ERCOFTAC presently lacked kudos in the academic community since not enough senior academics were seen to be involved in a leading capacity. He added that the problem was finding a committed senior individual who was prepared to lead the organisation forward. Furthermore, he said that the next ERCOFTAC Chairman should be chosen from outside of the present ERCOFTAC organisation, thus showing the community that the organisation was evolving.

5. Financial report

Prof. Hirsch reported that in 2008 there was an income of around 170k Euros, expenses of 290k Euros, and total current assets of 420k Euros of which 385k Euros is cash. Expenses included: a 30k Euros loss from the 2008 Autumn Festival, the 35k Euros salary of the IEO, and a 10k fund for Prof. Rodi to create and edit the QNET-CFD Wiki. Prof. Hutton suggested that future financial reports should include a sheet stating cost items related to the investment budget. This would indicate how much of the total expenditure goes towards either investment

or operation, thus simplify review procedures relating to their effectiveness. Prof. Leschziner noted that only a fraction of the budget allocated for SIG funding had actually been claimed.

** The Executive Committee voted to pay a Bristol based IT specialist to run the QNET-CFD wiki. He will be paid at an hourly rate of 23 Euros from a 10k Euro total budget. His services will be reviewed after one year.*

6. Report from the Administration and Development Office

Concerning ETMM7, Prof. Leschziner reported that he believed Renault had now paid the 2000 Euros sum.

7. Report from the Coordination Centre

Nothing to report.

8. Report from the Scientific Programme Committee

i. SIG funding requests

Based on the recommendation of the SPC, the EC voted to fund the following SIGs for up to 3000 Euros for 2010:

SIG 12 *Dispersed turbulent two-phase flows*
SIG 15 *Turbulence modelling*
SIG 33 *Transition mechanisms prediction and control*
SIG 40 *Smoothed particle hydrodynamics*
SIG 43 *Fibre suspension flows*

Requests for reimbursements by these funded SIGs should be made to the ERCOFTAC ADO in Brussels. For invoiced items, the ADO should be provided with receipts, a short justification, and bank details. All reimbursement requests will be audited by the ADO before payment. Prof. Leschziner reported that he expects two or three more requests for 2010 SIG funding to be submitted for review in Lausanne.

ii. Workshop and summer school funding requests

Based on the recommendation of the SPC, the EC approved the following actions regarding sponsorship of future events:

W2009-11 '*DLES8*', Eindhoven, The Netherlands, 7-9.7.2010.

Application for use of the ERCOFTAC logo was approved.

A scholarship of 2000 Euros was awarded.

W2009-12 '*Unsteady and coupled phenomena in aeronautical applications*', Toulouse, France, 9.2010.

Application for use of the ERCOFTAC logo was rejected. However, the organisers are invited to: (i) submit a more detailed application for future consideration, and (ii) to become members of ERCOFTAC.

W2009-13 '*Synthetic turbulence and vortex flows*', Warsaw, Poland, 1-3.7.2009.

Application for use of the ERCOFTAC logo was approved.

A scholarship of 2000 Euros was awarded.

W2009-14 '*14th Workshop on turbulence modelling*', Rome, Italy, 18.9.2009.

Application for use of the ERCOFTAC logo was approved.

A scholarship of 2000 Euros was awarded.

W2009-15 '*Global flow instability and control*', Crete, Greece, 28-30.9.2009.

Application for use of the ERCOFTAC logo was approved.

A scholarship of 2000 Euros was awarded.

iii. The DaVinci 2009 Award

Prof. Leschziner reported that material will be distributed shortly to the PC Coordinators to ask for nominations for the award. He added that more volunteers had been found to sit on the evaluation jury.

iv. Status of ETMM8

Prof. Leschziner reported that the organisation of ETMM8 was progressing. He added that he will make a second call for papers once the ETMM8 website was active in June.

9. Report from the Industrial Programme Committee

Dr. Lea urged ERCOFTAC SIG and PC Coordinators to provide input and ideas for developing industrially orientated events, with the aim of increasing the number of industrial ERCOFTAC members. He added that Dr. Seoud will proactively contact the coordinators for their participation in the near future, in order to draw up a programme of events for 2010.

Dr. Seoud then gave a short presentation of his activities. This included details of upcoming seminars on: 'Technology Awareness - Microfluidics and Microheat' and 'Best Practice Guidance - CFD of dispersed multi-phase flows'.

10. Composition of the SPC, IPC and MB

Dr. Borhani noted that many members of the present SPC, IPC and MB had generally passed their two year time limit, without informing the Coordination Centre of renewals. Furthermore, it was unclear who was actually on these committees. He added that some SIG Coordinators had also enquired if they were eligible to sit on the SPC.

** An item will be added to the next Management Board meeting to discuss the composition of the SPC, IPC and MB committees; as well as the necessary changes to the ERCOFTAC by-laws that it would require.*

11. Status of ERCOFTAC products and services

i. ERCOFTAC Website

Dr. Lea reported that after general dissatisfaction with the present state and capabilities of the ERCOFTAC website, a web design company, 'Duo Design', had been approached for a quotation for designing a new website featuring: a content management system allowing different levels of editing privileges, an e-commerce system allowing online purchases of ERCOFTAC products with credit cards, and website statistics. The company responded with a quotation of 10k Euros to design and initiate a new site, and then migrate the contents of the present site to it. Once this has been carried out, they will charge a fee of 50 Euros per month, plus e-commerce transaction costs, to maintain the site. Prof. Hirsch noted that any site would need proactive management to ensure the quality of the submissions. Prof. Hutton suggested that Dr. Lea should be responsible for coordinating with Duo Design during the set up phase of the new website. He added that Dr. Seoud should manage the website during its initial operation phase. Dr. Borhani added that the management ERCOFTAC website was not the responsibility of the Coordination Centre.

** The EC voted to approve the creation of a new ERCOFTAC website with Duo Design, minus the automatic newsletter option. Prof. Hutton will write to Duo Design to officially accept the offer.*

ii. ERCOFTAC Best Practice Guidelines

Prof. Hutton reported that the creation of the second edition of the 'BPG on Industrial CFD' was ongoing, with editors already identified for each chapter. He added that Dr. Lea was now responsible for this project. Prof. Hirsch suggested that the form of the next BPG should be somehow linked to the contents of the QNET-CFD database.

13. Dates and location of the next EC meeting

The next EC meeting and ERCOFTAC Spring Festival will be held at TU Delft in May 2010. The exact dates are to be decided.

Navid Borhani
Lausanne, 9.2009

ERCOFTAC SIG Funding Applications

To be considered at the SPC meeting in Lausanne, 2nd October 2009.

SIG

- 42 Synthetic models in turbulence
- 35 Multipoint turbulence structure and modelling
(documents to be provided at the meeting)

SIG 42, Synthetic models in turbulence

Franck Nicolleau, Coordinator

Department of Mechanical Engineering, The University of Sheffield, UK.

September 1, 2009

This is the second application for this newly formed Special Interest Group (2nd year).

Brief Reminder of the context:

Synthetic Turbulence Models (STM) include any turbulence model based on prescribing or constructing an Eulerian velocity field in order to meet some of turbulent flows' physical properties. The idea is not to solve the Navier Stokes equations directly or through some closures but to find the ingredients necessary to repeat or understand some of turbulence properties.

A popular STM is the Kinematic Simulation (KS) where flow realizations with complete spatial, and sometime spatio-temporal, dependency, are generated via superposition of random modes, with prescribed constraints: strict incompressibility (divergence-free velocity field at each point), prescribed high Reynolds energy spectrum, ...

Such an approach is widely used in various domains including Lagrangian aspects in turbulence mixing/stirring, particle dispersion/clustering, and, aeroacoustics. Recent improvements consisted in incorporating linear dynamics, for instance in rotating and/or stably- stratified flows and boundary effects e.g. flow in pipes or channels.

Brief Reminder of topics:

- homogeneous isotropic KS, multi-particle dispersion, particle with inertia, particle clustering, ...
- cloud physics, prediction of droplet size distribution due to condensation,
- anisotropic KS, stratification and rotation, MHD,
- KS for aero-acoustics,
- KS with boundary conditions, dispersion in a pipe or a channel
- KS as a Lagrangian sub-grid, for LES, DES, industrial applications,
- Synthetic models as a tool for generating look-a-like data as an alternative to stochastic models, the placebo technique, Multiscale Lagrangian Map Approach, minimal map synthetic turbulence for Eulerian applications, in particular study of intermittency and anomalous scalings,
- KS in quantum mechanics, fluctuation dynamo, simulations of quantized vortices, superfluids.

1 Past activities

SIG 42 is now in its second year, it was set up after a meeting in London IMS/ERCOFTAC/SIG 35/COST 20 workshop, IC London, March 26-28, 2007, *Interscale energy transfer in various turbulent flows*, co-organized by Claude Cambon, Arkadi Tsinober, & Christos Vassilicos where it appeared that there was a need for assessing the 'Kinematic Simulation community' within SIG35.

So the first event on *Synthetic models in turbulence* was organised under the label SIG35 at Sheffield. It then clearly appeared that there was a KS community and a critical mass of researchers to justify the creation of a proper SIG dedicated to KS. To get its appeal broader and attract more people the new SIG was named 'Synthetic models in turbulence' as KS is thought of in a broader context, as an approach rather than a specific

Lagrangian modelling.

So far five workshops have been organised.

- SIG 35 1st workshop on Synthetic Turbulence (Sheffield 29th-30th May 2007). *ERCOFTAC bulletin 75, December issue, 2007*
- SIG 42 2nd workshop on Synthetic Turbulence (Vilanova 29th-30th November 2007) *ERCOFTAC bulletin 77, March issue, 2008* this latter was coupled with a SIG14 event ‘ADVANCES IN TURBULENCE IX, PAN-EUROPEAN LABORATORY ON NON-HOMOGENEOUS TURBULENCE’ organised by J-M Redondo
- SIG 42 3rd workshop on Synthetic Turbulence (Newcastle 3rd-4th July 2008) *ERCOFTAC bulletin 79, June issue, 2009*
- SIG42 4th Workshop on Synthetic Turbulence Models, Synthetic Turbulence Models and particle laden flows (Nancy, France, 11th-12th December 2008) *ERCOFTAC bulletin 79, June issue, 2009*
- SIG 42 5th Workshop on Synthetic Turbulence Models and Vortex Flow (Warsaw, Poland, 1st-3rd July 2009)

Two meetings a year (of which one international workshop) is viable and desirable.

So far the practical objectives of the SIG are

- to bound the KS community which indeed has strong European roots, the approach originated in Cambridge (J. C. Hunt) has now spread to many research groups, and attract other international teams (Meneveau (USA), Rosales (Chile)) as well,
- to standardise the codes, perhaps get generic codes that can be used by anyone beyond the KS research community, particularly by industry,
- to advertise the KS technique, for research and industrial applications,
- to have regular meetings and workshops (twice a year) to exchange views on the use of KS,
- to group our assets and combine our effort to apply for European grants.

2 Plan of activities and initiatives in end of 2009 and 2010

The following meetings are scheduled (final dates are still to be decided):

- A SIG 42 steering committee meeting in Lyon (november 2009).
- A workshop in Ecole Centrale de Lyon (France), end of June 2010 *Synthetic models and Environment*, co-organised by C. Cambon, B. Favier, F. Godefert, A. Nowakowski and F. Nicolleau (both ERCOFTAC label and scholarships will be requested.)

The first workshops were organised alongside other SIGs, SIG35 as the parent SIG and SIG14 as a the stratified and rotating KS is particularly relevant to its topics. Next workshops are organised where research teams have links with the KS community (e.g. Nancy, Lyon, Glasgow, Imperial, ...) or are developing techniques of interest for KS (e.g. vortex dynamic in Warsaw). They are also crucial for developing the necessary network for European grant applications.

Funding for the organisation of the workshops and to cover travel expenses for the co-ordinator or a leading member of the SIG to attend SPC meetings are needed at this early stage of the SIG development (thanks to last year fundings it was possible to have at least one representative at all SPC meetings in 2009).

3 Agreement with the ‘concordat’

We confirm our agreement with the concordat and in particular our commitment to attending SPC meetings.

ERCOFTAC Workshops and Summer Schools

1. Applications for ERCOFTAC event sponsorship

To be considered at the SPC meeting in Lausanne, 2nd October 2009.

Workshops

W2010-01	Workshop on fibre suspension flows	
W2010-02	MUSAF colloquium	
W2010-03	European drag reduction and flow control meeting	X
W2010-04	Advances and applications of GiD	X
W2010-05	Two-phase flow predictions	X
W2010-06	Dynamics of non-spherical particles in fluid turbulence	X
W2010-07	Research in turbulence and transition	X

Scholarships

Summer Schools

S2010-01	PIV course	X
S2010-02	Non-normality and non-linearity in thermo-acoustics	X
S2010-03	Turbulence and mixing in compressible flows	X

Scholarships

2. Overdue reports – plus 6 months from 2nd October 2009

W2007-10	Workshop on near wall turbulence	22.3.2007
W2008-03	Sound Source Mechanisms In Turbulent Shear-Flow	7.7.2008
W2008-04	DNS and LES of Reacting Flows	22.10.2008

Workshops & Summerschools

Code	Title	Location	Start Date	End Date	Adverts	Report	Organisers	Emails	Co-organisers	Funding Requested	Approved	Logo Requested	Approved	Reviewed
S2006-01	Application of PIV	Göttingen, Germany.	13/03/2006	17/03/2006		69	Schröder, A.		PCs: North Germany, Netherlands, France. SIGs: 32 Co: SG STAB, Oldenburg University	Yes	Yes	Yes	Yes	Vienna, 11.2005
S2006-02	Int. ss. on turbulent diffusion	Vilanova, Spain.	04/09/2006	09/09/2006		71	Redondo, J.M. Tampieri, F. Babiano, A.		PCs: Spain SIGs: 14	Yes	Yes	Yes	Yes	Vienna, 11.2005
S2007-01	Small scale turbulence	Cargèse, France.	13/10/2007	25/10/2007		75	Danaila, L.		PCs: France West SIGs: 4, 35	Yes	Yes	Yes	Yes	Athens, 10.2006
S2007-02	DLES of reacting and two-phase flows	Berlin, Germany.	01/09/2007	01/09/2007		75	Thevenin, D. Tomboulides, A.		SIGs: 28	Yes	Yes	Yes	Yes	Athens, 10.2006
S2008-01	Int. ss. on turbulence, plankton and marine snow	Vilanova, Spain.	01/09/2008	05/09/2008	76	79	Clercx, H.	h.j.h.clercx@tue.nl	SIGs: 37 Co: JM Burgers Center, Lille University, Spanish Ministry of Science and Education, CNRS, AGAUR.	Yes	Yes	Yes	Yes	Athens, 10.2006
S2008-02	Application of PIV	Göttingen, Germany.	25/02/2008	29/02/2008		77	Schröder, A.		PCs: North Germany, Netherlands, France. SIGs: 32	Yes	Yes	Yes	Yes	Brussels, 10.2007
S2008-03	JM Burgers Centre course on combustion	Eindhoven, Netherlands.	06/05/2008	09/05/2008		79	de Goey, L.P.H. Roekaerts, D.	l.p.h.d.goey@tue.nl dirkr@ws.tn.tudelft.nl	SIGs: 28	Yes	Yes	Yes	Yes	Brussels, 10.2007
S2008-04	Modern applications of combustion technology	Nürnberg, Germany.	25/02/2008	28/02/2008			Dinkelacker, F. Leipertz, A.		SIGs: 28	No		Yes	No	Brussels, 10.2007
S2008-05	Modelling of atomisation and sprays	Halle, Germany.	21/07/2008	24/07/2008	76	79	Sommerfeld, M.	martin.sommerfeld@iw.uni-halle.de	PCs: Germany North SIGs: 12	Yes	Yes	Yes	Yes	Brussels, 10.2007
S2008-06	Turbulence and mixing in compressible flows II	Marseille, France.	07/07/2008	12/07/2008	76	79	Dussauge, J-P.	jean-paul.dussauge@polytech.univ-mrs.fr	PCs: France South SIGs: 4	Yes	Yes, 3000	Yes	Yes	Stockholm, 5.2008
S2008-07	LES simulation and application in aeroacoustics	Balatonfüred, Hungary.	31/08/2008	06/09/2008	76	79	Lajos, T. Lohasz, M.	lajos@ara.bme.hu lohasz@ara.bme.hu	PCs: AHS SIGs: 1, 39 Co: COST ACTION P20 LES-AID, CFD.hu	Yes	Yes, 3000	Yes	Yes	Stockholm, 5.2008
S2009-01	Turbulent mixing and beyond	Trieste, Italy.	01/10/2009				Abarzhi, S.I. Gauthier, S.	snezh@flash.uchicago.edu serge.gauthier@orange.fr	Co: NSF, AFSOR, EOARD, ICTP, ANL, CEA, LANL, DOE ASC, ILE, IIT.	Yes	No	Yes	No	Brussels, 11.2009
S2009-02	Summerschool in Flow Control and Optimization	Stockholm, Sweden.	29/06/2009	03/07/2009	*		Brandt, L. Hanifi, A.	luca@mech.kth.se ardeshir.hanifi@foi.se	SIGs: 33	Yes	Yes, 3000	Yes	Yes	Brussels, 11.2009
S2009-03	Bio-fluid mechanics	Eindhoven, Netherlands.	09/03/2009	14/03/2009		79	van Steenhoven, A.A van de Vosse, F.N. Poelma, C.	a.a.v.steenhoven@tue.nl	PCs: JM Burgers Centre SIGs: 37	Yes	Yes, 3000	Yes	Yes	Brussels, 11.2009
S2010-01	PIV course	Göttingen, Germany	22/03/2010	26/03/2010			Schröder, A.	andreas.schroeder@dlr.de	PCs: Germany North, Netherlands, France SIGs: 32 Co: AG Stab, Oldenburg University, Munich University	Yes		Yes		Lausanne, 10, 2009
S2010-02	Non-normality and non-linearity in thermo-acoustics	Munich, Germany	17/05/2010	21/05/2010			Polifke, W. Zellhuber, M. Tomboulides, A.	polifke@td.mw.tum.de zellhuber@td.mw.tum.de ananiast@googlemail.com	SIGs: 28 Co: Marie Curie RTN AETHER	Yes		Yes		Lausanne, 10, 2009
S2010-03	Turbulence and mixing in compressible flows	Oléron Island, France.	13/09/2010	18/09/2010			Comte, P.	Pierre.Comte@lea.univ-poitiers.fr	PCs: France West SIGs: 4, 35	Yes		Yes		Lausanne, 10, 2009
W2006-01	European drag reduction and flow control meeting	Ischia, Italy.	10/04/2006	14/04/2006		69	Orlandi, P.		SIGs: 20	Yes	Yes	Yes	Yes	Paris, 5.2005
W2006-02	Turbulence and interactions	Giens, France.	29/05/2006	31/05/2006	68	71	Deville, M.		Co: France PEPIT, Paris University, ONERA	Yes	Yes	Yes	Yes	Vienna, 11.2005
W2006-03	Particle laden flows	Twente, Netherlands.	21/06/2006	23/06/2006		71	Geurts, B.J.		SIGs: 1 Co: EUROMECH	Yes	Yes	Yes	Yes	Vienna, 11.2005
W2006-04	Workshop on refined turbulence modelling	Berlin, Germany.	01/10/2006	01/10/2006	68, 69	75	Thiele, F.		SIGs: 15 Co: IAHR/QUANT-CRD	Yes	Yes	Yes	Yes	Vienna, 11.2005
W2006-05	Mathematical modelling of turbulent combustion	Stawika, Poland.	01/09/2006	03/09/2006	67, 68, 69	71	Boguslawski, A.		PCs: Polish SIGs: 28	Yes	Yes	Yes	Yes	Vienna, 11.2005
W2006-06	Design optimisation: Methods and applications	Las Palmas, Spain.	05/04/2006	07/04/2006	67, 68	71	Winter, G. Haase, W. Periaux, J.		SIGs: 34 Co: CEANI, University of Las Palmas	No		Yes	Yes	Vienna, 11.2005
W2006-07	Int. ws. Physics of turbulent mixing	Paris, France.	17/07/2006	21/07/2006	67, 68, 69	71	Legrand, M. Haas, J-F. Redondo, J. ...		PCs: France West & South, Spanish, UK SIGs: 4, 14, 15, 24, 101, 102	Yes	Yes	Yes	Yes	Vienna, 11.2005
W2006-08	SIG33: Laminar-turbulent transition mechanisms	Stockholm, Sweden.	31/05/2006	02/06/2006		71	Hanifi, A. Henningson, D.		SIGs: 33 Co: FOI Stockholm	Yes	Yes	Yes	Yes	Florence, 5.2006
W2006-09	Flow control and MEMS	London, UK.	19/09/2006	22/09/2006		71	Morrison, J.F.		Co: IUTAM	Yes	Yes	Yes	Yes	Florence, 5.2006
W2006-10	3rd Structure and Lagrangian aspects in turbulence	Marseille, France.	13/11/2006	14/11/2006		75	Schneider, K. Cambon, C.			No		Yes	Yes	Athens, 10.2006
W2007-01	Quality & reliability of CFD simulations III	Nottingham, UK.	14/03/2007			73	Lea, C.		PCs: UK SIGs: 5, 101	No		Yes	Yes	Florence, 5.2006
W2007-02	Micro PIV and applications in microsystems	Delft, Netherlands.					Lindken, R.		SIGs: 32, 38	Yes	Yes	Yes	Yes	Florence, 5.2006

Workshops & Summerschools

Code	Title	Location	Start Date	End Date	Adverts	Report	Organisers	Emails	Co-organisers	Funding Requested	Approved	Logo Requested	Approved	Reviewed
W2007-03	Langrangian techniques in multiphase flow	Trieste, Italy.	05/09/2007	07/09/2007		75	Kuerten, J.			Yes	Yes	Yes	Yes	Athens, 10.2006
W2007-04	Spheric II	Madrid, Spain.	01/05/2007	01/05/2007	71, 72	73	Gomez-Gesteira, M. Souto Iglesias, A.		SIGs: 40	Yes	Yes	Yes	Yes	Athens, 10.2006
W2007-05	New developments in multipoint turbulence modelling	London, UK.	01/03/2007	01/03/2007		73	Cambon, C.		Co: COST	Yes	Yes	Yes	Yes	Athens, 10.2006
W2007-06	LES simulation for design of combustion systems	Rouen, France.	24/05/2007	25/05/2007		73	Vervisch, L. Tomboulides, A.		Co: EC COST P20, GST	Yes	Yes	Yes	Yes	Athens, 10.2006
W2007-07	IUTAM: Unsteady separated flows and their control	Corfu, Greece.	18/06/2007	22/06/2007		75	Braza, M.		PCs: France South Co: IUTAM	No*		Yes	Yes	Athens, 10.2006
W2007-08	Laminar-turbulent transition mechanisms	Freudenstadt, Germany.	13/06/2007	15/06/2007		75	Rist, U. Hanifi, A.		SIGs: 33	Yes	Yes	Yes	Yes	Athens, 10.2006
W2007-09	International gas turbine conference	Tokyo, Japan.	02/12/2007	07/12/2007			Ota, E. Yoshino, T.		Co: ASME/IGTI. ...	No		Yes	No	Athens, 10.2006
W2007-10	Workshop on near wall turbulence	Viterbo, Italy.	22/03/2007	23/03/2007			Stanislav, M.			No		Yes	Yes	Athens, 10.2006
W2007-11	Synthetic turbulence models	Sheffield, UK.	29/05/2007	30/05/2007		75	Nicolleau, F.		PCs: France Henri Bénard, UK. SIGs: 1, 35	Yes	Yes	Yes	Yes	Berlin, 5.2007
W2007-12	Quality & reliability of LES	Leuven, Belgium.	24/10/2007	26/10/2007		75	Meyers, J. Geurts, B.J. Sagaut, P.		SIGs: 1	Yes	Yes	Yes	Yes	Berlin, 5.2007
W2007-13	PAN-EUROPEAN lab on non-homogeneous turbulence	Vilanova, Spain.	29/11/2007	01/12/2007		77	Redondo, J.M.		PCs: Iberian East, France Henri Bénard SIGs: 14, 35	Yes	Yes	Yes	Yes	Brussels, 10.2007
W2007-14	LES for combustion and transition modelling	Ghent, Belgium.	29/11/2007	30/11/2007		79	Dick, E. Elsner, W.	erik.dick@ugent.be	SIGs: 10, 28	No		Yes	Yes	Brussels, 10.2007
W2008-01	ETMM7	Limassol, Cyprus.	04/06/2008	06/06/2008	74,76		Leschziner, M.A. Kassinis, S.	mike.leschziner@imperial.ac.uk	Co: University of Cyprus	Yes	Yes	Yes	Yes	Florence, 5.2006
W2008-02	Spheric III	Lausanne, Switzerland.	04/06/2008	06/06/2008	76	77	Maruzewski, P.	pierre.maruzewski@epfl.ch	SIGs: 1	Yes	Yes	Yes	Yes	Brussels, 10.2007
W2008-03	Sound source mechanisms in turbulent shear flows	Poitiers, France.	07/07/2008	09/07/2008	76		Jordan, P.	peter.jordan@lea.univ-poitiers.fr	PCs: France West	No		Yes	Yes	Brussels, 10.2007
W2008-04	DNS and LES of reacting flows	Eindhoven, Netherlands.	22/10/2008	24/10/2008	76		de Goey, L.P.H.	l.p.h.d.goey@tue.nl	SIGs: 28 EC COST P20	Yes	No	Yes	Yes	Brussels, 10.2007
W2008-05	Quality & reliability of CFD simulations IV	Nottingham, UK.	05/03/2008			79	Lea, C.	chris.leabuxton@btinternet.com	PCs: UK SIGs: 5, 101 Co: NAFEMS	Yes	Yes	Yes	Yes	Brussels, 10.2007
W2008-06	SIG33: Open issues in transition and flow control	Genova, Italy.	16/10/2008	18/10/2008	76	79	Bottaro, A. Hanifi, A.	alessandro.bottaro@unige.it ardeshir.hanifi@foi.se	SIGs: 33	Yes	Yes	Yes	Yes	Brussels, 10.2007
W2008-07	European drag reduction and flow control meeting	Mariental, Germany.	08/09/2008	11/09/2008	76	77	Hage, W. Wassen, E.	kwing-so.choi@nottingham.ac.uk wolfram.hage@dlr.de erik.wassen@cfdtu-berlin.de	SIGs: 20	Yes	Yes, 2000	Yes	Yes	Stockholm, 5.2008
W2008-08	DLES 7	Trieste, Italy.	08/09/2008	10/09/2008	76	77	Armenio, V. Fröhlich, J. Geurts, B.J. ...	armenio@dica.units.it froehlich@ict.uni-karlsruhe.de b.j.geurts@math.utwente.nl	SIGs: 1	Yes	Yes*, 2000	Yes	Yes	Stockholm, 5.2008
W2008-09	Multiscale methods for fluid and plasma turbulence	Luminy, France.	21/04/2008	25/04/2008			Schneider, K.	kschneid@cmi.univ-mrs.fr	PCs: France Henri Bénard SIGs: 35 Co: CNRS, CEA, ONR, Franco-Allemande Uni	Yes	No	Yes	No	Stockholm, 5.2008
W2008-10	13th. Workshop on turbulence modelling	Graz, Austria.	25/09/2008	26/09/2008	76	79	Brenn, G. Jakirlic, S.	brenn@fluidmech.tu-graz.ac.at s.jakirlic@sla.tu-darmstadt.de	PCs: AHS SIGs: 15 Co: IAHR, COST	Yes	Yes, 2000	Yes	Yes	Stockholm, 5.2008
W2008-11	Conference on turbulence and interactions	Martinique, France.	31/05/2009	05/06/2009	76, 77		Deville, M.	michel.deville@epfl.ch	PCs: France Henri Bénard, Swiss SIGs: 4, 12, 14, 35, 39, 42 Co: EPFL, DGA, ONERA, UPMC	No		Yes	Yes	Stockholm, 5.2008
W2008-12	3rd. Workshop on synthetic turbulence models	Newcastle, UK.	03/07/2008	04/07/2008	76	79	Nicolleau, F. Reeks, F. Baggaley, C. Cambon, C.	f.nicolleau@sheffield.ac.uk mike.reeks@newcastle.ac.uk a.w.baggaley@newcastle.ac.uk claude.cambon@ec-lyon.fr	PCs: France Henri Bénard, UK. SIGs: 35, 42	Yes	Yes, 2000	Yes	Yes	Stockholm, 5.2008
W2009-01	ETMM8	Marseille, France.								Yes	Yes	Yes	Yes	Stockholm, 5.2008
W2009-02	Immersed boundary methods	Amsterdam, Netherlands.	01/06/2009			*	Pourquie, J. Breugem, W-P. Boersma, B.J. Turek, S.	m.j.b.m.pourquie@tudelft.nl	PCs: JM Burgers Centre Co: EUROMECH, Royal Dutch Academy of Sci.	Yes	No	Yes	Yes	Brussels, 11.2008
W2009-03	Quality & Reliability of LES II	Pisa, Italy.	09/09/2009	11/09/2009			Salvetti, M.	mv.salvetti@ing.unipi.it	SIGs: 1 Co: University of Pisa, COST Action P20 LES-AID	Yes	Yes*, 2000	Yes	Yes	Brussels, 11.2008
W2009-04	Fluxes and structures in fluids	Moscow, Russia.	24/06/2009	27/06/2009			Chashechkin, Y.D. Baydulov, V.G.	chakin@ipmnet.ru bayd@ipmnet.ru	Sigs: 14, 42 Co: RAS	Yes	Yes*, 2000	Yes	Yes	Brussels, 11.2008
W2009-05	Papermaking research symposium *Withdrawn*													
W2009-06	4th Workshop on synthetic turbulence modelling	Nancy, France.	11/12/2008	12/12/2008		79	Angilella, J.R. Nicolleau, F.	jean-regis.angilella@ensem.inpl-nancy.fr f.nicolleau@sheffield.ac.uk	SIGs: 35, 42 PCs: France Henri Bénard	Yes	Yes*, 2000	Yes	Yes	Brussels, 11.2008

Workshops & Summerschools

Code	Title	Location	Start Date	End Date	Adverts	Report	Organisers	Emails	Co-organisers	Funding Requested	Approved	Logo Requested	Approved	Reviewed
W2009-07	LES of Turbulence, Acoustics and Combustion	Marseilles, France.	24/08/2009	28/08/2009	*		Comte, P. Serre, E.	pierre.comte@lea.univ-poitiers.fr eric.serre@L3m.univ-mrs.fr	PCs: France-West SIGs: 1	No		Yes	Yes	Brussels, 11.2008
W2009-08	Quality & Reliability in Aerospace CFD	Nottingham, UK.	04/03/2009				Parry, J.	john_parry@mentor.com	PCs: UK SIGs: 5, 101 Co: NAFEMS	No		Yes	No	Brussels, 11.2008
W2009-09	Turbulent Spray Combustion	Corsica, France.	07/06/2009		*		Merci, B. Roekaerts, D.	bart.merci@ugent.be d.j.e.m.roekaerts@tudelft.nl	SIGs: 28	Yes	Yes, 2000	Yes	Yes	Brussels, 11.2008
W2009-10	3rd Hybrid RANS-LES Symposium	Gdansk, Poland.	10/06/2009	12/06/2009	*		Doerffer, P. Haase, W. Peng, S-H.	doerffer@karol.imp.gda.pl office@haa.se peng@foi.se	Co: EADS, FOI, IMP-PAN	No		Yes	Yes	Brussels, 11.2008
W2009-11	DLES 8	Eindhoven, Netherlands.	07/07/2010	09/07/2010			Kuerten, J.	j.g.m.kuerten@tue.nl	SIGs: 1	Yes	Yes, 2000	Yes	Yes	Budapest, 5.2009
W2009-12	Unsteady and coupled phenomena in aeronautical applications	Toulouse, France.	01/09/2010				CERFACS CFD Team	lgicquel@cerfacs.fr poinot@cerfacs.fr gourdain@cerfacs.fr bousuge@cerfacs.fr	Co: Airbus, Safran, ONERA	No		Yes	No	Budapest, 5.2009
W2009-13	Synthetic turbulence and vortex flows	Warsaw, Poland.	01/07/2009	03/07/2009			Nowakowski, A.	a.f.nowakowski@sheffield.ac.uk	PCs: Polish SIGs: 42, 35	Yes	Yes, 2000	Yes	Yes	Budapest, 5.2009
W2009-14	14th Workshop on turbulence modelling	Rome, Italy.	18/09/2009				Jakirlic, S. Rispoli, F. Borello, D.	s.jakirlic@sla.tu-darmstadt.de rispoli@dma.ing.uniroma1.it borello@dma.ing.uniroma1.it	PCs: Italy SIGs: 15 Co: IAHR, COST	Yes	Yes, 2000	Yes	Yes	Budapest, 5.2009
W2009-15	Global flow instability and control	Crete, Greece.	28/09/2009	30/09/2009			Theofilis, V.	vassilios.theofilis@upm.es	PCs: Iberian West SIGs: 33 Co: US AFOSR/EOARD, Caltech, Ecole Polytechnique Paris	Yes	Yes, 2000	Yes	Yes	Budapest, 5.2009
W2010-01	Workshop on fibre suspension flows	Stockholm, Sweden.	09/02/2010	10/02/2010			Lundell, F.	fredrik@mech.kth.se	SIGs: 43	No		Yes		Lausanne, 10, 2009
W2010-02	MUSAF colloquium	Toulouse, France.	27/09/2010	29/09/2010			Gicquel, L. Gourdain, N. Bousuge, J-F. Poinot, T.	lgicquel@cerfacs.fr gourdain@cerfacs.fr bousuge@cerfacs.fr poinot@cerfacs.fr	SIGs: 1, 5, 14, 15, 28, 36, 37, 41, 101 Co: Airbus, Safran, Onera, EU(FP7)	No		Yes		Lausanne, 10, 2009
W2010-03	European drag reduction and flow control meeting	Kiev, Ukraine.	06/09/2010	09/09/2010			Voropayev, G. Choi, K-S.	vortex@nbi.com.ua Kwing-so.Choi@nottingham.ac.uk	SIGs: 20 Co: Ukrainain Academy of Science	Yes		Yes		Lausanne, 10, 2009
W2010-04	Advances and applications of GiD	Ibiza, Spain.	25/05/2010	27/05/2010			Coll, A. Castilla, R.	abelcs@cimne.upc.edu castilla@mf.upc.edu	PCs: Iberian East Co: COMPASSIS, Technical University of Catalonia	Yes		Yes		Lausanne, 10, 2009
W2010-05	Two-phase flow predictions	Halle, Germany.	22/03/2010	26/03/2010			Sommerfeld, M.	martin.sommerfeld@iw.uni-halle.de	PCs: Germany North SIGs: 12	Yes		Yes		Lausanne, 10, 2009
W2010-06	Dynamics of non-spherical particles in fluid turbulence	Trondheim, Norway.	29/09/2010	01/10/2010			Andersson, H. Soldati, A.	helge.i.andersson@ntnu.no soldati@uniud.it	PCs: Nordic SIGs: 43, 12	Yes		Yes		Lausanne, 10, 2009
W2010-07	Research in turbulence and transition	Lisbon, Portugal.	16/10/2009				Theofilis, V. Castilla, R. da Silva, C.	vassilios.theofilis@upm.es castilla@mf.upc.edu carlos.silva@ist.utl.pt	PCs: Iberian West, Iberian East SIGs: 1, 4, 14, 15, 33 Co: IST, IDMEC	Yes		Yes		Lausanne, 10, 2009

European Research Community On Flow, Turbulence And Combustion

WORKSHOP – CONFERENCE – SUMMER SCHOOL - COURSE APPLICATION SHEET

Title	2 nd SIG43 workshop on fibre suspension flows		
	<i>Add a brief summary of the objectives of the activity (or the announcement) on a separate page</i>		
	<input checked="" type="checkbox"/> Workshop	<input type="checkbox"/> Summer School	<input type="checkbox"/> Conference <input type="checkbox"/> Course
Location and Date	Stockholm, Sweden February 9-10, 2010		
Organizer	Name Fredrik Lundell		
	Address KTH Mechanics, Royal Institute of Technology Osquars Backe 18 100 44 Stockholm		
	Country Sweden		
	Tel	+46 8 790 68 75	Fax +46 8 790 76 54
	Email fredrik@mech.kth.se		
Pilot Center(s) or SIGs involved	SIG43 on fibre suspension flows		
Co-organizing Associations			
Scholarships	Scholarship request? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Rules	I have read the document "Rules for holding ERCOFTAC events", which can be found on www.ercoftac.org <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

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Number	W2010-01
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Date Received	25.8.2009		
Approval	SPC		MB
Scholarships	<input type="checkbox"/> Yes, Amount	EURO	<input type="checkbox"/> No
Announcement	Bulletin		
Report	Bulletin		

1st SIG43 workshop on fibre suspension flows

VTT Technical Research Centre of Finland, Jyväskylä, Finland, 2nd – 3rd April, 2009

Jari Hämäläinen

Department of Physics, University of Kuopio

Introduction

ERCOFTAC Special Interest Group on fibre suspension flows (SIG43) was established in 2008. The first workshop organized by the group was held April 2-3, 2009, at the Technical Research Centre of Finland (VTT), in Jyväskylä, Finland. Local workshop arrangements were carried out by Dr. Janne Poranen and Mr. Juha Salmela from VTT. The workshop collected together researchers from five countries: Finland, Sweden, Norway, Poland and France. There were also participants from industry (Metso Paper, Tamfelt) and from SME's who are offering CFD services to industry (Numerola, Process Flow). Altogether 25 persons took part in the first SIG43 workshop.

Scientific program

The workshop consisted of 12 presentations dealing with CFD and experiments for fibre suspension flows:

- Opening, **Janne Poranen**, VTT and **Jari Hämäläinen**, University of Kuopio
- Modeling of fiber suspension flows in papermaking processes by combining Non-Newtonian fluid dynamics and turbulence, **Juha-Pekka Huhtanen**, Tampere University of Technology
- CFD study of refining hydraulics, **Dariusz Asendrych**, Częstochowa University of Technology
- Simulations of long particles in turbulent flows, **Lihao Zhao**, Norwegian University of Science and Technology
- Modelling of fibre suspensions in papermaking process, **Heidi Niskanen**, University of Kuopio
- Experiments on the development of the fiber orientation distribution in elongational base flow, **Hannu Eloranta**, Tampere University of Technology
- Application of ultrasound anemometry for measuring filtration of fibre suspensions: Effect of fibre and pulp properties, **Sanna Haavisto**, VTT
- Experimental study on the transition from dilute fiber suspension to fiber network, **Gabriele Bellani**, KTH
- Filtration of Fibre Suspension in a Shear Flow **Mika Laitinen**, Numerola Oy

- Fibre suspension modeling at Process Flow, **Hannu Karema**, Process Flow Ltd Oy
- Flow of pulp in pipes, **Salaheddine Skali-Lami**, Nancy-University
- New experimental results on the flow regimes in closed channel flows of wood fibre suspensions, **Ari Jäsberg**, University of Jyväskylä
- UDV measurements and CFD simulation of two-phase flow in a stirred vessel, **Sanna Haavisto**, VTT

Tour to the experimental facilities in Jyväskylä region

There are several fibre suspension research units in the Jyväskylä region which were visited during the workshop. The tour started from the Metso Paper's pilot paper machine, which is the main research unit of the world leading paper machine supplier. The experimental laboratory of University of Jyväskylä, Department of Physics, was visited next. Also the experimental laboratories at VTT were introduced.

Workshop material

An abstract booklet and a CD-ROM consisting of all the presentations are available. Full papers have not been written. For further information on the SIG43 and the 1st workshop, please, contact the SIG43 coordinator, Professor Jari Hämäläinen (jari.hamalainen@uku.fi).

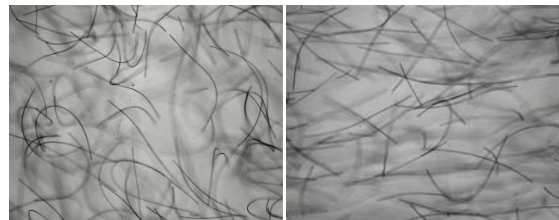


Figure. Random and oriented fibres (experiments by Hannu Eloranta, TUT)



MUSAF colloquium: Multiphysics and Unsteady Simulations for Aeronautical Flows

(around Aircraft and within Engines)

Scope:

With the advent of massively parallel computing and the access to thousands of processors for a single computation, advanced numerical simulations of aeronautical flows face new perspectives and challenges. Among these new perspectives, current state-of-the-art Computational Fluid Dynamics (CFD) codes can now be integrated into wider industrial problems where multiphysics modeling and fully unsteady predictions are known to be crucial. Impact should be readily visible throughout a wide range of external and internal flow configurations: full aircraft computations, turbomachinery flows, reacting flows, thermo-acoustics, noise, heat transfer... The colloquium, supported by the European Commission, leading aeronautical manufacturers and research groups, aims at providing a review of the potential challenges to be faced in the field of unsteady multiphysics modeling and coupling techniques for LES, URANS, CAA...

27-29 September 2010

CERFACS

European Centre for Research and Advanced Training in Scientific Computation
42, avenue Gaspard Coriolis, F-31057 Toulouse Cedex 1, FRANCE

Invited Keynote speakers:

Prof. Charbel Farhat

Stanford University, Stanford, USA

Prof. Charles Hirsch

NUMECA international, Brussels, Belgium

Prof. Suresh Menon

Georgia Institute of Technology, Atlanta, USA

Associate Prof. Juan J. Alonso

Stanford University, Stanford, USA

Prof. George Karniadakis

Brown University, Providence, USA

Dr. Philippe Spalart

Boeing Commercial Airplanes, Seattle, USA

Scientific advisory board:

Laurent Gicquel (CERFACS), Nicolas Gourdain (CERFACS), Thierry Poinot (IMFT), Jean-François Boussuge (CERFACS), Pascal Larrieu (Airbus), Olivier Dumas (SAFRAN), Jean-Jacques Thibert (ONERA)

Contact points:

T. Poinot (poinot@cerfacs.fr), N. Gourdain (gourdain@cerfacs.fr), L. Gicquel (lgicquel@cerfacs.fr), M. Labadens (labadens@cerfacs.fr)



Preliminary program

DAY 1:

Monday 27th of September 2010

Morning sessions

“Unsteady Flow Simulations in Complex Geometries”

- 9:00-9:55 **Keynote lecture:** “Predictability and Uncertainty in Large-Scale Flow Simulations” by **Prof. George Karniadakis (Brown Univ.)**
- 10:05-10:30 “title to be announced”, *P. Sagaut (Paris VI)*
- 10:30-10:55 “LES and URANS with a Two-Equation Turbulence Model”, *L. Davidson (Chalmers Univ.)*
- 11:05-11:30 “Predicting reliability of Large-Eddy Simulation in free and wall-bounded shear layers”, *B. Geurts (Univ. of Twente)*
- 11:30-11:55 “Affordable Large Eddy Simulation for Unsteady Aeronautical Flows in Complex Geometries Using All-Speed-Accurate High-Resolution, High-Order Methods” , *D. Drikakis (Cranfield Univ.)*

Lunch

Afternoon sessions

“Methods for Multi-physics Simulations in Turbomachines”

- 14:00-14:55 **Keynote lecture:** “High Fidelity Multiphysics Simulations for Turbomachinery” by **Prof. Charles Hirsch (Numeca)**
- 15:05-15:30 “Large-Scale High-Fidelity Aerothermal Simulations in Turbomachinery“, *P. Geuzaine (CenAero)*
- 15:30-15:55 “title to be announced”, *F. Vuillot (ONERA)*
- 16:05-16:30 “Some LES Investigations with different solvers of a ribbed duct flow: comparison/ validation with the VKI database“, *P. Rambaud (VKI)*
- 16:30-16:55 “title to be announced”, *A. Stuermer (DLR)*

17:00-19:30 Welcome party (cocktail) at Météo-France



Preliminary program

DAY 2:

Tuesday 28th of September 2010

Morning sessions

“Acoustics and Noise Predictions”

9:00-9:55

Keynote lecture: “*status unknown*”, *Dr. Philippe Spalart (Boeing)*

10:05-10:30

“Progress in Direct Computation of Aerodynamic Noise Using Compressible Large-Eddy Simulations”, *C. Bailly (LMFA – ECL)*

10:30-10:55

“*title to be announced*”, *F. Thiele (TU Berlin)*

11:05-11:30

“Towards the reduction of airframe noise”, *W. Schröder (RWTH Aachen)*

11:30-11:55

“Large-Eddy Simulation for Compressible Flow and Noise Prediction - Recent Progress for Supersonic Jets”, *L. Eriksson (Chalmers Univ.)*

Lunch

Afternoon sessions

“Methods for Unsteady Flow Simulations in Combustion Chambers”

14:00-14:55

Keynote lecture: “Multi-scale Modeling for LES of Turbulent Combustion in Gas Turbine and Scramjet Combustors”, *Prof. Suresh Menon (Georgia Tech.)*

15:05-15:30

“Simulation of ignition and combustion in multi burner configurations”, *W. Jones (Imperial College)*

15:30-15:55

“Large Eddy Simulation of Stratified Flames”, *J. Janicka (TU Darmstadt)*

16:05-16:30

“Challenges in LES with Detailed Chemistry”, *L. Vervisch (CORIA)*

16:30-16:55

“LES and multiphysics for engine computations on massively parallel machines”, *T. Poinsot (IMFT)*

17:00-19:30

Visit of Airbus final assembly line



Preliminary program

DAY 3:

Wednesday 29th of September 2010

Morning sessions

“Strategies and Options for Parallel Flow Solver Applications”

- 9:00-9:55 **Keynote lecture:** “title to be announced”, *Prof. Charbel Farhat (Stanford Univ.)*
- 10:05-10:30 “Turbomachinery CFD on many-core platforms – strategies and experiences”, *G. Pullan (Cambridge Univ.)*
- 10:30-10:55 “Towards LES in Turbomachine Blade Passages: Dedicated Methods and Test-Cases”, *J. Boudet (ECL)*
- 11:05-11:30 “Parallel Visualization Issues in Fluid Dynamics”, *J. Favre (Swiss Nat. Super. Centre)*
- 11:30-11:55 “A Staggered Dual-Time All-Mach-Number Algorithm for LES of Reacting Flows”, *J. Oefelein (Sandia Livermore Nat. Lab.)*

Lunch

Afternoon sessions

“Frontier Simulations”

- 14:00-14:55 **Keynote lecture:** “title to be announced”, *Prof. Juan J. Alonso (Stanford Univ.)*
- 15:05-15:30 “Advanced Simulation of Internal Combustion Engine Flow Using LES”, *C. Angelberger (IFP)*
- 15:30-15:55 “Some challenges for unsteady simulations in nuclear industry: present achievements and related methods, short term prospects”, *F. Ducros (CEA)*
- 16:05-16:30 “Simulation and advanced models for applications in applied aerodynamics”, *S. Deck (ONERA/DAAP)*
- 16:30-16:55 “DNS of Turbulent Combustion: Lifted Autoignitive Jet Flames at Ambient and at Diesel Engine Pressures”, *J. Chen (Sandia Livermore Nat. Lab.)*



Hotels In front of the hotels there are : Metro Stations, Airport Shuttle, Public Car Park.

1- Hôtel MERCURE*:**

Rue Saint Jérôme
31000 TOULOUSE

Phone: +33 (0)5 62 27 79 79

Fax: +33 (0)5 62 27 79 00

<http://www.accorhotels.com/>

3- 2 Hotels-restaurants OURS BLANC:**

25, place Victor Hugo and 2, rue Victor Hugo
31000 TOULOUSE

Phone: +33 (0)5 61 23 14 55

Fax: +33 (0)5 61 23 62 34

<http://www.hotel-oursblanc.com/>

Phone: +33 (0)5 61 21 62 40

Fax: +33 (0)5 61 23 62 34

2- Hôtel IBIS:**

2, rue Claire Pauilhac (place Jeanne d'Arc)
31000 TOULOUSE

Phone: +33 (0)5 61 63 61 63

Fax: +33 (0)5 61 63 07 46

<http://www.accorhotels.com/>

4- Best Western Les Capitouls Jean Jaurès *:**

29, allées Jean-Jaurès
31000 TOULOUSE

Phone: +33 (0)5 34 41 31 21

Fax: +33 (0)5 61 63 15 17

<http://www.bestwestern-capitouls.com/>

Travel information

You come by car

- From the Highway A62 Paris-Bordeaux, follow the traffic sign: Foix-Tarbes . Then Exit 27 : La Cépière. follow Cugnaux, Les Pradettes, then Météo-Cerfacs.
- From the Highway A61 Montpellier-Carcassonne, follow the traffic sign Aéroport Blagnac, Then Exit 27 : La Cépière. follow Cugnaux, Les Pradettes, then Météo-Cerfacs.
- From Blagnac Airport, follow the traffic sign Auch, then the motorway Arc-En-Ciel to Lardenne Cugnaux-Tournefeuille, then exit at "Parc d'Activités Basso Cambo". follow the traffic sign Météo-Cerfacs.

You come by train

Take the Underground at Matabiau station to Basso Cambo station (terminus), then, with the same ticket, bus 8 direction "Lycée Polyvalent". The bus stops just in front of Météo-France (journey time: about 30 minutes)

You come by plane

- The quickest way from the Airport is by taxi (journey time: about 15 minutes, fare ~ 30 €)
- For downtown shuttles depart every 20 minutes (7/7 days) Get off at Matabiau Station or at Jean-Jaurès, Take the Underground to Basso Cambo le métro direction Basso Cambo, and proceed as above (journey time: about 50 minutes)

European Drag Reduction and Flow Control Meeting

EDRFCM 2010

6-9 September 2010*

(*provisional dates)

Kiev, Ukraine

ERCOFTAC Special Interest Group SIG20 *Drag Reduction and Flow Control* is pleased to announce the European Drag Reduction and Flow Control Meeting (EDRFCM) 2010, to be held in Kiev, Ukraine in September 2010. This is a specialist workshop and conference to be held over four days, where most recent results on experimental, numerical and analytical research into drag reduction and flow control will be presented and discussed.

Topics

- Riblets, compliant walls, polymer and surfactant additives, flow oscillations, optimal and suboptimal control, local blowing/suction, electro-magnetic and plasma flow control, etc.
- A special session on "Plasma Flow Control" is planned.

Abstract submission

Abstracts are limited to 2 pages including figures. A Latex and Word templates can be downloaded from the meeting web site. All accepted abstracts will be included in a Book of Abstracts that will be available to registered participants.

Important dates

Abstract submission deadline: 31 April 2010

Notification of acceptance: 30 May 2010

Meeting venue

The workshop will be held in a lake-side sanatorium approximately 20 km from the historic city of Kiev.

Registration

The registration fee will be expected to be around 160 EUR (ERCOFTAC members: 140 EUR), which includes the Book of Abstracts, an excursion to nearby historic sites and a conference dinner. Limited funding is available for students to cover a part of travel expenses and/or the registration fee.

Contact information

Convenor of SIG20 Drag Reduction:

Prof. Kwing-So Choi
University of Nottingham
Department of Mechanical Engineering
University Park
Nottingham, United Kingdom
Email: kwing-so.choi@nottingham.ac.uk

Local Organizer:

Prof. Gennadii Voropayev
Institute of Hydrodynamics
Ukrainian Academy of Sciences
8/4 Zheljabova str.
Kiev, Ukraine
Email: vortex@hbi.com.ua

European Research Community On Flow, Turbulence And Combustion

WORKSHOP – CONFERENCE – SUMMER SCHOOL - COURSE APPLICATION SHEET

Title	GID 2010 5 th Conference on Advances and Applications of GiD <i>Add a brief summary of the objectives of the activity (or the announcement) on a separate page</i>		
	[] Workshop [] Summer School [X] Conference [X] Course		
Location and Date	Palladium Palace Resort Hotel, Carretera d'en Bossa s/n, 07817, Playa d'en Bossa, Ibiza, Spain, 25-27 th May 2010		
Organizer	Name Abel Coll		
	Address CIMNE - International Center for Numerical Methods in Engineering Office c-2, C1 building - Campus Nord UPC Gran Capità s/n, 08034 Barcelona		
	Country Spain		
	Tel 34 - 93 401 74 03		Fax 34 - 93 40 65 17
	Email abelcs@cimne.upc.edu		
Pilot Center(s) or SIGs involved	Iberian East Pilot Center,		
Co-organizing Associations	COMPASSIS (www.compassis.com) Technical University of Catalonia (www.upc.edu)		
Scholarships	Scholarship request? [X] Yes [] No		
Rules	I have read the document "Rules for holding ERCOFTAC events", which can be found on www.ercoftac.org [X] Yes [] No		

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Number	W2010-04
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Date Received	17.9.2009		
Approval	SPC		MB
Scholarships	[] Yes, Amount	EURO	[] No
Announcement	Bulletin		
Report	Bulletin		

The announcement is still not ready. We include the description of the event held in 2008. This can be found in the website <http://www.gidhome.com/2008/info.html>

OBJECTIVES

The objective of this fourth edition of the GiD Conference is to **bringing together users and developers of the GiD pre/post processing system** in order to exchange ideas and experience on the generation of data for computer simulation and the graphic visualisation of numerical results. The first three conferences were held in Barcelona on February 2002, February 2004 and March 2006.

The meeting is organised in a conference format including oral presentations, and discussion on advances in the development and applications of GiD to different fields in engineering and science and identify future directions for research and practice.

Sessions related to specific areas related to GiD will be complemented by Keynote Lectures on targeted research topics in the field of pre and post processing given by international experts.

CONFERENCE TOPICS

Contributions are welcomed on any development and application of GiD. The following list gives an indication of the topics addressed in the conference:

- Interface with CAD data (IGES, VDA, DXF, etc)
- CAD data repair
- Mesh generation
- Point generation. Discrete element generation. Meshless methods.
- Numerical methods (finite elements, finite volumes, finite differences, discrete elements, particle methods etc)
- Parallel remote and grid computing
- Interface of GiD with commercial codes (Nastran, Ansys, LS-DYNA, etc)
- Visualisation of numerical results (streamlines, isosurfaces, vectors, beam diagrams, etc)
- Animations of graphical results (simple and combined results, MPEG, AVI, VRML formats)
- Fast visualization via GPUs
- Applications of GiD in science and engineering (GIS, hydrology, geotechnics, multi-physics, CFD, food processes, structural analysis, electromagnetics, physics, chemistry, bio-medical engineering, etc)

LOCATION

The conference will take place in the island of Ibiza in Spain, at the Palladium Palace hotel.

ORGANIZING COMMITTEE

A. Coll, CIMNE
M. Pasenau, CIMNE
E. Escolano, CIMNE
J. Suit, UPC/CIMNE
R. Ribó, COMPASS

CIMNE: International Center for Numerical Methods in Engineering www.cimne.com

UPC: Universitat Politècnica de Catalunya www.upc.edu

COMPASS Ingeniería y Sistemas, S.A., www.compassis.com

CALL FOR PAPERS

Half page abstracts on topics related to the themes of the conference are invited by **January 20th, 2008**. Authors are requested to submit their abstracts via the Conference [Web Site](#). Notification of acceptance will be given by **February 4th, 2008** at which stage information regarding the format

of the papers to be published will be sent to the authors. The length of the paper should not exceed four pages including figures. Full instructions for writing and submitting both the abstract and the paper are available [here](#). Authors are asked to send their collaborations in address' pdf format. Other formats will not be accepted. In order to produce the proceedings in time for distribution to the delegates at the conference, completed papers will be required by **March 2nd, 2008**.

Instructions to authors for the preparation of papers: [PDF format](#) or [Word format](#)

LANGUAGE

Contributed papers must be written in English. Oral works can be presented in English or Spanish.

IMPORTANT DATES

Deadline for presenting a half page abstract: January 20th 2008

Acceptance of the paper and instructions for writing a four page paper: February 4th, 2008

Deadline for submitting the full paper: March 2nd, 2008

Booking of hotel accommodation **as soon as possible**. Check [here](#) for details.

PRE-CONFERENCE COURSE ON GiD 9.0

Course describing the features of the latest version of GiD will be held on **May 7th 2008**.

Course: a 6 hours course covering a whole simulation process.

Content: How to create a model, apply conditions, materials, meshing settings. Launch a simulation and postprocess the results. How to create new customised windows. Key parameters when importing models from other CADs. Etc..

Emphasis will be placed on participants' demands.

The course includes a "hands on" tutorial on PC's in order to follow and apply the different course topics. **To follow the tutorials participants will have to bring their own personal computer.**

Course fees

Course: 100 €

Combined course + conference fees

Delegates: 250 € Student: 200€

REGISTRATION FEES

Delegates: 200 Euros

Students: 120 Euros

The fees include:

- One year licence of professional version of GiD v9.0
- Conference proceedings
- Attendance to all scientific sessions
- Coffee breaks, reception and dinner

Students working in applications using GiD can be supported by the organisation. Please, fill and send the application form you will find in [the Conference Webpage](#).

CONFERENCE SECRETARIAT

International Center for Numerical Methods in Engineering (CIMNE) Edificio C-1, Campus Norte UPC, Gran Capitan s/n, 08034 Barcelona, Spain Tel: +34 93 401 74 41 E-mail: gidconf@cimne.upc.edu Fax: +34 93 401 65 17 <http://www.gidhome.com/2008>

European Research Community On Flow, Turbulence And Combustion

WORKSHOPS/CONFERENCES/SUMMERSCHOOLS/COURSES SUMMARY SHEET

Title	12th Workshop on Two-Phase Flow Predictions <i>Add a brief summary of the objectives of the activity (or the announcement) on a separate page</i>			
	Workshop	Summerschool	Conference	Course
Location and Date	Halle (Saale), Germany 22. – 26. March 2010			
Organizer	Name Prof. Dr.-Ing. Martin Sommerfeld			
	Address: Zentrum für Ingenieurwissenschaften Martin-Luther-Universität Halle-Wittenberg D-06099 Halle (Saale)			
	Country: Germany			
	Tel: 0049-3461-462879		Fax: 0049-3461-462878	
	E-mail: martin.sommerfeld@iw.uni-halle.de			
Pilot Center(s) or SIGs involved	SIG 12: Dispersed Turbulent Two-Phase Flow PC Germany North			
Co-organizing Associations	none			
Scholarships	Request scholarships ?		Yes	
Rules	I have read the document "Rules for holding ERCOFTAC event", which can be found on www.ercoftac.org, ERCOFTAC events: Yes			

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 EPFL-STI-IE (LMF)
 CH - 1015 LAUSANNE
 Switzerland

Fax: +41.21.693.53.07

To be filled-in by ERCOFTAC

Number	W2010-05
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Date Received	18.9.2009		
Discussed SPC & MB	SPC	MB	
Scholarships	p Yes, Amount	EURO	p No
Announcement	Bulletin		
Report	Bulletin		

Objectives of the Workshop

The main objective of the Workshop is to bring together researchers working in the field of dispersed multiphase flow on theoretical, numerical and experimental basis. Oral presentations and posters in the following areas are most welcome for the Workshop:

1. Recent developments in the Euler/Euler and Euler/Lagrange approaches
2. Modelling of dispersed turbulent two-phase flows (turbulence models, heat and mass transfer, particle-wall interaction, particle-particle interaction, bubble and droplet interactions, agglomeration, ...)
3. Direct numerical simulations with interface resolution (solid particles, droplets and bubbles)
4. Direct and large eddy simulations of particulate flows (point-particle assumption)
5. Application of numerical methods for two-phase flows in process engineering
6. Experimental studies on dispersed two-phase flows including new measuring techniques

During the 4-day Workshop 40 presentations, each 30 min including discussion can be accommodated. Additionally, about 15 posters may be accepted.

An additional objective of the Workshop will be related to the validation of numerical predictions obtained by different model approaches and numerical codes. These validations will be based on pre-defined test cases for which experimental or numerical results (e.g. direct or large eddy simulations) are available. Several test cases will be selected and made available to the interested groups approximately four months prior to the Workshop. The test cases are generally blind test cases and only boundary and inlet conditions will be provided. The following test cases are tentatively planned:

- Confined particle-laden flow downstream of a bluff-body (Boree)
- Dense particle-laden free jet with different solids loading (Sinclair-Curtis)

During the Workshop, the various numerical results for the test cases will be exhibited. The presentations are followed by a round table discussion to examine the performance of the various computer codes and models. The test case calculations can be regarded as a challenge to approach more complex problems in two-phase flow predictions and will hopefully stimulate further improvements and developments of numerical methods and models.

EUROMECH Colloquium 513 on "Dynamics of non-spherical particles in fluid turbulence"

September 29th - October 1st 2010

Trondheim, Norway

Our proposal to host this EUROMECH colloquium has been approved by the EUROMECH Council. We now apply for permission to organise this event in association with ERCOFTAC and we also apply for ERCOFTAC support for scholarships for young researchers. Non-spherical particle dynamics in turbulent flows are particularly relevant for SIG43 Fibre suspension flows, but also within the scope of SIG12 Dispersed turbulent two phase flow.

Scope and topics:

Dynamics of non-spherical particles in fluid flow are encountered both in nature and in industrial applications, e.g. airborne solid particles or aerosols, carbon nanotubes, micro-organisms like phytoplankton, sediment-laden flows and wood-fibre suspensions. The scope of the colloquium includes both studies and modeling of the dynamical behaviour of non-spherical particles as well as the modulation of the turbulence field brought about by the particles. The focus will be on generic aspects and physics of particulate turbulent flows, be it computer simulations, laboratory or field measurements, and theoretical studies. Among the topics to be included are particle dynamics in free and wall-bounded turbulence, fluid-particle interactions, collision modelling, agglomeration, advances in measurement and simulation techniques, and rheological modelling.

Chairperson:

Professor Helge I. Andersson
Department of Energy and Process Engineering
Norwegian University of Science and Technology
7491 Trondheim, Norway
Telephone: (+47) 73 59 35 56
Fax: (+47) 73 59 34 91
E-mail: helge.i.andersson@ntnu.no

Co-chairperson:

Professor Alfredo Soldati
Dipartimento di Energetica e Macchine
Universita di Udine
Udine 33100, Italy
E-mail: soldati@uniud.it

The fourth in this series of symposia established in 2004, past editions of which have jointly been supported by ERCOFTAC has established a forum for presentation and discussion of results and open issues in turbulence physics, transition and modeling. In particular, focus is placed on advances in theory, modeling, numerical algorithms, and experiment devoted to fundamental and applied research in turbulent and transitional flows. The intended target audience encompasses specialists who have contributed to pioneering developments in this field and are willing to promote the synergy between theory, experiment and computation in order to advance both the frontiers of knowledge and technology transitions in this field.

This meeting is expected also to foster the involvement of Portuguese research teams working in the fields of turbulence and transition and to announce the role of the ERCOFTAC organization. Contributions selected for presentation will be published online, while a summary will appear in the ERCOFTAC bulletin.

The workshop will have about 20 presentations with, among others, the following speakers

- J. C. F. Pereira (IST, Lisbon, Portugal)
- M. Teixeira (Fac. Ciencias, Lisbon, Portugal)
- Sergei Chumakov (CTR - Stanford, USA)
- D. Arnal (ONERA, France)
- Jorge Barata (University of Beira Interior, Portugal)
- Teofilis Vassilis (UPM, Madrid, Spain)
- Roberto Castilla (University Catalunya, Spain)

Pending confirmation, presentations will also be given by

- Javier Jimenez (UPM, Madrid, Spain)
- Fernando Pinho (FEUP, Porto, Portugal)
- Xavier Viegas (ADAE, Coimbra, Portugal)

European Research Community On Flow, Turbulence And Combustion

WORKSHOPS/CONFERENCES/SUMMERSCHOOLS/COURSES SUMMARY SHEET

Title	PIV Course <i>Add a brief summary of the objectives of the activity (or the announcement) on a separate page</i>			
	Workshop	Summerschool	Conference	<input checked="" type="checkbox"/> Course
Location and Date	Göttingen, Germany March, 22. – 26., 2010			
Organizer	Name	Dr. Schröder, Andreas		
	Address	Deutsches Zentrum für Luft- und Raumfahrt e.V. Institut für Aerodynamik und Strömungstechnik Bunsenstrasse 10, 37073 Göttingen		
	Country	Germany		
	Tel	0049 551 709 2190 / 2468	Fax	0049 551 709 2830
	E-mail	andreas.schroeder@dlr.de		
Pilot Center(s) or SIGs involved	Germany North, The Netherlands, France SIG 32			
Co-organizing Associations	AG STAB, Uni Oldenburg / Uni Bw München			
Scholarships	request scholarships ?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Rules	I have read the document "Rules for holding ERCOFTAC event", which can be found on www.ercoftac.org, ERCOFTAC events: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

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Number	S2010-01
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Date Received	10.9.2009		
Discussed SPC & MB	SPC	MB	
Scholarships	p Yes, Amount	EURO	p No
Announcement	Bulletin		
Report	Bulletin		

Deutsches Zentrum
für Luft- und Raumfahrt e.V.

German
Aerospace Center



DLR Institute of Aerodynamics and Flow Technology
Bunsenstr. 10, D-37073 Göttingen, Germany

Institute of Aerodynamics
and Flow Technology

Dr. Navid Borhani
ERCOFTAC Coordination Centre
EPFL-STI-IGM-ERCOFTAC
ME G1 465, Station 9
CH-1015 Lausanne VD
Switzerland

Fax +41 21 693 5960

1 + 5 pages

Your letter	
Your reference	
Our reference	
Your correspondent	Dr. A. Schröder
Telephone +49 5 51 7 09-	2190 / 2468
Telefax +49 5 51 7 09-	2830
E-mail	andreas.schroeder@dlr.de
Göttingen,	10.09.2009

Request for ERCOFTAC approval and scholarships for PIV course, March 22– 26, 2010

Dear Dr. Borhani,

Please find attached the completed form for approval of ERCOFTAC courses. As we did not receive scholarships in the last year for our PIV course, I indicated our interest to obtain such support for 2010.

The website of our course is <http://pivcourse.dlr.de>

Best regards

A handwritten signature in blue ink that reads 'A. Schröder'.

Andreas Schröder

Application of Particle Image Velocimetry

-Theory and Practice-

The main interest of todays research in fluid mechanics is more and more directed to problems where unsteady and separated flows are predominant. For investigations of flow fields with pronounced spatial structures and/or rapid temporal or spatial changes (transition from laminar to turbulent flow, coherent structures, pitching airfoils in transonic flows with shocks, rotors, test facilities with short run time, etc.) new experimental techniques, such as Particle Image Velocimetry (PIV) are required which allow to capture the flow velocity of large flow fields instantaneously. An important feature of PIV is that for the first time, a reliable basis of experimental flow field data is provided for direct comparison with numerical calculations and hence, for validation of computer codes. During the last years an increasing number of scientists have started to utilize the PIV technique to investigate the instantaneous structure of velocity fields in various areas of fluid mechanics. A number of different approaches for the recording and evaluation of PIV images have been described in literature. This course, which is the 18th course on PIV since 1993 organized by DLR, will mainly concentrate on those aspects of the theory of PIV relevant to applications. Besides giving lectures on the fundamental aspects, special emphasis is placed on the presentation of practical and reliable solutions of problems which are faced during the implementation of this technique in wind tunnels and other test facilities. During practice the participants will have the opportunity to carry out the recording and the evaluation of PIV images by themselves in small groups. Recent developments of the PIV technique such as 3D(t)-PIV (tomographic and holographic PIV) and Stereo PIV, Time Resolved PIV and Micro PIV will be discussed and demonstrated.

Lecturers

Prof. Michel Stanislas, Laboratoire de Mécanique de Lille, France, is working in the field of Flow Visualization, Holography, and Particle Image Velocimetry. Prof. Stanislas will present the lectures on the optical aspects of PIV.

Prof. Klaus Hinsch, Carl von Ossietzky Universität, Oldenburg, Germany, who has long term experience in the field of Holography, Speckle and Particle Image Velocimetry, will present the lectures on 3D and holographic PIV.

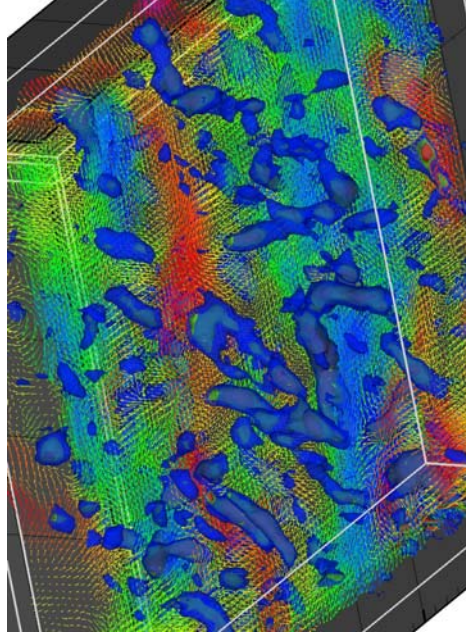
Prof. Jerry Westerweel, Delft University of Technology, The Netherlands, will discuss the theoretical basis of the digital PIV technique, combined PIV / LIF and Micro PIV in his lectures.

Prof. Christian Kähler, UniBw München will discuss Stereo and Multi-plane PIV aspects and the advances in Time Resolved- and long range micro-PIV.

Dr. Andreas Schröder, Institute of Aerodynamics and Flow Technology, DLR, Göttingen, will organize the PIV course, which was established in 1993 by Dr. Jürgen Kompenhans. In the past Prof. Markus Raffel and Dr. Christian Willert (now working in DLR's Institute of Propulsion Technology) have provided the foundations of PIV application in wind tunnels. Together with Dr. Klaus Ehrenfried, Dr. Boleslaw Stasicki, Dr. Robert Konrath, Dr. Reinhard Geisler, Dr. Daniel Schanz, Dipl.-Ing. Janos Agocs and Dipl.-Ing. Fritz Boden from DLR, they will present their knowledge and experience in different areas of the PIV technique such as tracer particles, illumination, recording, evaluation, data presentation, 3D(t)-PIV and other 3C-PIV techniques.

Application of Particle Image Velocimetry

-Theory and Practice-



3D -velocity vector fields measured in a turbulent boundary layer flow

March 22 - 26, 2010

18th course since 1993 to be held at

German Aerospace Center (DLR), Göttingen, Germany

organized by



ERCOFTAC
Pilot Centre 'Germany North'



AG STAB

JM Burgerscentrum

The University of Groningen
Research School for Fluid Mechanics

in cooperation with

Laboratoire de Mécanique de Lille,
Delft University of Technology,
University of Oldenburg,
Bw University of München and
DLR, Göttingen

Course Outline

Monday, March 22, 2010

Registration

Welcome by Dr. Jürgen Kompenhans, Head of Department of Experimental Methods, Institute of Aerodynamics and Flow Technology
Principles of PIV technique: Flow tracing by particle imaging, light scattering, recording of PIV images, analysis
Application of PIV technique: Considerations for design of PIV-systems, PIV-systems for wind tunnels
Principles: Statistics of PIV images

Tuesday, March 23, 2010

Application: Digital PIV, video recording, CCD/CMOS sensors

Principles: Theoretical aspects of evaluation of digital PIV recordings, cross-correlation, image deformation, peak detection, evaluation of stereoscopic PIV recordings

Application: Practical aspects of evaluation of digital PIV recordings, measurement uncertainties, Combined PIV / LIF
Practice I

Wednesday, March 24, 2010

Principles: Advanced techniques, optical principles of stereoscopic, tomo- and holographic methods, data validation

Application: Multi plane stereo-, Micro- and Time Resolved- PIV, PIV for multi-phase flows, vector field operators, data analysis and presentation
Practice II

Thursday, March 25, 2010

Practice III and Practice IV

Friday, March 26, 2010

Practice V

Future aspects of PIV technique, Final discussion

Practice (preliminary)

Image capture in wind tunnel: seeding, pulse laser, illumination optics, triggering, CMOS recording, TR-PIV

Image capture in water tunnel: imaging, CCD recording, optical distortions, 3D PIV

Evaluation and post processing: cross-correlation methods, data validation, data

analysis and presentation

Optics and holography: imaging, holography

Non-standard video and PIV related techniques: video stroboscope, density

measurements (BOS)

General Information

The latest information about the course may be found at

<http://pivcourse.dlr.de>

Program Schedule

Registration will begin at 8:00 on Monday, March 22, 2010 in the Secretary Room of Building 7. Lectures (4 half days) and experiments and demonstrations in the laboratory (5 half days) will run from 8:30 to 12:00 from Monday to Friday and from 13:30 to 16:30 from Monday to Thursday, respectively. All presentations will be given in English.

Course Materials

A complete set of course notes together with the book 'Particle Image Velocimetry - A Practical Guide (2nd Edition)' (published by Springer, 2007) and the USB memory of proceedings of the PIV'09 symposium will be distributed to the participants at registration.

Course Registration

Early registration is required due to limited number of places in the laboratory. Only *Online registration at <http://pivcourse.dlr.de> is possible.* The registration fee of 1100 EURO includes course notes, lunches and refreshments during the course. For payments received before January 28, 2010, a reduced registration fee of 990 EURO applies. The fee for participation is free of VAT as far as the German Umsatzsteuergesetz (UStG) is concerned. The organizers reserve the right to cancel the course in case of insufficient registration. A cancellation fee of 200€ will be charged from registered persons who cancel their participation after March 8, 2010. For students some ERCOFTAC scholarships are available on request.

Exhibition

An exhibition of equipment from major manufacturers of PIV systems will take place from March 25 to 26, 2010.

Additional Information

For additional information about the course contact:

Scientific:

Dr. Andreas Schröder

Tel. + 49 551 709 2190, e-mail: andreas.schroeder@dlr.de

Dr. Jürgen Kompenhans

Tel. + 49 551 709 2460, e-mail: juergen.kompenhans@dlr.de

Organization: **Mrs. Ilka Micknaus**

Tel. +49 551 709 2468 / 2461, e-mail: pivcourse@dlr.de

Institute of Aerodynamics and Flow Technology, DLR, Bunsenstrasse 10, 37073 Göttingen, Germany, Fax + 49 551 709 2830.

Who should attend ?

This course is mainly intended for engineers, scientists and students, who have already some basic knowledge of the PIV technique and have just started to utilize PIV for their special industrial or scientific applications or plan to do so in near future. During the course many problems arising in the recording and evaluation of PIV images will be treated - in theory as well as in practice.

European Research Community On Flow, Turbulence And Combustion

WORKSHOPS/CONFERENCES/SUMMERSCHOOLS/COURSES SUMMARY SHEET

Title	“Non-normality and non-linearity in thermo-acoustics” (Please see brief summary in the next page) <i>Add a brief summary of the objectives of the activity (or the announcement) on a separate page</i>
	<input type="checkbox"/> Workshop <input checked="" type="checkbox"/> Summerschool <input type="checkbox"/> Conference <input type="checkbox"/> Course
Location and Date	TU Munich, Germany, May 17-21, 2010
Organizer	Name: Wolfgang Polifke, Mathieu Zellhuber (TU Munich, Germany) Address: Lehrstuhl für Thermodynamik Technische Universität München D-85747 Garching Country: Germany Tel +49 (0)89 289 16216, +49 (0)89 289 16217 Sek. Fax: +49 (0)89 289 16218 E-mail: polifke@td.mw.tum.de , zellhuber@td.mw.tum.de http://www.td.mw.tum.de
Pilot Center(s) or SIGs involved	SIG28 Reacting Flows
Co-organizing Associations	Joint Summer School (2 days) and Workshop (2 days). The Summer School (only) is co-organized with Marie Curie RTN AETHER
Scholarships	request scholarships ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Rules	I have read the document "Rules for holding ERCOFTAC event", which can be found on www.ercoftac.org, ERCOFTAC events: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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Date Received	18.9.2009
Discussed SPC & MB	SPC MB
Scholarships	<input type="checkbox"/> Yes, Amount EURO <input type="checkbox"/> No
Announcement	Bulletin
Report	Bulletin

“Non-normality and non-linearity in thermo-acoustics”

Brief Summary of the objectives of the activity

The ERCOFTAC SIG28, the Marie Curie RTN AETHER and TU Munich intend to organize a Workshop and a Summer School on “Non-normality and non-linearity in thermo-acoustics”. The Workshop and Summer School will be held at TU Munich, Germany, during the week of May 17-21, 2009 and will report on recent findings in the area of non-normality and non-linear effects in thermo-acoustics. This topic should attract not only academic researchers but also people from industry as it is still one of the challenging topics in the gas turbine industry.

The Summer School part will consist of a series of invited lectures which will take place during the first two days and which will give introduction and overview to the topics involved. The first part will be followed by a Workshop consisting of one or two days of talks on recent research results in non-linear thermoacoustics (that's the workshop part) with major objective to offer participants the possibility to discuss and exchange ideas on this important topic. For the workshop part, a call for papers will be published.

The potential list of invited lecturers and speakers consists of R. Sujith (IIT Madras), M. Juniper (Cambridge), P. Schmid (Ecole Polytechnique), T. Schuller (EM2C, ECP) or S. Candel (EM2C, ECP), W. Polifke (TU Munich), N. Karimi (TU Darmstadt), C. Lawn (Queen Mary) and P. de Goey (TU Eindhoven). The location will be TU Munich and funding will contribute to scholarships for students from ERCOFTAC member institutes as well as to reimburse invited speakers.

European Research Community On Flow, Turbulence And Combustion

WORKSHOP – CONFERENCE – SUMMER SCHOOL - COURSE

APPLICATION SHEET

Title	Turbulence and mixing in compressible flows III <i>Add a brief summary of the objectives of the activity (or the announcement) on a separate page</i>
	<input type="checkbox"/> Workshop <input checked="" type="checkbox"/> Summer School <input type="checkbox"/> Conference <input type="checkbox"/> Course
Location and Date	La Vieille Perrotine, CNRS holiday & conference centre, Oléron Island, St Pierre d'Oléron, France, 13-18 September 2010
Organizer	Name: Pierre Comte <hr/> Address <div style="text-align: center;"> LEA / CEAT 43 route de l'Aérodrome F-86036 POITIERS Cedex </div> <hr/> Country France <hr/> Tel: +33 (0)5 49 36 60 11 Fax: +33 (0)5 49 36 60 01 <hr/> Email: pierre.comte@lea.univ-poitiers.fr
Pilot Center(s) or SIGs involved	SIG 4, PC France West , SIG 35
Co-organizing Associations	
Scholarships	Scholarship request? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Rules	I have read the document "Rules for holding ERCOFTAC events", which can be found on www.ercoftac.org <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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Number	S2010-03
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Date Received	
Approval	SPC MB
Scholarships	[] Yes, Amount EURO [] No
Announcement	Bulletin
Report	Bulletin

Turbulence and mixing in compressible flows III

Summary of the objectives

The Summerschool «Turbulence and mixing in compressible flows III» is organised for an audience of students, research scientists and engineers working on problems involving significant changes of density. This is of course the case of high speed flows (transonic, supersonic, hypersonic regimes). This happens also when interfaces between different media are subjected to accelerations, when some aspects of combustion are present or in the questions of aeroacoustics. Such problems appear in various domains of application: in aeronautics for problems of external and internal aerodynamics and for aeroacoustics, and more generally when the control of such compressible turbulent flows is investigated; the questions of compressible mixing and some aspects of astrophysical flows require also a detailed knowledge of compressible turbulence.

A quick analysis of the degree courses in the universities reveals that of compressible turbulence is generally not taught in the classical academic education, so that there is a need for specialized teaching on this topic, at a European level. Therefore, the objective of this Summer School is to give a series of specialised lectures for research scientists and engineers, giving information about the classical problems in the field, identifying the hard points and the available solutions.

The main topics which will be explored can be summed up as follows:

Classical decompositions for compressible turbulence.

Properties of supersonic boundary layers, Morkovin hypothesis, Reynolds Analogies.

Properties of supersonic free shear flows.

RANS modelling for supersonic flows.

Spectral modelling for compressible flows.

Shock turbulence interactions and shock-boundary layer interactions.

Elements of aeroacoustics.

Simulation of flows with combustion.

Turbulent mixing and turbulence in unsteady flows.