

# *European Research Community on Flow, Turbulence and Combustion*

## **SCHEDULE**

### **ERCOFTAC COMMITTEE MEETINGS**

5<sup>th</sup> May 2009

University of Technology and Economics  
Budapest, Hungary

<b>9:00-12:00</b>	SPC meeting – Room 60, Floor 1, Central ‘K’ Building IPC meeting – Room 65, Floor 1, Central ‘K’ Building
<b>12:00-13:00</b>	Lunch
<b>13:00-16:30</b>	EC meeting – Room 60, Floor 1, Central ‘K’ Building

#### **Documents attached**

1. Agendas for the SPC, IPC and EC meetings
2. Minutes of the Ercoftac Committee meetings held in Brussels on 20.11.2008
3. Ercoftac Workshop and Summerschool status report
4. Applications for ERCOFTAC event sponsorship and overdue reports
5. Applications for SIG funding
6. ADO report and accounts

# *European Research Community on Flow, Turbulence and Combustion*

## **AGENDA**

### **SCIENTIFIC PROGRAMME COMMITTEE MEETING**

**5<sup>th</sup> May 2009, Budapest**

**9:00**

**Scientific Committee meeting, chaired by Prof. Leschziner**

1. Approval of the agenda
2. Approval of minutes from the SPC meeting held in Brussels on 20.11.2008
3. Action items from the from the SPC meeting held in Brussels on 20.11.2008
4. Special Interest Groups
  - i. Current status report
  - ii. SIG funding requests
5. Pilot Centres
  - i. Creation of a North American PC in collaboration with Boeing
6. Workshops and summer schools
  - i. Status of reports from previous events
  - ii. Consideration of new proposals
  - iii. Joint conference on multi-phase flows with SIAMUF
7. Status of ETMM8
8. The 2009 DaVinci award
9. Presentation on C-Aero and its implications for ERCOFTAC
10. ERCOFTAC publications
  - i. FTAC journal
  - ii. ERCOFTAC Bulletin
  - iii. ERCOFTAC Book series
  - iv. LES Best practice guidelines – Special session at the AIAA 2010 conference
11. QNET-CFD: The wiki version of the knowledge base
12. Any Other Business
13. Dates and location of the next SPC meeting

**12:00**

**End of meeting**

**AGENDA**

**INDUSTRIAL PROGRAMME COMMITTEE MEETING**

**5<sup>th</sup> May 2009, Budapest**

**09:00          IPC meeting, chaired by Dr. Lea**

1.    Apologies for absence
2.    Approval of the agenda
3.    Minutes of IPC meeting held in Brussels on the 20<sup>th</sup> November 2008
4.    Wiki version of QNET-CFD knowledge base
  - i.    Present status (Profs Rodi and Hutton)
  - ii.   Future plans
5.    ERCOFTAC industrial strategy
  - i.    Delivery and development of the business plan (Dr Seoud)
  - ii.   Monitoring & review (Dr Lea)
6.    Best Practice Guidelines
  - i.    Status of the Dispersed Multi-Phase Flow BPG (Dr Seoud acting for Prof Oliemans)
  - ii.   Status of the Industrial CFD BPG, including 2<sup>nd</sup> edition (Dr Lea)
  - iii.  Other BPG: Heat transfer?
7.    Next IPC meeting
8.    Any Other Business

**12:00          End of meeting, lunch break**

# *European Research Community on Flow, Turbulence and Combustion*

## AGENDA

### EXECUTIVE COMMITTEE MEETING

5<sup>th</sup> May 2009, Budapest

**13:30**                    **Executive Committee meeting, chaired by Prof. Hutton**

1. Approval of the agenda
2. Approval of minutes from the MB-GA meeting held in Brussels on 20.11.2008
3. Action items from the from the MB-GA meeting held in Brussels on 20.11.2008
4. The evolution of ERCOFTAC and its future operation
  - i. Creation of a North American PC in collaboration with Boeing
  - ii. Report from the Horizon 10 group
5. Financial report
6. Report from the Administration and Development Office
7. Report from the Coordination Centre
8. Report from the Scientific Programme Committee
9. Report from the Industrial Programme Committee
10. Composition of the SPC, IPC and MB
11. 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
12. Any Other Business
13. Dates and location of the next EC meeting

**16:30**                    **End of meeting**

# *European Research Community On Flow, Turbulence and Combustion*

## **SCIENTIFIC PROGRAMME COMMITTEE MEETING**

**20<sup>th</sup> November 2008, Brussels, Belgium**

### **ATTENDANCE**

Andersson, H.  
Borhani, N.  
Braza, M.  
Cambon, C.  
Comte, P.  
Deconinck, H.  
Dick, E.  
Gauger, N.

Hämäläinen, J.  
Hanifi, A.  
Jakirlic, S.  
Kuhlmann, H.  
Leschziner, M.  
Longatte, E.  
Merci, B.  
Nicolleau, F.

Redondo, J.  
Rodi, W.  
Van Steenhoven, A.  
Vlachos, N.  
Von Terzi, D.  
Wallin, S.

### **APPOLOGIES**

Brenn, G.  
Carey, C.  
Cartage, T.  
Castro, I.P.  
Choi, K-S.  
Courty, J-C.  
Delgado  
Doerffer, P.  
Duursma, R.  
Geurts, B.

Haase, J-F.  
Jacobsen, C.B.  
Jansohn, P.  
Jimenez, J.  
Lehning, M.  
Martelli, F.  
Morrison, J.F.  
Ooms, G.  
Panidis, T.  
Pawlik, V.

Pfitzner, M.  
Rispoli, F.  
Simoneau, J-P.  
Sommerfeld, M.  
Standingford, D.  
Theofilis, V.  
Tomboulides, A.  
Von Rohr, P.R.

## SUMMARY OF ACTION ITEMS ARISING FROM MEETING

- *The SPC voted to recommend the appointment of Prof. Geurts as SPC Vice-Chairman to the Managing Board.*
- *The SPC decided to recommend to the Managing Board that SIG coordinators should be able to: (i) manage their own pages and upload documents on the ERCOFTAC website, and/or (ii) cross-link their own webpages. The quality of their efforts would then be controlled by the ERCOFTAC IEO.*
- *The SPC agreed that requests for future SIG funding should be assessed by the SPC and then forwarded to the Executive Committee for approval. Therefore, an agenda item will be added to future SPC committee meetings to assess SIG funding requests.*
- *The SPC decided to refer the Coordination Centre's proposal to change the ERCOFTAC Bulletin to a bi-annual publication to the Managing Board for a decision.*

## MINUTES

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

### **1. Approval of the agenda**

The agenda was approved by the members.

### **2. Approval of SPC committee meeting minutes from Stockholm on the 6<sup>th</sup> May 2008**

Prof. Andersson stated that he was present at the SPC meeting in Stockholm.

### **3. Matters arising and review of actions from the SPC Meeting held in Stockholm on the 6<sup>th</sup> May 2008**

- Prof. Leschziner had contacted SIG coordinators to motivate them to publish their activities on the ERCOFTAC website.
- Prof. Leschziner had written to all SIG coordinators to ask them for their future activity plans, and submitted these to the Executive Committee for review in order to determine their funding for 2009.
- Prof. Leschziner had written to all PC coordinators to inform them that funds were available for specific PC activities, on application to and approval by the Executive Committee.

### **4. SPC Chairmanship**

After a search for suitable candidates, Prof. Leschziner reported that Prof. Geurts had agreed to become SPC Vice-Chairman with an intention of eventually becoming SPC Chairman. His conditions are that his SPC Chairmanship would start only after his responsibilities relating to LES-AID end in January 2010, and that he is not responsible for organizing ETMM8 in June 2010. Prof. Leschziner stated that the later would remain his responsibility.

*\* The SPC voted to recommend the appointment of Prof. Geurts as SPC Vice-Chairman to the Managing Board.*

## 5. Special Interest Groups

Prof. Leschziner reminded members that SIG coordinators should be members of ERCOFTAC. In view of this, he has contacted the coordinator of SIG 42, Prof. Nicolleau, to urge him to become an academic member of ERCOFTAC.

### i. Current status report

Since a SIG's exposure to the outside world is through its presence on the ERCOFTAC website, Prof. Leschziner drew up a SIG current status report by checking the state of their webpages. He noted that only a few SIGs had a credible webpage entry. This gave the general impression that there was very little activity within the ERCOFTAC network. He noted that these problems, discussed and reported on in detail at previous SPC meetings, have persisted since the creation of the webpage four years ago, regardless of the numerous initiatives put in place to correct them. Prof. Leschziner commented that the problem was not only the website management procedures, but the lack of motivation of some SIG coordinators. Prof. Redondo responded that the webpage problems and the lack of motivation were a result of the desire of the Executive Committee to have greater control over ERCOFTAC events and funding. Prof. Leschziner rejected this claim, and reiterated his view that the problem was, principally, lack of commitment by the SIGs.

*\* The SPC decided to recommend to the Managing Board that SIG coordinators should be able to: (i) manage their own pages and upload documents on the ERCOFTAC website, and/or (ii) cross-link their own webpages. The quality of their efforts would then be controlled by the ERCOFTAC IEO.*

Profs. Gauger, Andersson and Vlachos noted that better communication was needed throughout the ERCOFTAC network, with timely advertisement of event details and distribution of documents such as agendas and minutes. Prof. Leschziner commented that there should be a section in the ERCOFTAC Website that was only accessible to committee members, where relevant documents could be placed for download.

### ii. SIG funding

Prof. Leschziner reported that he had contacted all SIG coordinators to ask them for their planned future activities. After submitting their responses to the Executive Committee for review, it was decided that six SIGs would be funded for up to 3000 Euros in 2009. These SIGs are: 12 – Two-phase flow, 15 – Turbulence modelling, 20 – Drag reduction and flow control, 28 – Combustion and reacting flows, 35 – Multipoint turbulence modelling, and 42 – Synthetic models in turbulence.

In response to Prof. Hanifi's question on why SIG 33 'Transition mechanisms, prediction and control' had not been funded for 2009, Prof. Leschziner responded that no formal case had been submitted for consideration from this SIG.

Prof. Leschziner attributed the decrease in the number of funded SIGs, compared to eight in 2008, to the lack of motivation of some SIG coordinators. Prof. Hanifi responded by saying that SIG coordinators found the procedures for claiming from their 3000 Euros funding too complicated and time consuming, and that they would rather the full amount was paid in advance.

Prof. Redondo, asked why SIG funding is decided only by the SPC Chairman and the Executive Committee, rather than by the SPC committee. Prof. Leschziner responded that he was very keen, and under pressure from SIGs, to respond in a timely manner to applications from SIGs for support. These applications were coming in throughout the year and the need to await decisions by the SPC would inevitably lead to delays in awarding support.

*\* Prof. Leschziner and SPC Members agreed that requests for future SIG funding should be assessed by the SPC and then forwarded to the Executive Committee for approval. Therefore, an agenda item will be added to future SPC committee meetings to assess SIG funding requests.*

### iii. SIGs on 'Fibre suspension flows' & 'Turbomachinery'

The newly formed SIG 43 on 'Fibre suspension flows' reported that it had recently held its first meeting. Prof. Leschziner encouraged its coordinator, Prof. Hämäläinen, to submit a report on the SIG's proposed future activities so that its funding by ERCOFTAC could be considered.

The closure of SIG 8 'Turbomachinery' at the Stockholm SPC meeting is being reviewed after a request from GE Alstom to revive it.

## 6. Pilot Centres

Prof. Leschziner reported that the current status of the PCs, as derived from their presence on the ERCOFTAC webpage, was even worse than that of the SIGs. He added that he did not know how the situation could be improved. He had written to all PC coordinators to inform them that funds were available for specific PC activities, on application to and approval by the Executive Committee, in order to motivate them. Prof. Rodi commented that PC funding was not the main issue, especially for larger PCs, rather it was their lack of motivation. Prof. Redondo noted the lack of clear guidelines on PC activities and responsibilities was also a cause. Prof. van Steenhoven, referring to an email from Prof. Bodnar, proposed that future ERCOFTAC bi-annual meetings should be combined with symposiums by the local hosting PCs, thereby increasing the PC's exposure. Prof. Vlachos added that PC coordinators should be given upload access to their pages on the ERCOFTAC webpage so that they could update them personally.

## 7. Workshops and summer schools

Prof. Leschziner stated that, as a matter of principle, ERCOFTAC only supports events whose organisers are members of ERCOFTAC. After discussions, the SPC voted to recommend the following actions to the Managing Board regarding the sponsorship of events:

- W2009-02** '*Immersed boundary methods*', Amsterdam, The Netherlands, 1.6.2009.  
Application for use of the ERCOFTAC logo was approved.
- W2009-03** '*Quality and reliability of LES II*', Pisa, Italy, 9-11.9.2009.  
Application for use of the ERCOFTAC logo was approved.  
A scholarship of 2000 Euros was awarded. However, this is conditional on Pisa University's Department of Aerospace Engineering becoming an academic member of ERCOFTAC.
- W2009-04** '*Fluxes and structures in fluids*', Moscow, Russia, 24-27.6.2009.  
Application for use of the ERCOFTAC logo was approved.  
A scholarship of 2000 Euros was awarded. However, this is conditional on (i) Moscow State University's Department of Physics becoming an academic member of ERCOFTAC and (ii) the publication of the conference proceedings in the ERCOFTAC Book Series in English.
- W2009-06** '*4<sup>th</sup> Workshop on synthetic turbulence modelling*', Nancy, France, 11-12.12.2008.  
Application for use of the ERCOFTAC logo was approved.  
A scholarship of 2000 Euros was awarded. However, this is conditional on Sheffield University's Department of Mechanical Engineering and Nancy University's LAEGO becoming academic members of ERCOFTAC.
- W2009-07** '*LES of turbulence, acoustics and combustion*', Marseille, France, 24-28.8.2009.  
Application for use of the ERCOFTAC logo was approved.
- W2009-08** '*CFD simulation in the aerospace industry*', Nottingham, United Kingdom, 4.3.2009.  
Application for use of the ERCOFTAC logo was rejected.
- W2009-09** '*Turbulent spray combustion*', Corsica, France, 7.6.2009.  
Application for use of the ERCOFTAC logo was approved.  
A scholarship of 2000 Euros was awarded.
- W2009-10** '*3<sup>rd</sup> Hybrid RANS-LES symposium*', Gdansk, Poland, 10-12.6.2009.  
Application for use of the ERCOFTAC logo was approved.
- S 2009-01** '*Turbulent mixing and beyond*', Trieste, Italy, 1.10.2009.  
Application for use of the ERCOFTAC logo and scholarship were rejected.
- S2009-02** '*Summerschool in flow control and optimisation*', Stockholm, Sweden, 29.6-3.7.2009.  
Application for use of the ERCOFTAC logo was approved and awarded 3000 Euros.
- S2009-03** '*Bio-fluid mechanics*', Eindhoven, The Netherlands, 9-14.3.2009.  
Application for use of the ERCOFTAC logo was approved and awarded 3000 Euros.

Prof. Rodi reported on the successful 2<sup>nd</sup> Young ERCOFTAC Workshop, organised by Prof. Sesterhenn in Montestigliano during March 2008. A report on this workshop was published in issue 77 of the ERCOFTAC



Bulletin. The first of these events was sponsored by Germany South PC, whilst the second was funded by ERCOFTAC. After approval by Prof. Hutton, the ERCOFTAC Chairman, it received 6000 Euros from a separate budget to the normal ERCOFTAC event funds. Prof. Rodi added that a similar event is planned for the autumn of 2009, and that the SPC should play a role in defining its topic.

## **8. Status report on ETMM7 and ETMM8**

Prof. Leschziner reported that ETMM7 was successful and generated a net profit of around 10,000 Euros. This would serve as a strong foundation for ETMM8. He also noted competition from overlapping events on similar themes had affected the number and quality of the submissions to ETMM7.

Regarding ETMM8, to be held on 9-11<sup>th</sup> June 2010 in Marseille, Prof. Leschziner reported that there were problems with its local organisation and choice of venue. However, the necessary committees and abstract deadlines had been put into place. Furthermore, a flyer advertising the event had been produced and distributed. Prof. Leschziner urged members to distribute this flyer amongst colleagues.

## **9. ERCOFTAC publications**

### **i. FTAC Journal**

Prof. Rodi reported that volume 81 of the FTAC journal had been published. Furthermore, 27 papers have already been published on 'online first' and thus there was a good stock of papers for the coming year. He reported that there were 46 manuscripts currently under review; however, the paper submission rate had decreased slightly. Prof. Rodi stated that the impact factor of the journal had increased to 0.923, and that he was hopeful it would eventually pass 1. Two special issues are planned for 2009: one on the ECCOMAS conference on computation and combustion, and a second on ETMM7.

### **ii. ERCOFTAC Book Series**

Prof. Rodi reported that the last published volume was on DLES6. He added that a number of future volumes are currently planned. These include volumes on particle laden flows, QLES, and DLES7. Prof. Rodi added that the book series was experiencing competition from other publishers in terms of printing costs. He encouraged ERCOFTAC sponsored workshop and summerschool organisers to publish their proceedings in the book series, thus keeping it a viable activity.

### **iii. ERCOFTAC Bulletin**

The following future Bulletin themes are scheduled:

- 78, 2009: *'Environmental fluid mechanics'* (Guerts)
- 80, 2009: *'Transition modelling'* (Dick & Elsner)
- 82, 2010: *'Dispersed multiphase flows'* (Sommerfeld & Simonin)
- 84, 2010: *'Fibre suspension flows'* (Hämäläinen)
- 86, 2011: *'Fluid-structure interaction'* (Longatte)

The following PC Bulletin reports are scheduled:

- 79, 2009: *Dutch PC and Belgian PC*

The SPC discussed a proposal by the ERCOFTAC Coordination Centre that the Bulletin should become a bi-annual rather than a quarterly publication. Dr. Borhani stated that this proposal, which was approved by the Bulletin Editorial Board prior to the meeting, would greatly reduce the present resources and scheduling problems involved, with no real change to the impact of the Bulletin. The SPC felt that the Bulletin should remain a quarterly publication.

*\* The SPC decided to refer the Coordination Centre's proposal to change the ERCOFTAC Bulletin to a bi-annual publication to the Managing Board for a decision.*

## **10. Review of the ERCOFTAC Autumn Festival 2008 and the DaVinci 2008 Award**

Prof. Leschziner said that the ERCOFTAC Autumn Festival was poorly attended, with only a last minute round of persuasion leading to an acceptable attendance of around fifty. It was hoped that more than a hundred participants would attend the festival.

The winner of the 2008 DaVinci Award was Dr. Vennemann for his work on: 'Particle Image Velocimetry for micro-scale blood flow measurement'. Prof. Leschziner commented that the presentations of all five DaVinci finalists were of a high scientific standard. However, these presentations were also poorly attended. Considering these were effectively some of the best Ph.D. thesis from across Europe, Prof. Jakirlic said that the format of the DaVinci Award needed to be changed to increase its audience. He felt that the final presentations must be made to an audience of students, who not only would have an interest in the work but would also be exposed to ERCOFTAC as a result. Alternative suggested formats included a special session at ETMM or a separate event at a university.

Prof. Leschziner noted that no DaVinci candidates were submitted from some PCs, such as the French, and that he did not know how this situation could be improved. Furthermore, he added that the industrialists inside ERCOFTAC were not in favour of the DaVinci event due to its high cost relative to its perceived benefits to ERCOFTAC's visibility. He added that if bringing the attention of young researchers to ERCOFTAC was considered to be too expensive, he no longer knew what the role of ERCOFTAC was. Therefore, he urged that the SPC should play an active role in promoting the DaVinci event.

#### **11. Date of next SPC Committee meeting**

The next ERCOFTAC bi-annual meeting is scheduled for the 4-5<sup>th</sup> May 2009 in Budapest Hungary. The SPC committee meeting will take place on the 5<sup>th</sup> May 2009 at this event.

Navid Borhani, Lausanne, 2009.

# European Research Community On Flow, Turbulence And Combustion

## MINUTES

### INDUSTRIAL PROGRAMME COMMITTEE

BRUSSELS, NOVEMBER 20<sup>th</sup> 2008

#### Attendance

Geuzaine P	CENAERO
Hirsch C	NUMECA International
Hutton A	Airbus UK
Lea C	Lea CFD Associates
Oliemans	Multiphase Flow BV/TU Delft
Rodi W	University of Karlsruhe
Seoud R	ERCOFTAC
Wallin S	FOI

The meeting was opened at 09-00 by Dr Lea - IPC Chairman, who also took the minutes.

The main actions are underlined below.

#### 1. Apologies for absence

None received

#### 2. Minutes of IAC meeting held in Stockholm on 6<sup>th</sup> May 2008

The minutes of the IAC meeting in Stockholm on 6<sup>th</sup> May 2008 were circulated and agreed without comment.

#### 3. QNET-CFD Knowledge Base (KB) – present status and future plans

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

- The hosting of the KB is currently being transferred to BAE Systems.
- There will be a single wiki for the ERCOFTAC-only ('gold'), and public ('silver'), content.
- Prof Rodi has reviewed all 32 QNET-CFD Application Challenges (AC); reporting that approximately 14 are of 'gold' standard, 13 of 'silver' standard, and that 5 should be removed altogether.
- Prof Rodi is about to review QNET-CFD Underlying Flow Regime (UFR) content. Following his initial scan of this material it would appear that there is approximately a 50:50 split between 'gold' and 'silver' content.
- Prof Rodi will now recommend the split between 'gold', 'silver' and 'removed' AC, and will recommend certain corrections to AC (such as broken links) before launch of the wiki.
- Prof Rodi will arrange a visit to BAE Systems - ideally before Christmas and facilitated by Prof Hutton, so as to expedite the population of the wiki and the correction of existing content.

- **Prof Hutton** will obtain source files from the University of Surrey.
- Thanks are due to Prof Rodi, Sarah Hutton and Prof Hutton for their input.
- A final target completion date of March 2009 was agreed for the wiki. **Action: Profs Rodi and Hutton.**

#### 4. 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 from the ensuing discussion:

- **Dr Seoud** to add the title of the activity series, e.g. 'Technology Awareness', to advertising material at the request of Prof Hirsch, so establishing a common format for such publicity material.
- **Prof Oliemans** offered to put Prof RAWM Henkes (TU Delft/Shell) in contact with Dr Seoud, with a view to possibly hosting a seminar on Best Practice in the Modelling of Multi-Phase Flows (closely aligned with the recently published ERCOFTAC BPG), in The Netherlands.
- It was suggested that **Dr Seoud** focuses his proposal for a possible Technology Awareness seminar on Drag Reduction and Flow Control (aligned with SIG 20), on Flow Control (of which drag reduction is a key subset), and that he contact Dr Frank Thiele, TU Berlin.
- Prof Hutton suggested that aspects of 'Green Energy' (wind, wave, tidal, etc) could be a fruitful area for future Technology Awareness seminar and related industrial activities by ERCOFTAC.
- The meeting agreed that there was no mechanism for 'umbrella' industrial organisations (such as SIAMUF), to become members of ERCOFTAC, and that there could be a negative impact (in terms of loss of membership of individual companies) if such a possibility were to be pursued.
- **Dr Seoud** was asked to make the following changes to his future monthly/quarterly reports: to provide monthly costs and income figures – in addition to the monthly closing balance (as provided at present); to consider reducing the length of the monthly reports.
- **Dr Lea** agreed that in future Dr Seoud's reports should be circulated to all IPC members as well as those on the Executive Committee, and apologised for this oversight.
- **Dr Seoud** was asked to work with **Dr Lea** to produce up-to-date detailed financial forecasts in the manner of the original 2006 business plan.
- Prof Hirsch proposed that a global objective for **Dr Seoud** should be that he ensure during his 2<sup>nd</sup> year of employment that IEO costs are covered by income. This aim was agreed by the IPC.
- It was agreed that **Dr Lea** should conduct a formal annual performance review with Dr Seoud at the end of his first year of employment and report this to the Executive Committee.

## **5. Best Practice Guidelines (BPG)**

### ***(i) Dispersed Multi-Phase Flow BPG***

This has been completed and published.

**Dr Seoud** is to work with **Prof Oliemans** on efforts to promote sales of this new BPG.

A 'roadshow' launch of the BPG is still envisaged across Europe. The fee for attendance at these events will include a copy of the BPG. This idea is being developed between Dr Seoud and Prof Oliemans.

### ***(ii) Preparation of second edition of BPG***

Production of a 2<sup>nd</sup> 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 has been led by Prof Hutton, but due to volume of work this activity has stalled. **Dr Lea** agreed to take on the coordination of this BPG.

### ***(iii) Heat Transfer***

Prof Hirsch suggested that a BPG on the modelling of Heat Transfer would be well-received. No firm action was agreed on this item.

## **6. Development of the IPC**

The acting Chair of the IPC is currently Dr Lea. A proposal would be put before the Managing Board meeting that this position be voted on and, if accepted, be formalised.

## **7. Next IPC meeting**

The next IPC meeting is planned for Budapest, May 5th 2009.

## **8. Any Other Business**

None.

Meeting closed at 11-30.

Chris Lea  
April 2009

# *European Research Community On Flow, Turbulence and Combustion*

## **MANAGEMENT BOARD MEETING**

**20<sup>th</sup> November 2008, Brussels, Belgium**

### **ATTENDANCE**

Andersson, H.  
Borhani, N.  
Braza, M.  
Cambon, C.  
Comte, P.  
Gauger, N.  
Geuzaine, P.  
Hämäläinen, J.  
Hanifi, A.

Hirsch, C.  
Hutton, A.  
Jakirlic, S.  
Knoerzer, D.  
Kuhlmann, H.  
Lea, C.  
Leschziner, M.  
Nicolleau, F.  
Oliemans, R.

Redondo, J.  
Rodi, W.  
Seoud, R.  
Van Steenhoven, A.  
Vlachos, N.  
Von Terzi, D.  
Wallin, S.

### **APPOLOGIES**

Brenn, G.  
Carey, C.  
Cartage, T.  
Castro, I.P.  
Choi, K-S.  
Courty, J-C.  
Delgado  
Doerffer, P.  
Duursma, R.  
Geurts, B.

Haase, J-F.  
Jacobsen, C.B.  
Jansohn, P.  
Jimenez, J.  
Lehning, M.  
Martelli, F.  
Morrison, J.F.  
Ooms, G.  
Panidis, T.  
Pawlik, V.

Pfitzner, M.  
Rispoli, F.  
Simoneau, J-P.  
Sommerfeld, M.  
Standingford, D.  
Theofilis, V.  
Tomboulides, A.  
Von Rohr, P.R.

## SUMMARY OF ACTION ITEMS ARISING FROM MEETING

- *For the Horizon 10 Group to assess the reasons behind the current apathy of ERCOAFTC members, and offer possible solutions.*
- *Prof. Hirsch should investigate the costs of modifying the present ERCOFTAC website in order to make it more accessible or of changing the provider.*
- *To contact Prof. Hanjalic to gauge his interest in coordinating the creation of a Best Practice Guideline on Heat Transfer.*

## MINUTES

The meeting was opened by the ERCOFTAC Chairman, Prof. Hutton, at 13:00.

### **1. Approval of the agenda**

The agenda was changed to bring the General Assembly forward to 15:00.

### **2. Approval of EC committee meeting minutes from Stockholm on the 6<sup>th</sup> May 2008**

The minutes were approved.

### **3. Matters arising and review of actions from the SPC Meeting held in Stockholm on the 6<sup>th</sup> May 2008**

These were addressed later in the meeting.

### **4. The evolution of ERCOFTAC and its future operation**

Prof. Hutton thanked Prof. Hirsch and Ms. Laurent for their efforts in organising the ERCOFTAC Autumn Festival. It was generally agreed by those present that this was an outstanding event providing a balanced academic-industrial programme. However, Prof. Hutton noted the very poor attendance for an event aimed at celebrating ERCOFTAC's 20<sup>th</sup> Anniversary. This was despite great effort being made to personally persuade people to attend. Prof. Leschziner added that even though the Da Vinci award was of a high scientific standard, it was also poorly attended. Prof. Hutton said, in order to ensure the existence of ERCOFTAC in the future, it was important to find ways of generating enthusiasm amongst the community and its members. Prof. Redondo commented that the late change in dates for the Autumn Festival and the lack of promotion were contributing factors. He added that the industrial focus and high cost dissuaded academics and students from attending, and that a future registration fee structure should account for this. Prof. Hirsch added it was important to analyse and understand the reasons behind the poor attendance, especially for ERCOFTAC members who had a moral duty to attend. He commented that excuses, such as conflicting time tables, only suggested the low priority some members show towards ERCOFTAC. Prof. Hutton said, since the industrial side of ERCOFTAC was beginning to be revived, it was now time to shift some attention on to the academic side to hopefully generate future enthusiasm. Considering this, he proposed two actions:

- To invite the SIGs to submit their future activity plans. Then based on an assessment of their individual merits, to offer some of them financial support and guidance so that they will grow.
- Creation of the Horizon 10 Group, comprising a group of motivated people with an age limit of 45, to investigate possible future evolution strategies for ERCOFTAC.

*\* The management board decided to ask the Horizon 10 Group to assess the reasons behind the current apathy of ERCOFTAC members, and offer possible solutions.*

## **5. Election of new board members**

The Management Board voted to recommend the following people for election by the General Assembly:

- Prof. Hutton as the ERCOFTAC Chairman: approved by the majority and opposed by Prof. Redondo.
- Prof. Oliemans as the ERCOFTAC First Vice-Chairman for one more year: approved unanimously.
- Dr. Lea as the IPC Chairman: approved unanimously.
- Prof. Geurts as the SPC Vice-Chairman: approved unanimously.

The following new Management Board members were also recommended to the General Assembly for approval:

- Prof. Kowalewski and Prof. Doerffer from the Polish PC.
- Prof. Geuzaine from the Belgian PC.
- Prof. Martelli and Dr. Cecchi from the Italian PC.

Prof. Hutton thanked Prof. van Steenhoven for his work and efforts as SPC Vice-Chairman.

## **6. Financial report**

Prof. Hirsch presented the provisional accounts for 2008. He reported that there were currently 141 academic and 47 industrial members of ERCOFTAC. He said that, although ERCOFTAC was in good financial shape with reserves of around 500k Euros, there was a projected deficit of around 160k Euros for 2008. He added that this can not be sustained for more than two years. Furthermore, Prof. Hirsch reported that the ERCOFTAC Autumn Festival had made a loss which would be shown in the full 2008 accounts.

Prof. Hutton added it was important that ERCOFTAC now invested in its future. He invited academic members to submit suitable plans to the SPC for appraisal.

## **7. Report from the Administration and Development Office**

Prof. Hirsch reported that to date there were 18 unpaid research and 5 unpaid industrial members for 2008.

## **8. Report from the Coordination Centre**

Dr. Borhani reported that the Coordination Centre was now under the directorship of Prof. Thome. He added that the Coordination Centre would appreciate greater communication within the ERCOFTAC structure. Prof. Hutton invited the Coordination Centre to join the monthly Executive Committee teleconferences. Dr. Borhani stated that no increase in the Coordination Centre fees would be required in 2009. Prof. Hutton thanked Dr. Borhani for his efforts.

## **9. Report from the Scientific Programme Committee**

Prof Leschziner reported the following:

- There was a great deal of dissatisfaction amongst SPC members regarding the ERCOFTAC website, with the majority insisting they should have direct access rights to edit their own sections. After discussions, the Management Board decided that:  
*\* Prof. Hirsch should investigate the costs of modifying the present ERCOFTAC website in order to make it more accessible or of changing the provider.*
- There was dissatisfaction regarding the management of information within ERCOFTAC, particularly for the advertisement of events and committee meetings. One suggestion was to advertise the information on the ERCOFTAC webpage.
- The SPC decided to forward a request by the Coordination Centre to reduce the ERCOFTAC Bulletin to a bi-annual publication to the Management Board for a decision. Although this request was supported



by the Bulletin Editorial Board, the SPC was not in favour of it. Due to its importance for the visibility of ERCOFTAC, the Management Board voted to retain the present quarterly publication timetable, and to retain the redesigned format. Furthermore, greater effort should be made by the Editorial board to secure and schedule submissions for the publishing in the Bulletin.

- Prof. Leschziner reported that the SPC had decided to recommend awarding the ERCOFTAC Logo to 2 workshops, and funding for 2 summerschool and 4 workshops. The Managing Board voted unanimously to approve this.

## **10. Report from the Industrial Programme Committee**

Dr. Lea reported that Dr. Seoud had put together a package of industrially focused products, based on Best Practice Guideline and Technology Awareness Seminars, to increase the ERCOFTAC revenue stream. Dr. Seoud then reported on the recent successful Hybrid RANS-LES Best Practice Guidelines event held at BAE Systems in Farnborough. He noted the general interest shown by the community for future similar events. Dr. Seoud added that the SIGs should suggest future subjects for such seminars.

## **11. Status of ERCOFTAC products and services**

### **i. FTAC Journal**

Prof. Rodi reported that volume 81 of the FTAC journal had been published. Furthermore, 27 papers have already been published on 'online first' and thus there was a good stock of papers for the coming year. He reported that there were 46 manuscripts currently under review; however, the paper submission rate had decreased slightly. Prof. Rodi stated that the impact factor of the journal had increased to 0.923, and that he was hopeful it would eventually pass 1. Two special issues are planned for 2009: one on the ECCOMAS conference on computation and combustion, and a second on ETMM7.

### **ii. ERCOFTAC Book Series**

Prof. Rodi reported that the last published volume was on DLES6. He added that a number of future volumes are currently planned. These include volumes on particle laden flows, QLES, and DLES7. Prof. Rodi added that the book series was experiencing competition from other publishers in terms of printing costs. He encouraged ERCOFTAC sponsored workshop and summerschool organisers to publish their proceedings in the book series, thus keeping it a viable activity.

### **iii. ERCOFTAC Bulletin**

The following future Bulletin themes are scheduled:

- 78, 2009: '*Environmental fluid mechanics*' (Guerts)
- 80, 2009: '*Transition modelling*' (Dick & Elsner)
- 82, 2010: '*Dispersed multiphase flows*' (Sommerfeld & Simonin)
- 84, 2010: '*Fibre suspension flows*' (Hämäläinen)
- 86, 2011: '*Fluid-structure interaction*' (Longatte)

The following PC Bulletin reports are scheduled:

- 79, 2009: *Dutch PC and Belgian PC*

### **iv. ETMM7 & 8**

Prof. Leschziner reported that ETMM7 was successful and generated a net profit of around 10,000 Euros. This would serve as a strong foundation for ETMM8. He also noted competition from overlapping events on similar themes had affected the number and quality of the submissions to ETMM7.

Regarding ETMM8, to be held on 9-11<sup>th</sup> June 2010 in Marseille, Prof. Leschziner reported that there were problems with its local organisation and choice of venue. However, the necessary committees and abstract deadlines had been put into place. Furthermore, a flyer advertising the event had been produced and distributed. Prof. Leschziner urged members to distribute this flyer amongst colleagues. Prof. Leschziner then presented the budget for ETMM8 and reported that the costs and supplies have yet to be finalised. He added that registration fees might have to be higher than ETMM7 to account for inflation and the higher venue costs in Marseilles. Prof. Hirsch commented that the 15k Euros budgeted cost for the conference proceedings seemed too much. In response, Prof. Leschziner strongly opposed the publication of the proceedings only in a CD format. The budget was approved and forwarded to the General Assembly for ratification as part of the 2008-9 budget.

#### **v. ERCOFTAC Best Practice Guidelines**

- Industrial CFD: Dr. Lea reported that he had taken over management of the project. He added that the current status of the second edition of the BPG was a detailed draft document.
- Multiphase Flow: Prof. Oliemans reported that, after more than two years of work, the guide had now been published and was available for sale from the ADO. He thanked Prof. Sommerfeld, Prof. van Wachem, the editorial board, and the Swedish Industrial Association for Multiphase Flows (SIAMUF) for their efforts and sponsorship.

Prof. Hirsch suggested the theme of 'Heat Transfer' for a future Best Practice Guideline.

*\* The Management Board decided to contact Prof. Hanjalic to gauge his interest in coordinating the creation of a Best Practice Guideline on Heat Transfer.*

#### **vi. ERCOFTAC Website**

Please refer to section 9.

#### **vii. ERCOFTAC Classic Database**

Currently maintained by Dr. Craft and hosted by the University of Manchester.

#### **viii. QNET-CFD Knowledge Base**

Prof. Rodi reported that his team were in the process of moving the database from the University of Surrey to the servers of BAE Systems, and republishing it in a wiki format. Some sections of this wiki will be free for public access, however, these would not have any assurance of quality. Whilst an edited quality controlled 'gold standard' version will be made available to paying ERCOFTAC members.

#### **12. Any other business**

Dr. Knoerzer gave a short presentation on the present European Commission funding structure and opportunities for the Aeronautics field.

#### **13. Dates and location of the next MB-GA and EC meetings**

The next ERCOFTAC Spring Festival will be held in Budapest on the 4-5<sup>th</sup> May 2009; with the Committee Meetings scheduled for the 5<sup>th</sup> May. The next ERCOFTAC Autumn Festival will be a two day event, to be held in Lausanne on the 1-2<sup>nd</sup> October 2009; with the Committee Meetings scheduled for the 2<sup>nd</sup> October.

Navid Borhani, Lausanne, 2009.

# *European Research Community On Flow, Turbulence and Combustion*

## **GENERAL ASSEMBLY MEETING**

**20<sup>th</sup> November 2008, Brussels, Belgium**

The meeting was opened by the ERCOFTAC Chairman, Prof. Hutton, at 15:00.

### **1. Election of ERCOFTAC Officers and Management Board members**

The General Assembly voted anonymously to appoint:

- Prof. Hutton as the ERCOFTAC Chairman: approved by the majority and opposed by Prof. Redondo.
- Prof. Oliemans as the ERCOFTAC First Deputy Chairman for one more year: approved unanimously.
- Dr. Lea as the IPC Chairman: approved unanimously.
- Prof. Geurts as the Deputy SPC Chairman: approved unanimously.

The following new Management Board members were also approved:

- Prof. Kowalewski and Prof. Doerffer from the Polish PC.
- Prof. Geuzaine from the Belgian PC.
- Prof. Martelli and Dr. Cecchi from the Italian PC.

### **2. Approval of the 2007 accounts**

The 2007 accounts were approved unanimously.

### **3. Approval of the 2008-9 budget**

The 2008-9 budget was approved unanimously.

Prof. Hutton closed the assembly at 15:10, and thanked those attending.

## Workshops &amp; Summerschools

Code	Title	Location	Start Date	End Date	Adverts	Report	Organisers	Emails	Co-organisers	Scholarships Requested	Approved	Logo Requested	Approved
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
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
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
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
S2008-01	Int. ss. on turbulence, plankton and marine snow	Vilanova, Spain.	01/09/2008	05/09/2008	76	Rec.	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
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
S2008-03	JM Burgers Centre course on combustion	Eindhoven, Netherlands.	06/05/2008	09/05/2008		Rec.	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
S2008-04	Modern applications of combustion technology	Nürnberg, Germany.	25/02/2008	28/02/2008			Dinkelacker, F. Leipertz, A.		SIGs: 28	No		Yes	No
S2008-05	Modelling of atomisation and sprays	Halle, Germany.	21/07/2008	24/07/2008	76	Rec.	Sommerfeld, M.	martin.sommerfeld@iw.uni-halle.de	PCs: Germany North SIGs: 12	Yes	Yes	Yes	Yes
S2008-06	Turbulence and mixing in compressible flows II	Marseille, France.	07/07/2008	12/07/2008	76	Rec.	Dussauge, J-P.	jean-paul.dussauge@polytech.univ-mrs.fr	PCs: France South SIGs: 4	Yes	Yes, 3000	Yes	Yes
S2008-07	LES simulation and application in aeroacoustics	Balatonfüred, Hungary.	31/08/2008	06/09/2008	76	Rec.	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
S2009-01	Turbulent mixing and beyond	Trieste, Italy.	01/10/2009				Abarzhi, S.I. Gauthier, S.	snezha@flash.uchicago.edu serge.gauthier@orange.fi	NSF, AFSOR, EOARD, ICTP, ANL, CEA, LANL, DOE ASC, ILE, IIT.	Yes	No	Yes	No
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
S2009-03	Bio-fluid mechanics	Eindhoven, Netherlands.	09/03/2009	14/03/2009		Rec.	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
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
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
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
W2006-04	Workshop on refined turbulence modelling	Berlin, Germany.	01/10/2006	01/10/2006	68, 69	75	Thiele, F.		SIGs: 15 Co: LAHR/QNET-CRD	Yes	Yes	Yes	Yes
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
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
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
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
W2006-09	Flow control and MEMS	London, UK.	19/09/2006	22/09/2006		71	Morrison, J.F.		Co: IUTAM	Yes	Yes	Yes	Yes
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
W2007-01	Quality & reliability of CFD simulations III	Nottingham, UK.	14/03/2007			73	Lea, C.		PCs: UK SIGs: 5, 101	No		Yes	Yes
W2007-02	Micro PIV and applications in microsystems	Delft, Netherlands.					Lindken, R.		SIGs: 32, 38	Yes	Yes	Yes	Yes
W2007-03	Langrangian techniques in multiphase flow	Trieste, Italy.	05/09/2007	07/09/2007		75	Kuerten, J.			Yes	Yes	Yes	Yes
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
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
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
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
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

## Workshops &amp; Summerschools

Code	Title	Location	Start Date	End Date	Adverts	Report	Organisers	Emails	Co-organisers	Scholarships Requested	Approved	Logo Requested	Approved
W2007-09	International gas turbine conference	Tokyo, Japan.	02/12/2007	07/12/2007			Ota, E. Yoshino, T.		Co: ASME/IGTL ...	No		Yes	No
W2007-10	Workshop on near wall turbulence	Viterbo, Italy.	22/03/2007	23/03/2007			Stanislas, M.			No		Yes	Yes
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
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
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
W2007-14	LES for combustion and transition modelling	Ghent, Belgium.	29/11/2007	30/11/2007		Rec.	Dick, E. Elsner, W.	erik.dick@ugent.be	SIGs: 10, 28	No		Yes	Yes
W2008-01	ETMM7	Limassol, Cyprus.	04/06/2008	06/06/2008	74,76		Leschziner, M.A. Kassinou, S.	mike.leschziner@imperial.ac.uk	Co: University of Cyprus	Yes	Yes	Yes	Yes
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
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
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
W2008-05	Quality & reliability of CFD simulations IV	Nottingham, UK.	05/03/2008			Rec.	Lea, C.	chris.leabuxton@btinternet.com	PCs: UK SIGs: 5, 101 Co: NAFEMS	Yes	Yes	Yes	Yes
W2008-06	SIG33: Open issues in transition and flow control	Genova, Italy.	16/10/2008	18/10/2008	76	Rec.	Bottaro, A. Hanifi, A.	alessandro.bottaro@unige.it ardeshir.hanifi@foi.se	SIGs: 33	Yes	Yes	Yes	Yes
W2008-07	European drag reduction and flow control meeting	Mariental, Germany.	08/09/2008	11/09/2008	76	77	Hage, W. Wassen, E.	kwang-so.choi@nottingham.ac.uk wolfram.hage@dlr.de erik.wassen@cfdtu-berlin.de	SIGs: 20	Yes	Yes, 2000	Yes	Yes
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
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
W2008-10	13th. Workshop on turbulence modelling	Graz, Austria.	25/09/2008	26/09/2008	76	Rec.	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
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
W2008-12	3rd. Workshop on synthetic turbulence models	Newcastle, UK.	03/07/2008	04/07/2008	76	Rec.	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
W2009-01	ETMM8	Marseille, France.								Yes	Yes	Yes	Yes
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
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
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
W2009-05	Papermaking research symposium *Withdrawn*												
W2009-06	4th Workshop on synthetic turbulence modelling	Nancy, France.	11/12/2008	12/12/2008		Rec.	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
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
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
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
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
W2009-11	DLES 8	Eindhoven, Netherlands.	07/07/2010	09/07/2010			Kuerten, J.	j.g.m.kuerten@tue.nl	SIGs: 1	Yes		Yes	

## Workshops &amp; Summerschools

Code	Title	Location	Start Date	End Date	Adverts	Report	Organisers	Emails	Co-organisers	Scholarships Requested	Approved	Logo Requested	Approved
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 boussuge@cerfacs.fr	Co: Airbus, Safran, ONERA	No		Yes	
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	
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	

# **ERCOFTAC Workshops and Summer schools**

## **1. Applications for ERCOFTAC event sponsorship**

To be considered at the SPC meeting in Budapest, 5<sup>th</sup> May 2009.

### **Workshops & Conferences**

### **Scholarships**

W2009-11	DLES8	X
W2009-12	Unsteady and coupled phenomena in aeronautical applications	X
W2009-13	Synthetic turbulence and vortex flows	X
W2009-14	14th Workshop on Turbulence Modelling	X

## **2. Overdue reports – plus 6 months from 5<sup>th</sup> May 2009**

W2008-03	Sound Source Mechanisms In Turbulent Shear-Flow	7.7.2008
W2008-04	DNS and LES of Reacting Flows	22.10.2008

# European Research Community On Flow, Turbulence And Combustion

## WORKSHOP – CONFERENCE – SUMMER SCHOOL - COURSE APPLICATION SHEET

<b>Title</b>	Workshop on Direct and Large Eddy Simulation, DLES8  <i>Add a brief summary of the objectives of the activity (or the announcement) on a separate page (see page 2)</i>
	[ x ] Workshop    [ ] Summer School    [ ] Conference    [ ] Course
<b>Location and Date</b>	Eindhoven University of Technology, The Netherlands July 7-9, 2010
<b>Organizer</b>	<b>Name</b> J.G.M. Kuerten
	<b>Address</b> Department of Mechanical Engineering Eindhoven University of Technology P.O. Box 513, NL-5600 MB Eindhoven, The Netherlands
	<b>Country</b> The Netherlands
	<b>Tel</b> + 31 40 247 2362 <b>Fax</b> + 31 40 247 5399
	<b>Email</b> j.g.m.kuerten@tue.nl
<b>Pilot Center(s) or SIGs involved</b>	SIG 1
<b>Co-organizing Associations</b>	-
<b>Scholarships</b>	<b>Scholarship request?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Rules</b>	<b>I have read the document "Rules for holding ERCOFTAC events", which can be found on <a href="http://www.ercoftac.org">www.ercoftac.org</a></b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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ERCOFTAC Coordination Centre, EPFL, Switzerland.

Email: [ercoftac@epfl.ch](mailto:ercoftac@epfl.ch)

Fax: +41 21 693 5960

To be completed by ERCOFTAC

<b>Number</b>	W2009-11
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<b>Date Received</b>	28.1.2009
<b>Approval</b>	<b>SPC</b> <b>MB</b>
<b>Scholarships</b>	<input type="checkbox"/> Yes, Amount            EURO <input type="checkbox"/> No
<b>Announcement</b>	Bulletin
<b>Report</b>	Bulletin

Summary of the objectives of the workshop:



After Surrey in 1994, Grenoble in 1996, Cambridge in 1999, Enschede in 2001, Munich in 2003, Poitiers in 2005, Trieste in 2008, the 8th Workshop, DLES8, will be held in Eindhoven, The Netherlands. Following the spirit of the series, the goal of this latest workshop is to establish a state-of-the-art of direct numerical simulation (DNS) and large-eddy simulation (LES) techniques for the computation and modeling of transitional/turbulent flows covering a broad scope of topics such as aerodynamics, acoustics, combustion, multiphase flows, environment, geophysics and biomedical applications. This gathering of specialists in the field should once again be a unique opportunity for discussions about the more recent advances in the prediction, understanding and control of turbulent flows in academic or industrial situations.

Approximately ten speakers, from various European countries and the USA, will be invited to give a key-note presentation about recent research in each of the specific topics in DNS and LES mentioned above.



**WORKSHOPS/CONFERENCES/SUMMER SCHOOLS/COURSES  
SUMMARY SHEET**

<p><b>Title</b></p>	<p><b>5th Workshop on Synthetic Turbulence and Vortex Flow 1st-3rd July 2008, Warsaw</b></p> <p>This workshop will be the fifth on synthetic turbulence and will be organised by SIG42 and SIG35 interest groups. The joint organisation will enable the organisers to target a wider international audience. The participation from outside EU include: Charles Meneveau (Johns Hopkins University), Robert Rubinstein (NASA) and Carlos Rosales (Valparaiso)</p> <p>The workshop is open to anyone interested in "synthetic turbulence" including the so-called Kinematic Simulation, vortex flows and multi-point turbulence modelling.</p> <p>The success of Synthetic Turbulence Models relies on obtaining realistic particle trajectories and accurate Lagrangian statistics. So, far a lot of effort has been put on understanding the role and the energy spectrum as a KS input. The present workshop aims to build up on the expertise of host organisers in simulation and analysis of the vorticity transport equation using various approaches.</p> <p>Few topics to be discussed at the workshop:</p> <ul style="list-style-type: none"> <li>- improvement of the modelling of small scales advection by largest scales (sweeping),</li> <li>- introduction of strongly anisotropic energy spectra with better randomization of the wave-vector,</li> <li>- analogy with initialization of DNS/LES and with "Particle Representation Models"</li> <li>- use of specific modes consistent with geometric constraints, e.g. solid walls, instead of 3D spatial Fourier modes,</li> <li>- competition between "wavy" (really spatio-temporal, propagating) and "vortical" structures of the velocity field</li> <li>- Lagrangian turbulence diffusion, from fluid to plasma turbulence,</li> <li>- other "synthetic" models, e.g. to afford intermittency, possibly very different from conventional KS.</li> </ul> <p>For more details (<a href="http://www.sig42.group.shef.ac.uk/SIG42-05.htm">http://www.sig42.group.shef.ac.uk/SIG42-05.htm</a>)</p> <p><i>Add a brief summary of the objectives of the activity (or the announcement) on a separate page</i></p>
	<p>X Workshop                      p Summerschool                      p Conference                      p Course</p>

<b>Location and Date</b>	Warsaw University of Technology, Warsaw, Poland 1 <sup>st</sup> and 3 <sup>rd</sup> July 2009
<b>Organizer</b>	<b>Name</b> <b>Andrzej Nowakowski</b> ( <i>Sheffield Fluid Mechanics Group</i> ) <b>Konrad Bajer</b> ( <i>Warsaw University</i> ) <b>Jacek Rokicki</b> ( <i>Warsaw University of Technology</i> ) <b>Claude Cambon</b> ( <i>École Centrale de Lyon</i> ) <b>Franck Nicolleau</b> ( <i>Sheffield Fluid Mechanics Group</i> )
	<b>Country</b> Institute of Aeronautics and Applied Mechanics Warsaw University of Technology Nowowiejska 24 00-665 Warsaw, POLAND
	<b>Tel</b> (48-22) 2347444, (48-22) 2347523 <b>Fax</b> (48-22) 6220901
	<b>Email</b> jack@meil.pw.edu.pl
<b>Pilot Center(s) or SIGs involved</b>	Polish Pilot Centre, SIG 42, SIG 35
<b>Co-organizing Associations</b>	Warsaw University, Warsaw University of Technology, Sheffield Fluid Mechanics Group at the University of Sheffield
<b>Scholarships</b>	<b>request scholarships ?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Rules</b>	<b>I have read the document "Rules for holding ERCOFTAC event", which can be found on www.ercoftac.org, ERCOFTAC events:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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**To be filled-in by ERCOFTAC**

<b>Number</b>	W2009-13
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<b>Date Received</b>	5.3.2009
<b>Discussed SPC &amp; MB</b>	SPC <span style="float: right;"><b>MB</b></span>
<b>Scholarships</b>	<input type="checkbox"/> Yes, Amount <input type="checkbox"/> EURO <input type="checkbox"/> No
<b>Announcement</b>	Bulletin
<b>Report</b>	Bulletin

# European Research Community On Flow, Turbulence And Combustion

## WORKSHOPS/CONFERENCES/SUMMERSCHOOLS/COURSES SUMMARY SHEET

<b>Title</b>	<b>14th ERCOFTAC (SIG15) Workshop on Turbulence Modelling</b>  <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"/> Summerschool <input type="checkbox"/> Conference <input type="checkbox"/> Course
<b>Location and Date</b>	<b>September 18, 2009, Università di Roma "Sapienza", Italy</b>
<b>Organizer</b>	<b>Name: Prof. Dr. Franco Rispoli / Dr. Domenico Borello</b> <b>Address: Dipartimento di Meccanica Aeronautica, Sapienza Università di Roma, Via Eudossiana 18, 00184 Roma Italy</b>
	<b>Country: Italy</b>
	<b>Tel.: 0039 06 4458 5233</b> <b>Fax: 0039 06488 1759</b>
	<b>E-mail: <a href="mailto:rispoli@dma.ing.uniroma1.it">rispoli@dma.ing.uniroma1.it</a> / <a href="mailto:borello@dma.ing.uniroma1.it">borello@dma.ing.uniroma1.it</a></b>
<b>Pilot Center(s) or SIGs involved</b>	<b>SIG15 (also PC Italy)</b>
<b>Co-organizing Associations</b>	<b>IAHR and COST</b>
<b>Scholarships</b>	<b>request scholarships ?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Rules</b>	<b>I have read the document "Rules for holding ERCOFTAC event", which can be found on <a href="http://www.ercoftac.org">www.ercoftac.org</a>, ERCOFTAC events:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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**To be filled-in by ERCOFTAC**

<b>Number</b>	W2009-14
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<b>Date Received</b>	20.4.2009
<b>Discussed SPC &amp; MB</b>	<b>SPC</b> <b>MB</b>
<b>Scholarships</b>	<input type="checkbox"/> Yes, Amount              EURO <input type="checkbox"/> No
<b>Announcement</b>	Bulletin
<b>Report</b>	Bulletin

***14th ERCOFTAC (SIG15) Workshop on Turbulence Modelling  
September 18, 2009, Sapienza Università di Roma, Italy***

**Objectives:** Keeping in mind the wide use of CFD technology for solving the problems of industrial relevance, questions about the credibility and reliability of both the numerical methods and mathematical models simulating turbulence can only be tackled by intensive verification and systematic validation. The role of the ERCOFTAC series of workshops on refined turbulence modelling is closely connected to that. The workshops aim at bringing together scientists, researchers, users and developers from industry and from the academic field. A large data-base of simulation results assembled in such a way, as well as their detailed comparison with the reliable reference data obtained experimentally, by means of DNS but also by highly-resolved LES, enable discussion and conclusions about predictive performances of variety of turbulence models in a broad range of well-documented flow configurations. Until now SIG15 have organized thirteen workshops in Lyon (1991), Manchester (1993), Lisbon (1994), Karlsruhe (1995), Chatou (1996), Delft (1997), Manchester (1998), Helsinki (1999), Darmstadt (2001), Poitiers (2002), Gothenburg (2005), Berlin (2006) and Graz (2008). The workshop in Rome will be a one-day workshop dealing with the back-report on the 3D diffuser 1 (this was the test case in Graz) and comparative computational campaign of the 3D diffuser 2. Both diffusers, characterized by small geometrical changes but having large impact on the flow topology, have been experimentally investigated by Cherry, Elkins and Eaton (2008, 2009). Possibly, one or two survey lectures dealing with the case in question and state-of-the-art of the computational methods will be organized.

**Steering committee (SIG15):** K. Hanjalic, TU Delft and Università di Roma “La Sapienza”; S. Jakirlic (coordinator), Technical University Darmstadt; D. Laurence, University of Manchester and EDF, France; B. Launder, University of Manchester; W. Rodi, University of Karlsruhe; M. Leschziner, Imperial College of Science, London; F. Menter, ANSYS Germany; R. Manceau, University of Poitiers; D. von Terzi, University of Karlsruhe; S. Wallin, KTH Stockholm and FOI

**Local organizing committee:** Prof. Franco Rispoli, Dr. Domenico Borello and the Staff of the Dipartimento di Meccanica Aeronautica, Sapienza Università di Roma, Via Eudossiana 18, 00184 Roma Italy

# **ERCOFTAC SIG Funding Applications**

To be considered at the SPC meeting in Budapest, 5<sup>th</sup> May 2009.

## **SIG**

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

## Application for financial support in 2009

<b>SIG 12</b>	<b>Turbulent dispersed Two-Phase Flows</b>
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<b>Past activities (2007/2008):</b>	<p>Workshop on Lagrangian Techniques in Multiphase Flows. Trieste, 5. – 7. September 2007, organised by Dr. H. Kuerten, Technical University of Eindhoven, Netherlands (COST-action P20, Sponsored by ERCOFTAC)</p>
	<p>ERCOFTAC Summerschool on DNS of Reacting and Two-Phase Flows, Berlin, 2. – 8. September 2007, organised by Prof. D. Thevenin, University of Magdeburg, Germany</p>
	<p>ERCOFTAC Summerschool: Modelling of Atomisation and Sprays for Technical and Industrial Applications, Martin-Luther-Universität Halle-Wittenberg, Halle (Saale), Germany, July 2008</p>
	<p>Completion of the Best Practice Guidelines for Computational Fluid Dynamics of Dispersed Multiphase Flows. ERCOFTAC European Research Community on Flow, Turbulence and Combustion (Eds. Sommerfeld, van Wachem and Oliemans), Oct. 2008</p>

<b>Future activities in 2009/2010</b>	<p>Preparation of a theme issue for the ERCOFTAC Bulletin in Sept. 2009 (Title: Dispersed Multiphase Flow: From Micro- to Macro-Scale Numerical Modelling)</p>
	<p>Introduction of the BPG on multiphase flow at several ERCOFTAC pilot centres (London, Denmark, Italy)</p>
	<p>Further extension and documentation of the multiphase flow test case data base, e.g. dense particle-laden jet and swirling flow (<a href="http://www-mvt.iw.uni-halle.de/english/index.php?test_cases">http://www-mvt.iw.uni-halle.de/english/index.php?test_cases</a>)</p>
	<p>OpenFoam-Workshop in Halle (Saale) Germany (present status on multiphase modelling and future developments)</p>
	<p>12th Workshop on Two-Phase Flow Predictions scheduled for March 2010 (emphasis will be on test case calculations)</p>
	<p>ERCOFTAC Summerschool on modelling of bubbly flows: Recent developments and future needs (September 2010)</p>

The SIG-Concordat established at the London meeting on 16th June 2006 is accepted.

Merseburg, 06. April 2009

Location, Date





## **ERCOFTAC SIG 15 (Turbulence Modelling)**

*Steering Committee:* K. Hanjalic, S. Jakirlic (Coordinator), B.E. Launder, D. Laurence, M.A. Leschziner, R. Manceau, F. Menter, W. Rodi, D. von Terzi (newly co-opted member), S. Wallin

### ***Report on activities in the past year Plan of future activities***

(April 16, 2009)

#### **• Activities in the period June, 2008 – April, 2009**

The SIG15 was involved in organizing and conducting the 13<sup>th</sup> workshop on turbulence modelling:

- The 13<sup>th</sup> Workshop was hosted by Profs. Günter Brenn and Helfried Steiner from the Institute of Fluid Mechanics and Heat Transfer at Graz University of Technology, Austria in September 25-26, 2008. *Participation:* 50 participants from Europe, U.S.A. and Japan (13 from Germany, 15 from Austria, 6 from France, 2 from the United Kingdom, 1 from Denmark, 2 from Sweden, 1 from the USA, 1 from Japan, 1 from Italy, 3 from Hungary, 2 from Croatia, 2 from Slovenia, 1 from Bosnia & Herzegovina), of which 10 from industry, 4 from research institutes and 36 from universities (corresponding report is submitted to be published in the June 2009 Issue of the ERCOFTAC Bulletin). Following flow configurations
  - ✓ SIG15 Case 13.1: Round jet impinging perpendicularly onto a rotating, heated disc (Exp.: Minagawa and Obi, 2004; Popiel and Boguslawski, 1986)
  - ✓ SIG15 Case 13.2: Flow in a 3-D diffuser (Exp.: Cherry, Elkins and Eaton, 2007, 2008)

were chosen as test cases for this workshop. They were computed by four (4) and ten (10) computational groups respectively.

In addition an oral session was organized accommodating up to ten lectures all dealing with “Hybrid RANS/LES computational methods” with emphasis on their theoretical foundation and predictive capabilities in different applications. The oral session was divided into a session accommodating the five survey lectures and a session containing the five flash presentations.

#### **• Activities planed for the next two years**

- The computational workshops will be still the most important activity; the next 14<sup>th</sup> workshop on turbulence modeling will be held on September 18, 2009 at Universita di Roma “*Sapienza*”. It will be a one-day workshop dealing with the back-report on the 3D diffuser 1 (SIG 15 13.1 Test Case) and comparative computational campaign of the 3D diffuser 2.
- **(still in progress)** Work on establishment of the SIG-15 Forum (members from industry, research centers, CFD companies and academia) will be undertaken in order to establish a kind of advisory board which will be actively involved in the life of the SIG15 (e.g. test case selection in a market-search-way, enabling the potential

contributors would be known in advance). The potential members have to be recognized and directly contacted. Among others, colleagues from some non-European countries (e.g., China, Japan USA) will also be contacted. The way how to tackle this process will be discussed within the SIG.

- Organization of Summer-schools on SIG15-related topics. Such a possibility will be thoroughly discussed; the feasibility of its realization will be explored.
  - **(done to a large extent; polishing in progress)** Completing of the SIG15 part of the ERCOFTAC web site by including among others the entire information (case descriptions, instruction for computations, cross-plotting, etc.) of all 12 workshops organized hitherto (all necessary files will be copied to the ERCOFTAC server), all workshop reports published in the ERCOFTAC Bulletins, two special issues (on “Turbulence Modelling” coordinated by Hanjalic and Laurence, March, 1999 and on “Wall Modelling in LES” coordinated by Suad Jakirlic, March 2007), and relevant details/links, etc.
- **The SIG 15 representative/representatives will regularly attend the SPC meetings!**
  - **SIG 15 will closely follow the obligations defined in the ERCOFTAC-SIG Concordat:**
    - **This is what we always wrote:** The industrial engagement activity of ERCOFTAC will be actively supported by contributing to the Best-Practice-Guidelines edition including also the contribution to the Best-Practice courses in industrial CFD. The results/outcomes of the workshops will be included into the Knowledge Base and the joint efforts on its marketing will be undertaken.  
**Status:** the SIG15 is certainly a very relevant group to contribute appropriately to the Test Case Database (let me recall that over 40 test cases have been considered in the thirteen workshops organized until now; the SIG 15 steering committee members have in addition computed a large number of other underlying-flow-regime cases and industrially relevant configurations). On the other hand, it is well known, that such an activity requests a certain amount of time and one or few persons to be involved. One cannot expect that this will always be a volunteer activity. **Question:** can 3000 EURO (which we by the way never used), which are assigned per year for active SIG’s, be spent to support such an activity (of course in close agreement with the ERCOFTAC’s needs)?

**Application for financial support (2010): SIG 33 Transition Mechanisms, Prediction and Control**

(i) A statement of activities over the preceding two years:

- 5th ERCOFTAC SIG33 Workshop in Stockholm, Sweden, May 31-June 2, 2006.
- 6th ERCOFTAC SIG33 Workshop in Kleinwalsertal, Austria, June 17-20, 2007.
- ERCOFTAC Bulletin special theme: Laminar-turbulent transition, No. 74, Sept. 2007.
- 7th ERCOFTAC SIG33 - FLUBIO Workshop in Santa Margherita Ligura (GE), Italy, October 16-18, 2008.
- FLOW-ERCOFTAC Summer school in Flow Control and Optimization, Jun. 29 - Jul. 3, 2009.

(ii) A plan of activities for the years 2010/11:

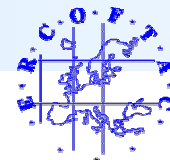
- A workshop is planned in Nice, France, May 2010.
- A workshop will be hold in 2011 (place and date not fixed yet).

(iii) A statement on input to the ERCOFTAC website:

- Homepage of SIG33 has been held updated continuously since 2006.

(iv) A commitment to the Concordate.

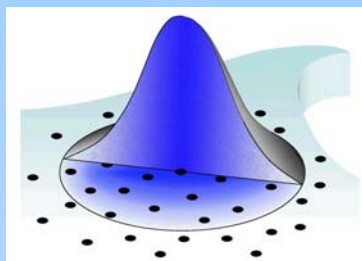
- The SIG has already committed to follow the Concordate.



### SPH European Research Interest Community

<http://wiki.manchester.ac.uk/spheric>

Contact: [damien.violeau@edf.fr](mailto:damien.violeau@edf.fr)



D. Violeau, Chairman  
N. Quinlan, Secretary  
B. Rogers, Webmaster

#### Steering Committee

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National University of Ireland, Galway  
University of Manchester (UK)  
University of Vigo (Spain)  
Sapienza University (Italy)  
Ecole Centrale de Nantes (France)  
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Swiss National Supercomputing  
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EPFL (Switzerland)  
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Université de Rennes (France)  
Université de Savoie (France)  
Swiss Federal Institute of Technology  
(Switzerland)  
CESI RICERCA (Italy)  
CIMNE Barcelona (Spain)  
University of Palermo (Italy)  
University of Genova (Italy)  
CEDEX (Spain)  
University of Pavia (Italy)  
Dublin Institute of Technology (Ireland)  
Imperial College London (UK)  
Insitute for Plasma Research (India)  
BAE Systems (UK)  
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Tarbiat Modares University (Iran)  
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Universidade de Santiago de Compostela (Spain)  
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University of Calabria (Italy)  
University Of Ljubljana (Slovenia)  
Virginia Tech (USA)  
SINTEF Materials and Chemistry (Norway)  
Manchester Metropolitan University (UK)  
Aberystwyth University (UK)  
J P KENNY Sdn. Bhd. (Malaysia)  
Politecnico di Milano

## Aim of SPHERIC

The *Smoothed Particle Hydrodynamics* (SPH) numerical method is nowadays successfully used in academic research and appears to be attractive for industrial applications in fluid dynamics and fluid-structure interactions. Recent publications in recognised journals show that an increasing number of academic or private institutions contribute to this development all around the world and particularly in Europe. Collaborations between institutes of various countries are also becoming more and more numerous, meaning that SPH is reaching its maturity in applied and industrial sciences.

SPHERIC, or “SPH European Research Interest Community”, aims to promote the SPH method in both academic and industrial fields and enhance collaborations between countries and institutes. It was recognized as a Special Interest Group (SIG) within Ercoftac in January 2006. Today (November 2008), the number of member institutes has reached 64, including 10 industrial partners (see opposite).

## Past and on-going activities

A Steering Committee of 12 members was created (see opposite) and meets twice a year for a 1-day meeting to take decisions regarding the SIG activities. The minutes are sent to all members.

A series of benchmark test cases has been built (3D dam break, 2D gate release, lid-driven cavity, rippled bed oscillatory flow, moving body in a closed cavity, landslide in a reservoir, etc.). A short description document was produced for each one to help the users. Some of these test cases are regularly used and presented at the occasion of the annual workshop/conference (see below).

A website (see top of this page) was created and is regularly updated with (to mention the most important features):

- a list of reference papers in Bibtex format (more than 400 entries);
- a job section (post-doctoral and PhD proposals, etc.);
- a section dedicated to the benchmarks (see above);
- newsletters (see below);
- information about the past and next events, including Powerpoint files of the invited lecturers of the past workshops and of the winners of the Libersky student award (see below);
- useful contacts and links.

A biannual newsletter is published and sent to about 200 persons all around the world. It contains 8 to 10 pages, with significant innovations and applications of SPH in various fields, with figures and appropriate references. The first seven issues (Dec. 2005, June 2006, Dec. 2006, June 2007, Jan. 2008, July 2008, Dec. 2008) can be downloaded from the website.

The first three SPHERIC workshops were held in Rome (Italy) in May 2006, Madrid (Spain) in May 2007 and Lausanne (Switzerland) in June 2008. Traditionally, this 3-day workshop is divided in thirteen plenary sessions, where 40 works and 3 keynote lectures on SPH are presented and discussed, together with a poster session. 80 to 90 SPH researchers attend this event, representing a wide range of universities, private companies and national agencies from about 15 countries in the World. Paper proceedings are edited and distributed to the attendees along with a CD-ROM. Since 2008, a training day is proposed to

students and young researchers. An award (Libersky prize) is presented for the best student contribution.

At the occasion of the XXXII biennial congress of IAHR (Int. Association of Hydraulic eng. and Research), which was held in Venice (Italy) in July 2007, a special seminar on SPH has been organized; 10 oral and written contributions were presented. The seminar had quite a success with more than 30 attendees. It should be reconducted in 2009 (Vancouver), while Prof. J.J. Monaghan has been invited to give a keynote adress.

A European collaboration project (named ESPHI) has been launched between 5 SPHERIC members to share scientific knowledge on SPH between Academia and Industry, in the context of a Marie Curie Transfer of Knowledge (ToK) agreement. It was accepted by the EC and will range from 2007 to 2009 (contact person: [etienne.parkinson@vatech-hydro.ch](mailto:etienne.parkinson@vatech-hydro.ch)). This programme includes improvements on pre-and post- treatment and parallelization, the modelling of turbulence and multiphase flows, industrial applications in 3 dimensions, and communication (lecture courses, publication of a book on SPH).

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### ***Near future activities***

The fourth workshop will take place in Nantes (France) in May 2009. The local organizing committee has received 66 abstracts of good quality; thus, for the first time our workshop should take the form of a small conference, with plenary sessions and parallel sessions. However, apart this point the global organisation will keep unchanged, with a training day and three World-recognized scientist as invited keynote speakers.

The next issue of the newsletter should be distributed in June 2009. As usual at this period of the year, it will be the opportunity to write a summary of the benefits of the last conference (see above).

The ESPHI European project (see above) is to be ended by September 2009. The book on SPH should require one more year (finalization, translation, negotiation with the editor) prior publication.

The place of the 2010 conference will be Manchester (UK).

Additional cases are planned for the benchmark database. The Steering Committee will soon examine how to transfer the description and results of all cases to the QNET-CFD database.

In the future, the SPHERIC events should not be restricted to an annual conference but may also include *e.g.* summerschools. However, the SIG needs a bit more maturity for doing so.

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### ***Concordat***

In 2006, the Steering Committee of SPHERIC has officially approved the concordat suggested by Ercoftac. In 2007, SPHERIC has approved the Concordat proposed by EROFTAC and so does it this year (2009). In particular:

- A leading member of the steering group will attend SPC meetings (except in case of Force Majeure);
- We will contribute to the industrial engagement activity through the provision of information and/or data that may arise from workshops, summerschools, etc., provided these data or information are not subject to any industrial confidentiality;
- The SIG website will be adapted to the proposed template and regularly updated.

Please note that in the recent past, only the first of the abovementioned items was not fully satisfied. After discussion, the Steering Committee decided to make everything possible to fulfil that point. The representative persons who will attend the Budapest and Lausanne ERCOFTAC meetings have been nominated yet.



*European Research Community on Flow, Turbulence and Combustion*  
*Special Interest Group on Fibre suspension flows – SIG43*

## **FUNDING APPLICATION TO ERCOFTAC**

SIG43 on Fibre suspension flows would like to apply ERCOFTAC support of 3000 euros for an active start-up of the group. The concrete plan to use the support is for travelling costs to ERCOFTAC meetings twice a year.

Jari Hämäläinen,

18<sup>th</sup> February, 2009



*European Research Community on Flow, Turbulence and Combustion*

***Special Interest Group on Fibre suspension flows – SIG43***

**Action report**

Here are mentioned all the concrete actions SIG43 has been responsible for since the establishment of the group:

- 2008
  - ❖ SIG43 presentation at Nordic PC (NPC12) meeting given by Jari Hämäläinen, May 29-30, 2008, Stockholm, Sweden
  - ❖ SIG43 was presented in ERCOFTAC bulletin 77, 2008
  - ❖ Steering group meeting, November 19, 2008, Brussels
  - ❖ Participating the ERCOFTAC SPC meeting, November 20, Brussels
- 2009
  - ❖ 1<sup>st</sup> workshop on fibre suspension flows, April 2-3, 2009, Jyväskylä, Finland
  - ❖ SIG43 workshop report in ERCOFTAC bulletin xx, 2009(?)
  - ❖ Researcher visit from Częstochowa University of Technology, Poland to University of Kuopio, Finland (3 months)
  - ❖ ERCOFTAC SIG43 group created in LinkedIn to have a discussion forum for all interested persons from the member organizations
  - ❖ Participating the ERCOFTAC SPC meeting, May 5, 2009, Budapest (?)
  - ❖ Organizing several sessions on fibre suspension flows in PRS2009, June 1-4, 2009, Kuopio, Finland



*European Research Community on Flow, Turbulence and Combustion*

***Special Interest Group on Fibre suspension flows – SIG43***

**ACTION PLAN 2009-2010**

The steering group decided the following action plan in its first meeting in Brussels in November, 2008.

1. Professor Jari Härmäläinen will be coordinator of the group and will participate all the ERCOFTAC meetings, i.e., the spring and autumn Committees. If he cannot participate, then Professor Bendiks Boersma will represent SIG43.
2. Official ERCOFTAC SIG web pages will be actively updated. Dr. Fredrik Lundell is responsible for the web pages. No other web pages (i.e., SIG's own pages) are needed at the moment.
3. SIG43 will arrange a workshop once a year. The first one will be organized by VTT on 2-3 April, 2009, in Jyväskylä Finland. The location of the second workshop has not been decided, but it was agreed that the workshops will be "rotated" through the all members of the SIG43.
4. SIG43 will organize several special sessions in Papermaking Research Symposium 2009, both on experimental fluid dynamics and CFD for fibre suspension flows.
5. Extra funding for the networking will be considered (COST, for example). In fact, the first funding application to CIMO has been submitted by Jari Härmäläinen in order to support one doctoral student visit from Poland to Finland for three months period in 2009.
6. Theme bulleting on Fibre suspension flows will be written. Depending on the number of ERCOFTAC bulletins per year, the theme bulletin will be either in the beginning of 2010, or in June 2010.
7. Extending the focus of SIG43: At the moment the papermaking-related fibre suspension flows is the main object. The group will actively try to attract other fibre suspension flows like polymers, textiles, etc.
8. Co-operation with ERCOFTAC special interest group on multi-phase flows will be activated.
- 9.

Jari Härmäläinen,

18<sup>th</sup> February, 2009





Brussels 20th April 2009

## **Administration and Development Office (A/DO)**

### **Activity report from 1<sup>st</sup> January to 31<sup>th</sup> December 2008**

#### **1. Invoicing 2008**

The invoices 2008 have been sent at the beginning of January to all the members and have been recorded into the accounting software.

#### **2. Follow up of memberships**

Since the beginning of January, we have collected the payments for the 2008 membership fees. At this time, we are still waiting for 12 payments from the research group, for 4 payments from the industry group.

#### **3. Scholarships and summer schools**

The scholarships and summer schools granted are booked as charges in the accounts. An invoice to be received is accounted for in the balance sheet. A table shows all the summer schools and scholarships not yet requested.

#### **4. Bank Account**

In July 2008 the business account has been closed and we have decided to open a term account for AIBS and one for Q&T. We have made a deposit for 6 months with a rate of 5.08%. At end of December 2008 we have renewed this investment for 6 month with a rate of 3.27%.

In July we have open a bank account in UK in order to be able to pay directly the salary of M. Seoud and all social security organisation. M. Hutton has a power of attorney on this account.

#### **5. Quality and Trust Special interest Group**

Credit card payment has been settled.



## 6. Web site

The A/DO has taken up the responsibility of the web site. Mr. Andrey Babayan is in charge of it and you will find here below the detail of what has been done.

January - June 2008 :

1. Multi-phase and Free-surface Flows for Dr. Navid BORHANI
2. Modification: ERCOFTAC Autumn Festival 2007 for Prof. Charles Hirsch
3. Modification: ERCOFTAC Best Practice Guidelines (BPG) for Dr. Navid BORHANI
4. Update of membership form for Dr. Navid BORHANI
5. Creation of [webmaster@ercoftac.org](mailto:webmaster@ercoftac.org) for Dr. Navid BORHANI
6. Update the details on the Coordination center page for Dr. Navid BORHANI
7. Announcement: ERCOFTAC Summer school 'Modeling of Atomization and Sprays for Technical and Industrial Applications.' for Dr. Navid BORHANI
8. Announcement: Summer School on Turbulence, Plankton and Marine Snow for Dr. Thierry Ursenbacher
9. Update membership information for Nordic PC for Dr. Navid BORHANI
10. Update of Bulletin page for Dr. Navid BORHANI
11. Update of The 2nd Young ERCOFTAC workshop page for Dr. Wolfgang Rodi
12. Announcement: 7th workshop to the SIG33 for Ardeshir Hanifi
13. Update of products and services page for Dr. Navid BORHANI
14. Creation of e-mail [Richard.Seoud-ieo@ercoftac.org](mailto:Richard.Seoud-ieo@ercoftac.org) (3 hours)
15. Creation of SIG42 for Dr. Navid BORHANI (big task - 2 days)
16. Update of products and services page for Dr. Navid BORHANI
17. Update of SIG4 information for Pierre Comte (2 hours)
18. ADO contact information modification for Dr. Navid BORHANI
19. SIG34 membership modification for Dr. Richard E. Seoud (1 hour)
20. Help with 7th workshop to the SIG33 for Ardeshir Hanifi
21. Updates of SIG42 for Dr. Richard E. Seoud (1 hour)
22. Fix of access rights in SIG33 "Bulletin contributions" for Ardeshir Hanifi
23. Hiding of empty pages for Prof. Charles HIRSCH (4 hours)
24. Mixing of "Past News" and "Calendar" databases for PCs and SIGs that post news (4 hours)
25. Updates of NPC membership, future and past events, bulletins for Dr. Richard E. Seoud (3 hours)
26. Update of Spray Summer school for Dr. Richard E. Seoud (15.05.2008)
27. NPC bulletins update for Dr. Richard E. Seoud (15.05.2008)

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28. Small fix of news for Dr. Richard E. Seoud (16.05.2008)
29. Update in ERCOFTAC Bulletin address for Anne Laurent (19.05.2008)
30. Update in Rules for holding ERCOFTAC events for Anne Laurent (21.05.2008)
31. Update of Membership registration form for Dr. Richard E. Seoud (27.05.2008)
32. Modification of SIG42 description for Dr. Richard E. Seoud (27.05.2008)
33. SIG14 small modifications for Dr. Richard E. Seoud (2.06.2008)
34. SIG37 small modifications for Dr. Richard E. Seoud (2.06.2008)
35. PC UK membership modifications for Dr. Richard E. Seoud (2.06.2008)
36. SIG35 small modifications for Dr. Richard E. Seoud (2.06.2008)
37. Modification of Membership page for Dr. Richard E. Seoud (3.06.2008)
38. Update of Membership registration form for Dr. Richard E. Seoud (3.06.2008)
39. Update of Membership registration form for Dr. Navid BORHANI (10.06.2008)
40. Update of Event registration form and rules for Dr. Navid BORHANI (10.06.2008)
41. SIG35 membership modifications for Dr. Richard E. Seoud (10.06.2008)
42. ETMM7 → ETMM8 for Dr. Richard E. Seoud (40 min) (18.06.2008)
43. ETMM7 → ETMM8 for Dr. Richard E. Seoud (20.06.2008)
44. NPC NPC12 event update for Dr. Richard E. Seoud (1 hour) (20.06.2008)
45. ETMM8 Venue modification: Pictures for Dr. Richard E. Seoud (1 hour) (23.06.2008)
46. center(s) → centre(s) for Dr. Richard E. Seoud (1 hour) (27.06.2008)
47. ERCOFTAC Structure modifications for Dr. Richard E. Seoud (1 hour) (27.06.2008)
48. 10 answers on different questions (membership, etc. )

## July - December 2008:

1. IAC → IPC for Dr. Richard E. Seoud (1 hour) (01.07.2008)
2. Modification of ERCOFTAC structure for Dr. Richard E. Seoud (1 hour) (01.07.2008)
3. Modification of ERCOFTAC executive committee for Dr. Richard E. Seoud (02.07.2008)
4. organiz... → organis... for Dr. Richard E. Seoud (1 hour) (02.07.2008)
5. Modification of ERCOFTAC Management Board for Dr. Richard E. Seoud (03.07.2008)
6. ERCOFTAC Autumn Festival 2008 – Industry Programme for Prof. Charles Hirsh (16.07.2008)
7. ERCOFTAC Autumn Festival 2008 – Industry Programme for Dr. Richard E. Seoud (28.07.2008)
8. Small modifications for Dr. Richard E. Seoud (28.07.2008)
9. Update NPC12 for Dr. Richard E. Seoud (05.08.2008)
10. Hybrid RANS-LES webpage for Dr. Richard E. Seoud (20.08.2008)
11. Update of Membership Form for Dr. Richard E. Seoud (22.08.2008)
12. Update of Welcome page for Dr. Richard E. Seoud (27.08.2008)

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13. SIG15: 13th ERCOFTAC/IAHR Workshop for Dr. Richard E. Seoud (16.09.2008)
14. SIG15: Bulletin Contribution for Dr. Richard E. Seoud (16.09.2008)
15. SIG15: Test case database for Dr. Richard E. Seoud (17.09.2008)
16. SIG42: steering committee modification database for Dr. Richard E. Seoud (19.09.2008)
17. Hybrid RANS-LES: small modification for Dr. Richard E. Seoud (19.09.2008)
18. Registration form AF2008 for Anne Laurent (1hour) (22.09.2008)
19. Technology Awareness Seminar for Dr. Richard E. Seoud (25.09.2008)
20. Update of Technology Awareness Seminar for Dr. Richard E. Seoud (26.09.2008)
21. News: Technology Awareness Seminar for Dr. Richard E. Seoud (26.09.2008)
22. /etmm7 -> /etmm8 for Prof. Charles Hirsh (01.10.2008)
23. ETMM8 modification for Dr. Richard E. Seoud (7.10.2008)
24. AF2008 files modification for Dr. Richard E. Seoud (7.10.2008)
25. AF2008 test modification for Dr. Richard E. Seoud (7.10.2008)
26. AF2008 files modification for Dr. Richard E. Seoud (8.10.2008)
27. AF2008 files modification for Anne Laurent (8.10.2008)
28. Modification: The Joint Technology Day (South Germany PC) for Dr. Richard E. Seoud (20.10.2008)
29. Modification: The Joint Technology Day (South Germany PC) for Dr. Richard E. Seoud (21.10.2008)
30. Fix: Announcement archive date for Dr. Richard E. Seoud (27.10.2008)
31. PC Henri Bénard: Workshop Astroflu for Dr. Richard E. Seoud (31.10.2008)
32. PC UK : Membership modification for Dr. Richard E. Seoud (3.11.2008)
33. Hide "Technology Awareness Seminar" for Dr. Richard E. Seoud (7.11.2008)
34. BPG DMPF page and BPG/BPG SPF pages modifications for Dr. Richard E. Seoud (2 hours) (7.11.2008)
35. New BPG order form for Anne Laurent (12.11.2008)
36. The 2008 Leonardo Da Vinci Doctoral Research Competition for Dr. Richard E. Seoud (13.11.2008)
37. NPC: new Industrial Member (Scania) for Dr. Richard E. Seoud (13.11.2008)
38. NPC: Membership modification for Anne Laurent (19.11.2008)
39. PC Henri Bénard: Modification Workshop Astroflu for Dr. Richard E. Seoud (24.11.2008)
40. NPC: Membership modification for Dr. Richard E. Seoud (24.11.2008)
41. Ercoftac/JMBC Course "Biological Fluid Mechanics" for Dr. Richard E. Seoud (24.11.2008)
42. PC Netherlands: several modifications for Dr. Richard E. Seoud (2 hours) (26.11.2008)
43. PC Greece: 2 announces for Prof. Vlachos (26.11.2008)
44. SIG10: event redirect to external URL for Dr. Richard E. Seoud (26.11.2008)
45. SIG43: creation from the beginning for Dr. Richard E. Seoud (4 hours) (2.12.2008)
46. SIG43: bulletin 77 for Dr. Richard E. Seoud (2.12.2008)



47. FLOW-ERCOFTAC Summer school in Flow Control and Optimization for Prof. Charles Hirsh (3.12.2008)
48. IM contact modification for Dr. Richard E. Seoud (5.12.2008)
49. Restore Paypal account for Anne Laurent (5.12.2008)
50. Workshop: Progress in Wall Turbulence : Understanding and modeling for Dr. Richard E. Seoud (8.12.2008)
51. Modifications in ANC PC for Dr. Richard E. Seoud (8.12.2008)
52. UP PC update for Dr. Richard E. Seoud (8.12.2008)
53. New membership form and order forms for BPG for Anne Laurent (9.12.2008)
54. E-Shop: Prices and logos setup for BPGs for Anne Laurent (9.12.2008)
55. E-Shop: Short descriptions for BPGs for Anne Laurent (10.12.2008)
56. NPC: Membership modification for Dr. Richard E. Seoud (15.12.2008)
57. SIG43: Small content modifications for Dr. Richard E. Seoud (15.12.2008)
58. TAS: modifications for Dr. Richard E. Seoud (15.12.2008)
59. SIG10: Past Technical Programme update for Dr. Richard E. Seoud (15.12.2008)
60. TAS: modifications for Dr. Richard E. Seoud (17.12.2008)
61. E-Shop: activation for Anne Laurent (17.12.2008)
62. News: 2 announcements for Dr. Richard E. Seoud (17.12.2008)
63. TAS: modifications for Dr. Richard E. Seoud (18.12.2008)
64. SIG1: LESTAC Workshop for Dr. Richard E. Seoud (19.12.2008)
65. 9 answers on different questions (membership, etc. )

## **7. Suggestions and Actions to be taken**

- Concerning the SIG, ERCOFTAC ADO wishes to have clear rules for the payment of the grants.  
A person should be identified to take responsibility for accepting the SIG expenses and to instruct about invoice and payment.

ERCOFTAC ADO would like to know if the budgets granted for previous years are still valid.

- Concerning ETMM7, Mr. Leschziner should contact Renault about the payment of the 2000€ and let us know if we can expect the payment or not.
- Concerning the activities organized by Mr. Seoud, ERCOFTAC ADO wishes that the payments from the participants are collected before or on the day of the event (by check or cash) in case they cannot produce a valid PO.

# *European Research Community On Flow Turbulence And Combustion*



Mr. Seoud should track the payment of Alstom for the 2008 Activity.

- Concerning bad debts (2007 & 2008), ERCOFTAC ADO suggests that Mr. Seoud try to find new contacts in those organizations.

Another way would be to involve PCs on the tracking payment issue.

We would like to thank Mr. S. Wallin for his help on providing new contacts and tracking payments.

- ERCOFTAC ADO would like to use a new accounting system called Navision used by Ms Laurent for the company Numeca International. In order to transfer all the database, we would need the help of a consultant, the cost should be around 1.000€.



European Research Community On Flow Turbulence And Combustion

ERCOFTAC

From January 1st, 2008 to December 31th, 2008

Assets	2008	2007	2006	Liabilities and Capital	2008	2007	2006
<b>I. Current Assets</b>				<b>I. Current Liabilities</b>			
A. Cash/ Bank Accounts				A. ADO Office	0,00 €		0,00 €
Checking Account ERCOFTAC Eur	48.765,86 €	4.676,55 €	9.922,77 €	B. Summerschool conceded S2008-03-05-06	9.000,00 €		
Term Account ERCOFTAC Euro	248.064,46 €	300.440,23 €	286.036,07 €	C. Workshop conceded W2008-01-07-10	6.000,00 €	W2007-02 2.000,00 €	W2006-04 2.000,00 €
Checking Account Promuval Euro			7.928,23 €	W2007-13		1.000,00 €	
Checking ETMM7	5.925,64 €	21.219,53 €		D. Business plan	- €		
Checking Account ERCOFTAC UK	10.000,00 €			E. Ercoftac Award	- €		
Checking Account Q&T-SIG Euro	19.292,11 €	34.047,57 €	11.147,15 €	F. Chairman Mr. Oliemans	452,03 €	2.607,02 €	4.544,26 €
Term Account Q&T-SIG	52.857,76 €	75.927,58 €	72.869,20 €	Mr. Hutton -Advance Payment	- 2.907,33 €	- 2.000,00 €	
	384.905,83 €	436.311,46 €	387.903,42 €	G. Web site			0,00 €
B. Accounts Receivable				H. Revenue reserve account			
Ercoftac Research 2008	7.500,00 €	500,00 €		Financial charges	1.217,77 €	632,50 €	1.283,20 €
Ercoftac Research 2007	2.000,00 €	4.000,00 €		Financial charges Q&T	332,75 €	243,13 €	267,85 €
Ercoftac Research 2006		500,00 €	4.000,00 €	Sales	0,00 €	500,00 €	500,00 €
Ercoftac Research 2005			1.000,00 €	I. Upgrade Knowledge Base	- €		
Ercoftac Research 2004			500,00 €	J. Second edition BPG	- €		
Ercoftac Research 2003			0,00 €	K. Coordination Center	- €		
Ercoftac Research 2002			500,00 €	L. FTAC journal	2.000,00 €		
Ercoftac Industry 2008	4.000,00 €			M. Eccomas	- €		
Ercoftac Industry 2007	2.000,00 €	2.000,00 €		N. Bills received but not yet paid	50.810,54 €	1.697,41 €	5.134,31 €
Ercoftac Associated 2006			250,00 €	O. Taxes and National insurance	11.349,26 €		
Ercoftac Associated 2005			250,00 €	<b>Total Current Liabilities</b>	78.255,02 €	6.680,06 €	13.729,62 €
Ercoftac Associated 2004			125,00 €	<b>II. Long-Term Liabilities</b>			
Double payment and unknow		-1.000,00 €		<b>Total Long-Term Liabilities</b>	0,00 €	0,00 €	0,00 €
ETMM7	2.050,00 €	2.000,00 €		<b>Total Liabilities</b>	78.255,02 €	6.680,06 €	13.729,62 €
Autumn Festival	3.230,00 €			<b>III. Capital</b>			
Rans	1.774,86 €			Net Result ERCOFTAC	272.011,72 €	340.064,36 €	313.562,49 €
Q&T	1.722,90 €	472,50 €	81,00 €	Net Result Q&T	69.079,92 €	102.494,09 €	77.575,99 €
	24.277,76 €	8.472,50 €	6.706,00 €	<b>Total Capital</b>	341.091,64 €	442.558,45 €	391.138,48 €
C. Revenue reserve account				<b>Total Liabilities and Capital</b>	419.346,66 €	449.238,51 €	404.868,10 €
Interest Income	8.186,83 €	3.519,73 €	8.499,76 €				
Interest Income Q&T	1.976,24 €	934,82 €	1.758,92 €				
<b>Total Current Assets</b>	419.346,66 €	449.238,51 €	404.868,10 €				
<b>II. Fixed Assets</b>							
<b>Total Fixed Assets</b>	0,00 €	0,00 €	0,00 €				
<b>III. Other Assets</b>							
<b>Total Other Assets</b>	0,00 €	0,00 €	0,00 €				
<b>Total Assets</b>	419.346,66 €	449.238,51 €	404.868,10 €				



**ERCOFTAC**

**Income Statement**

From January 1st, 2008 to December 31th, 2008

		<b>2008</b>	
<b>I. Revenue</b>			
	Income		
ERCOFTAC	Research Subscription	71.000,00 €	143 members
	Industry Subscription	43.250,00 €	46 members (3 SME)
	Associated Industry	500,00 €	1 member
	Autumn Festival	11.120,00 €	
	Past adjustments	0,00 €	
		<u>125.870,00 €</u>	
	Q&T		
	Q&T BPG1	2.825,00 €	
	Q&T BPG2	3.420,00 €	
	Q&T Postage and delivery	631,00 €	
	Q&T Credit card payment	14,40 €	
		<u>6.890,40 €</u>	
	ETMM7		
	Sales	14.189,85 €	
	RANS	20.984,55 €	
	Project	2.231,30 €	
			<b>170.166,10 €</b>
<b>Gross Profit (Loss)</b>			
<b>II. Expenses</b>			
ERCOFTAC	Eccomas Membership	1.000,00 €	
	Summerschools 2008	17.940,00 €	
	Workshop - Seminar 2008	17.426,02 €	
	Workshop - Seminar past	-2.000,00 €	
	SIG	1.340,00 €	
	Chairman Budget	2.835,07 €	
	Coordination Center Budget	37.500,00 €	
	ADO Budget	26.044,04 €	
	Travel expenses	603,66 €	
	Meeting	715,59 €	
	Legal Publications	107,33 €	
	Aerochina expenses	484,00 €	
	Website creation and maintenance	7.500,00 €	
	Flow, Turbulence And Combustion Journal	6.000,00 €	
	Business Plan	11.192,11 €	
	Awards ( price , certificate and medaille) & Autumn Festival	1.987,87 €	
	Autumn festival	43.740,42 €	
	RANS expenses	7.520,02 €	
		<u>181.936,13 €</u>	
ETMM7	ETMM7 expenses	28.875,80 €	
		<u>28.875,80 €</u>	
Q&T	2 <sup>nd</sup> BPG Edition	32.858,34 €	
	Postage & delivery	581,00 €	
	Upgrade Knowledge Base	10.000,00 €	
		<u>43.439,34 €</u>	
IEO	Salaries	34.995,90 €	
	<b>Total Expenses</b>		<b>289.247,17 €</b>
	<b>Net Operating Income</b>		<b>-119.081,07 €</b>
<b>III. Financial result</b>			
<b>Income:</b>			
	Interest Income	17.528,56 €	
	Interest Income Q&T	3.941,17 €	
	Interest ETMM	315,46 €	
<b>Expenses:</b>			
	Financial costs	3.189,26 €	
	Financial costs Q&T	806,40 €	
	Financial costs ETMM	175,27 €	
	<b>Total Financial result</b>		<b>17.614,26 €</b>
	<b>Net Income (Loss) AIBS</b>		<b>-68.052,64 €</b>
	<b>Net Income (Loss) Q&amp;T</b>		<b>-33.414,17 €</b>
	<b>TOTAL Net Income</b>		<b>-101.466,81 €</b>





## **Explanation about Income Statement 2008**

### **I. Revenue**

- Research members  
Ercoftac counts 143 members. We have booked 3 cancellations and we have 6 new members.
- Industry members  
Ercoftac counts 46 members. We have booked 2 cancellations and we have 3 new members.
- Past adjustments – Cancellation membership & double payment
  - R-UK-11                      1000 € - cancellation
  - R-E-05                        -500 € - they paid 2007
  - I-UK-10= Nexia              -1000 € - double payment
  - R-CZ-03= R-CZ02          500 € - double payment

### **II. Expenditure**

- Summer schools 2008 conceded by the board of director.  
Budget: 18 000 €                                      Invoice received: 14 940 €
- Workshop seminar 2008 conceded by the board of director.  
Budget: 16 000 €                                      Invoices received: 8 000 €  
W2007-02 had not been claimed on time. Grant has been cancelled.  
W2008-05 had not been claimed on time. Grant has been cancelled.
- Travel expenses                      483.66€ - Mr. Leschizner – Autumn festival  
120.00€ - Mr. Haas – Audit 2007
- Meeting                                  715.59€ - Mr. Leschizner - Stockholm
- Chairman Budget                      771.78 € for travel Brussels – Interview IEO (M.Hutton)  
615.12 € for travel London – PC workshop (M.Hutton)
- Website                                  7,500.00 € - Andrey Babayan
- Project Aerochina                      484 € - Audit certificat
- Journal FTC                              6,000.00 € - Prof Hanjalic From 01.07.07 to 31.12.08



**PAYROLL BREAKDOWN 2008**

**From 1<sup>st</sup> April 2008 to 31<sup>th</sup> December 2008**

**FIGURES in £ STERLING**

<b>Month</b>	<b>Gross</b>	<b>Tax</b>	<b>EmpleeNI</b>	<b>Sal. Net</b>	<b>EmpyrNI</b>	<b>HMRC</b>	<b>SALARY COST</b>
avr-08	2833,33	476	261,84	2095,49	304,68	1042,52	3138,01
mai-08	2833,33	476	261,84	2095,49	304,68	1042,52	3138,01
juin-08	2833,33	476	261,84	2095,49	304,68	1042,52	3138,01
juil-08	2833,33	476	261,84	2095,49	304,68	1042,52	3138,01
août-08	2833,33	476	261,84	2095,49	304,68	1042,52	3138,01
sept-08	2833,33	416	261,84	2155,49	304,68	982,52	3138,01
oct-08	2833,33	466	261,84	2105,49	304,68	1032,52	3138,01
nov-08	2833,33	466	261,84	2105,49	304,68	1032,52	3138,01
déc-08	2833,33	466	261,84	2105,49	304,68	1032,52	3138,01
	<b>25.499,97</b>	<b>4.194,00</b>	<b>2.356,56</b>	<b>18.949,41</b>	<b>2.742,12</b>	<b>9.292,68</b>	<b>28.242,09</b>



## Breakdown for Hybrid Rans Les Activity 2008

<b>INCOME - Hybrid Rans Les</b>					
25/08/2008	FV4	1	C RANS	8.496,84 €	Manpower 8*560 pounds sigrit altmaee
11/09/2008	FV4	2	C RANS	695,26 €	Nuclear energy safety -Simon kuln
11/09/2008	FV4	3	C RANS	1.395,00 €	Ghent university -Erik Dick
11/09/2008	FV4	4	C RANS	186,23 €	PCA Peugeot citroen
19/09/2008	FV4	5	C RANS	695,26 €	Rwth Aachen D. Christ
24/09/2008	FV4	6	C RANS	1.055,30 €	Viajes el corte ingles - Fernando Gisbert
24/09/2008	FV4	7	C RANS	695,26 €	Cenaero - Severine Quinet
24/09/2008	FV4	8	C RANS	1.055,30 €	Rwe npower - Tara Scarr
24/09/2008	FV4	9	C RANS	1.055,30 €	Gustuv B. V - Titia Mooi
30/09/2008	FV4	11	C RANS	695,26 €	Rolling metal strips - Jochem Groot
2/10/2008	FV4	13	C RANS	704,91 €	Lehrstuhl fur aerodynamik Technische universitat
2/10/2008	FV4	14	C RANS	704,91 €	Renuda - Tonello
8/10/2008	FV4	15	C RANS	704,91 €	GRS - Astrid Wankum
9/10/2008	FV4	16	C RANS	1.069,95 €	EADS learing shared services - caolina fresno sanc
13/10/2008	FV4	17	C RANS	704,91 €	Hemley fraser group milited -Hemsley Fraser
14/10/2008	FV4	18	C RANS	1.069,95 €	Alstom Power Technology -Lisa Marie Dilley
				<b>20.984,55 €</b>	
<b>EXPENDITURE - Hybrid Rans Les</b>					
26/11/2008	A1	853	F SEOUD	1.826,26 €	Dibber breaksfats printing
1/12/2008	A1	857	F RANS	5.693,76 €	speakers travel expenses
				<b>7.520,02 €</b>	
<b>NET RESULT</b>				<b>13.464,53 €</b>	

### ACCOUNTS RECEIVABLE - Payment to be received - April 15<sup>th</sup> 2009

27/02/2009	FV4	18	C RANS	1.069,95 €	Alstom Power Technology Centre-Lisa Marie Dilley
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## EXPENDITURE BUSINESS PLAN

From 1<sup>st</sup> January 2008 to 31<sup>th</sup> December 2008

### Travel for Interview IEO

31/03/2008	A1	808	F KARLSRUHE	336,40 €	Mr. Rodi- Travel interview IEO
31/03/2008	A1	809	F BEAUSITE	274,00 €	Mr. Rodi & Mr. Hutton - Hotel interview IEO
31/03/2008	A1	812	F MONTANARI	808,94 €	Mr. Montanari- interview IEO
22/04/2008	A1	813	F SEOUD	573,21 €	Mr. Richard Seoud -Interview IEO Travel
11/09/2008	A1	832	FNUMECA	371.20€	Mr. Charles Hirsch – business plan

### Travel Richard Seoud

20/05/2008	A1	818	F SEOUD	680,36 €	BAE Bristol & ERCOFTAC SPRING Stocklom
1/07/2008	A1	829	F SEOUD	513,52 €	O reynolds
1/11/2008	A1	862	F SEOUD	364,61 €	Autumn festival - travel
12/12/2008	A1	869	F SEOUD	600,00 €	Autumn festival - Hotel
31/12/2008	A1	870	F SEOUD	889,51 €	Bologna Microfluidics conference

### Office Supplies

23/09/2008	A1	840	F SEOUD	750,26 €	offices supplies
31/12/2008	A1	870	F SEOUD	332,00 €	offices supplies

### Consulting Chris Lea

23/09/2008	A1	837	F LEA	2.131,05 €	IEO Consulting
1/11/2008	A1	848	F LEA	360,95 €	IEO Consulting

### Consulting Radcliffes

1/08/2008	A1	833	F RADCLIFFE	2.206,10 €	IEO Consulting
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**11.192,11€**



## **BREAKDOWN AUTUMN FESTIVAL 2008**

### **INCOME**

Registration	11.120,00 €
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### **EXPENDITURE**

Speakers	6.000,00 €
Meeting room Academy	2.300,00 €
Deciders	27.766,60 €
Numeca	7.673,82 €
	<hr/>
	43.740,42 €

<b>NET RESULT</b>	<b>- 32.630,42 €</b>
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### **EXPENDITURE Leonardo Da vinci**

Medal	780.81 €
Diploma	89.54 €
Travel Finalists	1.117,52 €
Award winner ( cashed in 2009)	1.000,00 €
	<hr/>
	2 987.87 €



**SIG**

**From 1<sup>st</sup> January 2007 to 31<sup>th</sup> December 2009**

<b>SIG BUDGET</b>	SIG 12	SIG 15	SIG 20	SIG 28	SIG 34	SIG 35	SIG 40	SIG 42
2007	3.000 €	3.000 €	3.000 €	3.000 €	3.000 €	3.000 €	3.000 €	0 €
2008	3.000 €	3.000 €	3.000 €	3.000 €	0 €	3.000 €	0 €	0 €
2009	3.000 €	3.000 €	3.000 €	3.000 €	0 €	3.000 €	0 €	3.000 €
	<b>9.000 €</b>	<b>9.000 €</b>	<b>9.000 €</b>	<b>9.000 €</b>	<b>3.000 €</b>	<b>9.000 €</b>	<b>3.000 €</b>	<b>3.000 €</b>

<b>SIG EXPENSES</b>	SIG 12	SIG 15	SIG 20	SIG 28	SIG 34	SIG 35	SIG 40	SIG 42
2007	1.071 €					1.511 €	979 €	
2008						1.340 €		
2009								
	<b>1.071 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>2.851 €</b>	<b>979 €</b>	<b>0 €</b>



European Research Community On Flow Turbulence And Combustion

Unpaid Membership per Year

Statement on December 31th 2008

Research member	Institution				
R-DK-02	Aalborg University Esbjerg	2008			
R-F-20	Institut Jean-Le-Rond d'Alembert	2008	2007		
R-GR-03	Aristotle University of Thessalonik	2008	2007		
R-GR-06	NCSR DEMOKRITOS	2008			
R-N-01	Norwegian University of Science	2008			
R-P-01	Instituto Superior Tecnico	2008			
R-PL-04	Institute of fluid flow Machinery Polish Academy of Sciences	2008			
R-PL-06	Silesian Technical University	2008			
R-PL-07	Kielce University of Technology	2008			
R-S-05	LTH	2008			
R-S-08	Lulea University of Technology		2007		Mr. Wallin will try to provide new contact
R-S-09	Chalmers Institute of Technology	2008	2007		Dr. Staffan Lundström -new contact They paid both on April 2009
R-UK-07	King's college London	2008			
R-UK-16	UMIST	2008			
R-UK-21	Nottingham University	2008			
R-UK-27	University of Glasgow	2008			Cancellation 2009
		<b>15</b>	<b>4</b>		
		<b>7.500 €</b>	<b>2.000 €</b>		
Industry member	Institution				
I-D-09	EADS	2008			
I-UK-01	Arup research & Development	2008	2007		
I-UK-09	W.S Atkins Engineering Sciences	2008	2007		
I-UK-18	BAE Systems advanced Technology	2008			
		<b>4</b>	<b>2</b>		
		<b>4.000 €</b>	<b>2.000 €</b>		
<b>TOTAL in EUROS</b>		<b>11.500 €</b>	<b>4.000 €</b>		



*European Research Community On Flow Turbulence And Combustion*

*Status Membership per Year*

Statement on December 31th 2008

Research Group	Number of members	Number of received payments in 2008	Received amount in 2008	Number of unpaid membership	Amounts still due
2008	143	128	63.500 €	15	7.500 €
2007	140	2	1.000 €	4	2.000 €
2006	141	1	500 €		0 €
2005	139		0 €		0 €
2004	142		0 €		0 €
2003	138		0 €		0 €
2002	141		0 €		0 €
<b>Total</b>			<b>65.000 €</b>		<b>9.500 €</b>

Industry Group	Number of members	Number of received payments in 2008	Received amount in 2008	Number of members unpaid	Amount still due
2008	46	42	39.250 €	4	4.000 €
2007	45		0 €	2	2.000 €
2006	44		0 €		
2005	45		0 €		
2004			0 €		
2003			0 €		
<b>Total</b>			<b>39.250 €</b>		<b>6.000 €</b>

Associated	Number of members	Number of received payments in 2008	Received amount in 2008	Number of members unpaid	Amount still due
2008	1	1	500 €		0 €
2007	1		0 €		0 €
<b>Total</b>			<b>500 €</b>		<b>0 €</b>

**TOTAL 104.750 €**

**TOTAL 15.500 €**



# **European Research Community On Flow, Turbulence And Combustion**

*Summerschools/Courses (co)-organized with ERCOFTAC*

## **SummerSchools 2008**

**BUDGET 18 000 € -**

**INVOICES RECEIVED 8 940 € on 2008**

**INVOICES RECEIVED 6 000 € on 2009**

- **S2008-01 – Invoice 858 for 2940€**

***International Summer School on Turbulence, Plankton, and Marine Snow***

Location and date: Moli de Mar, Po Ermita de St. Cristofor (Far), Vilanova i la Geltrú,  
08800 Barcelona, Spain, September 2008

Organizer: Herman CLERCX

Co-organized: Additional funding is requested to reduce fees and cover expenses  
of invited keynote lecturers: JM Burgers Center (NL); Univ. of Lille  
(FR); CNRS (FR); Spanish Ministry of Science and Education (SP);  
AGAUR (Catalunya, SP), Bio-fluid Mechanics and Heat Transfer, SIG  
37

Scholarships: yes

Approved: yes, meeting in Athens (October 26, 2006)

- **S2008-02 - Invoice 811 for 3000€**

***Application of Particle Image Velocimetry***

Location and date: Göttingen, Germany, 25-29 February 2008

Organizer: A. Schröder

Co-organized: Germany North PC, Netherlands PC, France PC, SIG 32

Announcement: Bulletin 74

Scholarships: yes

Approved: yes, Brussels 31.10.2007

- **S2008-03 – Invoice 29008 For 3000 € - 2009**

***JM Burgers Centre Course on Combustion***

Location and date: Eindhoven, The Netherlands, 6-9 May 2008

Organizers: L.P.H. de Goey, D. Roekaerts

Co-organized: SIG28

Scholarships: yes

Approved: yes, Brussels 31.10.2007

- **S2008-04 – No requested**  
***Fundamentals and modern application of combustion technology***  
 Location and date: University of Erlangen, Nürnberg, Germany, February 25-28  
 Organizers: F. Dinkelacker, A. Leipertz  
 Co-organized: SIG28  
 Scholarships: not requested  
 Approved: no, Brussels 31.10.2007
  
- **S2008-05 - Invoice 29004 for 3000€ - 2009**  
***Modelling of Atomisation and Sprays for Technical and Industrial Applications***  
 Location and date: Halle (Saale), Germany, 21-24 July 2008  
 Organizers: M. Sommerfeld  
 Co-organized: SIG12, PC Germany North  
 Scholarships: yes  
 Approved: yes, Brussels 31.10.2007
  
- **S2008-06 – Invoice & financial report pending**  
***Turbulence and mixing in compressible flows II***  
 Location and date: Marseille, France, 7-12 July 2008  
 Organizers: J-P. Dussauge  
 Co-organized: SIG4, France South PC  
 Scholarships: yes  
 Approved: yes, Stockholm Mai 2008
  
- **S2008-07 – Invoice 854 for 3000€**  
***Les simulation and application in aeroacoustics***  
 Location and date: Balatonfüred, Hungary 31 August-6 September 2008  
 Organizers: Lajos T., Lohasz M.  
 Scholarships: yes  
 Approved: yes, Stockholm Mai 2008

# European Research Community On Flow Turbulence And Combustion

Workshops/Conferences (co)-organized with ERCOFTAC

Workshop 2008 Budget 16 000 € - Invoices received 8000€

- **W2008-01**  
***ERCOFTAC International Symposium on Engineering Turbulence Modelling And Measurements – ETMM7***  
Location and date: Limassol, Cyprus, 4-6 June 2008  
Organizers: M.A. Leschziner (Chairman), S. Kassinos  
Co-organized: University of Cyprus  
Announcement: Bulletin 74  
Report: too early  
Scholarships: yes  
Approved: **yes, Florence 4.5.2006**
- **W2008-02 – Invoice 859 for 2000€**  
***Spheric Third International Workshop: SPHERIC III***  
Location and date: EPFL, Lausanne, Switzerland, 4-6 June 2008  
Organizer: P. Maruzewski  
Co-organized: SIG1  
Scholarships: yes  
Approved: **yes, Brussels 31.10.2007**
- **W2008-03 – Not requested**  
***Sound Source Mechanisms in Turbulent Shear-Flow***  
Location and date: Poitiers, France, 7-9 July 2008  
Organizers: P. Jordan  
Co-organized: France West PC  
Scholarships: Not requested  
Approved: **yes, Brussels 31.10.2007**
- **W2008-04 – Not awarded**  
***DNS and LES of Reacting Flows***  
Location and date: Eindhoven, Holland, 22-24 October 2008  
Organizers: L.P.H. de Goey  
Co-organized: SIG28 (Reacting Flows), EC COST Action P20 LES-AID  
Scholarships: Requested, but not awarded  
Approved: **no, Brussels 31.10.2007**
- **W2008-05 – Expired on September 2008**  
***Quality & Reliability of CFD Simulations IV: Complex flows***  
Location and date: University of Nottingham, UK, 5 March 2008  
Organizers: C. Lea  
Co-organized: UKPC, SIG101, SIG5, NAFEMS  
Scholarships: yes  
Approved: **yes, Brussels 31.10.2007**
- **W2008-06 Invoice 874 for 2000€**  
***7th ERCOFTAC SIG33 Workshop: Open issues in transition and flow control***  
Location and date: Genova, Italy, 16-18 October 2008  
Organizers: A. Bottaro, A Hanifi

# European Research Community On Flow Turbulence And Combustion

Co-organized: SIG 33  
Scholarships: yes  
Approved: **yes, Brussels 31.10.2007**

- **W2008-07 – report approved but still now no invoice & financial report received**  
***European Drag Reduction and Flow Control Meeting 2008***  
Location and date: Mariental, Germany, 8-11 September 2008  
Organizers: W. Hage, E. Wassen  
Co-organized: SIG20  
Scholarships: yes  
Approved: **yes, Stockholm Mai 2008**
- **W2008-08 – Invoice 841 for 2000 €**  
***Direct and Large-Eddy Simulations 7***  
Location and date: Trieste, Italy, 8-10 September 2008  
Organizers: V. Armenio, J. Fröhlich, B. J. Geurts, O. Métals, K. R. Sreenivasan  
Co-organized: SIG 1  
Scholarships: yes  
Approved: **yes, Stockholm Mai 2008**
- **W2008-09 –not awarded**  
***Multiscale methods for fluid and plasma turbulence***  
Location and date: Luminy, France, 21-25 April 2008  
Organizers: Schneider. K.  
Co-organized: SIG 35  
Scholarships: Requested, but not awarded  
Approved: **yes, Stockholm Mai 2008**
- **W2008-10 – on process**  
***13<sup>th</sup> Workshop on turbulence modelling***  
Location and date: Graz, Austria, 25-26 September 2008  
Organizers: Brenn G. & Jakirlic S.  
Co-organized: SIG 15  
Scholarships: yes  
Approved: **yes, Stockholm Mai 2008**
- **W2008-11 Not requested**  
***Conference on turbulence & interactions***  
Location and date: Martinique, France 31 May -5 June 2009  
Organizers: Deville. M  
Co-organized: SIG 4,12,14,35,39,42  
Scholarships: not requested  
Approved: **yes, Stockholm Mai 2008**
- **W2008-12 – Invoice 873 for 2000€**  
***3<sup>rd</sup> Workshop on Synthetic turbulence models***  
Location and date: Newcastle, UK 3 July - 4 July 2008  
Organizers: Nicolleau F., Reeks F., Baggaley C., Cambon C.  
Co-organized: SIG 35, 42  
Scholarships: yes  
Approved: **yes, Stockholm Mai 2008**

## Income Statement Quality and Trust SIG Accounts

From 1<sup>st</sup> January to 31<sup>th</sup> December 2008

### INCOME

**1. Sales of Best Practice Guidelines – Version 2000**

27 Orders (29 BPG sold) 2 825.00 €

Post and bank charges 314.00 €

**2. Sales of Best Practice Guidelines – Version 2008**

27 Orders (41 BPG sold) 3 420.00 €

Post and bank charges 317.00 €

Credit card payment (2 BPG) 14.40 €

**3. Income from interest on term account**

Interests 3 941.17 €

**TOTAL INCOME RECEIVED 10 831.57 €**

### EXPENDITURE

**1. Bank charges 806.40 €**

**2. 2<sup>nd</sup> BPG edition**

Authors	27 000.00 €
Paypal	1 724.25 €
BPG Copies	4 131.09 €

*Mr. Mudde & Mr. Kuipers did not send their bank account number*

**3. Upgrade knowledge Base - Mr. Rodi 10 000.00 €**

**TOTAL EXPENDITURE 44 245.74 €**

**NET INCOME 2008 -33 414.17€**

## Balance Sheet Quality and Trust SIG Accounts

From 1<sup>st</sup> January to 31<sup>th</sup> December 2008

### ASSETS

#### Current Assets

##### a. Cash/ Bank Accounts.

Checking Account Q&T 19 292.11 €

Term Account Q&T 52 857.76 €

##### b. Accounts Receivable

Invoices QT 2008 1 722.90 €

C. Revenue reserve account 1 976.24 €

**TOTAL ASSETS 75 849.01€**

### Liabilities and Capital

#### Current Liabilities

##### a. Revenue reserve account

Financial charges 332.75 €

Transfer to be made to Ercoftac AIBS for 6 436.34 €

The payment of Transport copies BPG: 4131.09

Paypal system: 1724.25

Postage: 581

#### Capital

Net Result Q&T 69 079.92 €

**TOTAL Liabilities and CAPITAL 75 849.01€**