

European Research Community on Flow, Turbulence and Combustion

SCHEDULE

ERCOFTAC COMMITTEE MEETINGS

**20^h November 2008,
Royal Academy, Brussels.**

9:00-12:00	SPC & IPC meetings held in parallel sessions
12:00-13:00	Lunch
13:00-16:45	Managing Board meeting
16:45-17:00	General Assembly meeting

Documents attached

1. Agendas for the SPC, IPC and MB-GA meetings
2. Minutes of the Ercoftac Committee meetings held in Stockholm on 6th May 2008
3. Ercoftac Workshop and Summerschool status report
4. Applications for ERCOFTAC event sponsorship and overdue reports
5. SIG status report

European Research Community on Flow, Turbulence and Combustion

AGENDA

SCIENTIFIC PROGRAMME COMMITTEE MEETING

20th November 2008, Brussels

09:00 SPC meeting, chaired by Prof. Leschziner

Coffee break around 10:30

1. Approval of agenda
2. Minutes of the SPC Meeting held in Stockholm on the 6th May 2008
3. Matters arising and review of actions from the SPC Meeting held in Stockholm on the 6th May 2008
4. SPC Chairmanship
5. Special Interest Groups
 - i. Current status report
 - ii. SIG funding
 - iii. SIGs on 'Fibre suspension flows' & 'Turbomachinery'
6. Pilot Centres
 - i. Current status report
 - ii. PC Support
7. Workshops and summer schools
 - i. Status of reports on previous events
 - ii. New proposals
8. Status report on ETMM7 and ETMM8
9. ERCOFTAC publications
 - i. FTAC journal and the ERCOFTAC book series
 - ii. Bulletin and theme issues for 2009-10
 - iii. Review of Website
10. Review of the ERCOFTAC Autumn Festival 2008 and Da Vinci 2008 Award
11. Date of next SPC meeting

12:00 End of meeting, lunch break

AGENDA

INDUSTRIAL PROGRAMME COMMITTEE MEETING

20th November 2008, Brussels

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

Coffee break around 10:30

1. Apologies for absence
2. Minutes of IPC meeting held in Stockholm on the 6th May 2008
3. QNET-CFD knowledge base
 - i. Present status (Profs Rodi, Hutton and Hirsch)
 - ii. Future plans
4. ERCOFTAC industrial strategy
 - i. Delivery and development of the business plan (Dr Seoud)
 - ii. Monitoring & review (Dr Lea)
5. Best Practice Guidelines
 - i. Status of the Dispersed Multi-Phase Flow BPG (Prof Oliemans)
 - ii. Status of the Industrial CFD BPG, including 2nd edition (Prof Hutton)
6. Development of the IPC (Dr Lea)
7. Next IPC meeting
8. Any Other Business

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

European Research Community on Flow, Turbulence and Combustion

AGENDA

MANAGING BOARD – GENERAL ASSEMBLY MEETINGS

20th November 2008, Brussels

13:00 **Managing Board meeting, chaired by Prof. Hutton**

Coffee break during the meeting approx. 15:00)

1. Approval of the agenda
2. Approval of minutes of the EC meeting held in Stockholm 6th May 2008
3. Action items from the EC meeting held in Stockholm 6th May 2008
4. The evolution of ERCOFTAC and its future operation
5. Election of new Managing Board members
6. Financial report
 - i. Budget 2007 and 2008
7. Report from Administration and Development Office
8. Report from Coordination Centre
9. Report from Scientific Programme Committee
10. Report from Industrial Programme Committee
11. Status of ERCOFTAC products and services
 - i. FTAC journal
 - ii. Bulletin
 - iii. Book series
 - iv. Conferences: ETMM7 & 8
 - v. BPG - Industrial CFD
 - vi. BPG - Multiphase Flow
 - vii. Website
 - viii. ERCOFTAC data base
 - ix. QNET-CFD knowledge base
12. Any Other Business
13. Dates and location of the next MB-GA and EC meetings

16:45 **End of meeting**

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

1. Opening
2. Election of Managing Board members
3. Approval of 2007 accounts and the 2008-9 budget

17:00 **End of Meeting**

New Managing board members

Polish PC

Prof. T. Kowalewski, Institute of Fundamental Technological Research, Polish Academy of Sciences, Warsaw.

Prof. P. Doerffer, Institute of Fluid-Flow Machinery, Polish Academy of Sciences, Gdansk.

Belgian PC

Philippe Geuzaine, Cenaero.

Italy PC

Prof. Francesco Martelli (Research) & Dr. Stefano Cecchi (industry)

European Research Community on Flow, Turbulence and Combustion

SCIENTIFIC PROGRAMME COMMITTEE MEETING

6th May 2008 Stockholm, Sweden

ATTENDANCE

Borhani, N.	EPFL, Switzerland.
Cambon, C.	LMFA, France.
Choi, K. S.	University of Nottingham, England.
Comte, P.	LEA CEAT, France.
Hanifi, A.	FOI, Sweden.
Hirsch, C.	Numeca, Belgium.
Hutton, A. G.	Airbus UK, England.
Jakirlic, S.	Darmstadt University, Germany.
Kuhlmann, H.	Vienna University, Austria.
Lea, C.	Lea CFD Associates, England.
Leschziner, M. A.	Imperial College London, England.
Oliemans, R.	Multiphase Flow BV, Holland.
Redondo, J-M	UPC, Spain.
Rodi, W.	University of Karlsruhe, Germany.
Tomboulides, A.	University of West Macedonia, Greece.
Van Steenhoven, A. A.	TU Eindhoven, Netherlands.
Wallin, S.	KTH, Sweden.

APPOLOGIES

Andersson, H.	NTSU, Norway.
Braza, M.	IMFT, France.
Castilla	UPC, Spain.
Dick, E.	Gent University, Belgium.
Gauger, N.	DLR, Germany.
Geurts, B. J.	University of Twente, Netherlands.
Hanjalic, K.	University of Rome, Italy.
Klaas, M.	Aachen University, Germany.
Martelli, F.	University of Firenze, Italy.
Monkewitz, P. A.	EPFL, Switzerland.
Ooms, G.	JMB Centre, Holland.
Rispoli, F.	Universita la Sapienza, Italy.
Vlachos, N.	Thessaly University, Greece.

European Research Community on Flow, Turbulence and Combustion

SCIENTIFIC PROGRAMME COMMITTEE MEETING

6th May 2008 Stockholm, Sweden

MINUTES

The meeting was opened by the SPC Chairman, Prof. Leschziner, at 9:00. He noted the poor attendance; with only 30% of the SPC present.

1. Approval of the agenda

The agenda was approved by the members.

2. Approval of SPC committee meeting minutes from Brussels on the 31st October 2007

With reference to section (4.i) of the minutes, stating: 'Prof. Van Steenhoven outlined Ercoftac's new proposal on the funding of recurring annual events: Such events will no longer be automatically supported financially, rather for future events, funds will be provided, for example, for the even years and not the odd.' Prof. Leschziner clarified the SPC's policy regarding Ercoftac support of recurring events, namely: SPC wishes to encourage applications from new events that would not find funding from other sources, therefore, funding of recurring events should be modulated as a function of the number of requests thus allowing the effective promotion of embryonic events.

3. Special Interest Groups

i. Current status report and the state of SIG representation on the Ercoftac webpage

Prof. Leschziner reported that he had recently sent an email to all of the SIGs commenting on the pitiful state of their webpages on the Ercoftac website. He stated that this was a shame, since the efforts of some SIGs were not reflected in what was advertised online. Furthermore, it projected a bad image of Ercoftac to the wider community. This view was emphasised by Prof. Hutton who remarked that the state of the SIG and PC representation on the website was a disgrace. He added that, considering Ercoftac's current marketing push, the priority was to get the webpage populated with information.

Prof. Leschziner noted that webpages of the 8 funded SIGs (12, 15, 20, 28, 33, 34, 35 & 40) were generally acceptable, probably due to their responsibilities under the concordat agreement, however, the rest were quiet poor with half containing no information at all.

Further discussions revealed the deep dissatisfaction and frustration felt by members regarding the Ercoftac webpage, and its apparent inability to function or deal with the submitted information. Several possible reasons for the present state of the website were highlighted:

1. *The website infrastructure:* Many members felt the infrastructure of the Ercoftac website was not suited to its purpose: In particular, the template developed for data input into the website could not cope with the information the SIGs wished to submit. Members commented that the current template was inflexible and inefficient, data entry was often difficult, and the final results appeared in an undesirable format.

Several SIG coordinators expressed their desire to create and update their own webpages on the Ercoftac server without the involvement of the webmaster; thus removing excuses involving the webmaster. Prof. Hirsch stated that this option was not acceptable since, from previous experience, some coordinators still made no effort to input information or encountered difficulties with the procedure. As a result of which coordinators were then asked to forward their data to the ADO for inclusion by the webmaster. Furthermore, he noted that a template was implemented to ensure

uniformity in the presentation style across the website. Other SIG coordinators wished to maintain their webpages on their own servers, and be cross-linked into the Ercoftac webpage. However, Prof. Leschziner felt that this was not acceptable since it implied the webpage was not functioning properly and was thus bad for Ercoftac's image.

Prof. van Steenhoven advocated the use of a wiki style update mechanism for the SIG and PC webpages.

Some members requested to examine the Ercoftac webpage statistics to see if it was an effective means of marketing their work, but it was unclear if such information was even available.

2. *The administration and quality control of the website:* Some members felt that the webmaster was not acting in timely accordance with the wishes of the SIG or PC. Dr. Hanifi voiced the frustration of SIG coordinators that information provided in template format often did not appear online, and was sometimes deleted during administration changes. Prof. Redondo stated he would not waste his time generating information that does not appear on the webpage due to system or administration problems. He added that if the site was seen to function, coordinators would be more motivated to get involved. Prof. Van Steenhoven stated that the level of activity of a SIG could not be judged by the state of its webpage if it was the administration of the website that caused the problem.

3. *Lack of information regarding submission procedures:* Members commented that submission procedures were changing continuously and that they were not informed. They recommended that any implemented scheme should be clearly stated on the website.

4. *Priority conflicts and motivation of the SIG and PC coordinators:* Prof. Hutton felt that this was not a procedural problem, but one of motivation of the coordinators to submit data in the first place. Furthermore, this problem would exist regardless of any implemented data submission procedure. He added that all SIGs and PCs should be contacted directly for information, even previously submitted to identify inactive units. Prof. Redondo suggested the current state of the Ercoftac website was indicative of the dissatisfaction felt by Ercoftac's academic members regarding the organisations current approach. He noted that factors, including the formal concordat, budget restrictions, and Ercoftac's more commercial approach to its image and goals, had resulted in a lack of interest by its academic members and confusion as to what the value added by Ercoftac association actually was. Prof. Redondo stated that the situation could be improved by allowing PCs and SIGs to have more freedom on the use of their allocated funds, and that the SIG concordat rules should be clearly advertised on the webpage.

The SPC decided on the following data submission procedure for the website: All information to be published on the Ercoftac website should be sent to the IEO using the current template. The IEO will then record its submission, forward it to the webmaster, and control that it has been effectively implemented in coordination with Prof. Hirsch.

Furthermore, Prof. Leschziner said that he would inform the SIGs again, particularly SIGs 1, 5, 10, 14, 32, 38, 39, 41, 42, 100, to motivate them to publicise their activities and to effectively insert their information into the webpage.

In response to Prof. Cambon who asked if the SIG funding was only for 2008, Prof. Leschziner stated that he will write to all SIG coordinators to ask for their future activity plans. Based on these reports, he would then recommend their future funding to the Executive Committee.

ii. Creation and deletion of SIGs

The SPC voted unanimously to dissolve 'SIG 8 – Turbomachinery' due to its inactivity.

Prof. Wallin presented a proposal for the creation of new SIG on fibre suspension flows and its proposed future activities. *The SPC voted unanimously in favour of this proposal* and forwarded it to the Executive Committee for approval.

4. Pilot Centres

Prof. Leschziner stated that the current state of PC representation on the Ercoftac webpage was unacceptable, with nothing of any value under a large majority of PC pages. This situation was bad for the image of Ercoftac and needs to be corrected, however, he noted that PCs were unclear about their function and lacked funds to be active. Prof. van Steenhoven remarked that Ercoftac funding was available for PC activities on approval of specific requests to the Managing Board. Prof. Leschziner said that he will write to all PCs to advertise this source of funds in order to encourage PC activity.

5. Ercoftac workshops and summer schools

i. Outstanding reports

The report on ‘W2007-10: Workshop on near wall turbulence, Italy, 22.3.2007’ was registered as overdue.

ii. New proposals

Prof. Leschziner stated that, since Ercoftac had decided to elevate ETMM to its showcase conference, it was counter productive to promote events that overlapped with ETMM’s scope and dates. Such overlap occurred with numerous other LES and turbulence modelling events, such as DLES, and resulted in a reduction in the number of presentations and participants at ETMM. Furthermore, by spreading the Ercoftac label too wide it would lose its value. As a result, he said there was a need to maximise ETMM’s impact and show a coherent Ercoftac policy. In response, Prof. Redondo stated that this was not a good policy since promotion of small activities should not stop for the sake of ETMM; rather a more balanced approach was needed especially for embryonic events that promote research and education. He said an option would be for SIGs to present their research in a suitable forum in ETMM. Prof. Comte added that, by sponsoring small scale events, Ercoftac’s visibility was enhanced rather than diminished. Prof. Rodi stated that competing events, like the established Ercoftac sponsored DLES event, have always existed and will continue to do so even without Ercoftac sponsorship. He added that DLES was the only Ercoftac event that published its proceedings in the Ercoftac book series, and if its support was cut, then the book series could come to an end and drive away the involved individuals from the Ercoftac community. Prof. Redondo stated that as a condition of Ercoftac support for an event, they should publish their proceedings in the Ercoftac book series.

Prof. Oliemans said that Ercoftac sponsorship of an event should lead to a marked reduction of attendance fees for Ercoftac members. In response, Prof. Leschziner stated that an Ercoftac member reduction was not the main reason for Ercoftac support of an event, but rather to allow research students to attend. Prof. Hutton recommended that for industrial participants there should be a larger difference between member and non-member registration fees thus highlighting the benefits of Ercoftac membership. He said that this should be communicated to future applicants. Prof. Redondo replied by stating the role of Ercoftac summer schools was not to provide training for industry, but for academic education, and so sponsorship should not be provided for such industry focused events.

After the Brussels 2007 SPC meeting, sufficient funds remained from the 2008 budget for 2 summer schools and 2 workshops. However, after reviewing the applications, the SPC voted to recommend to the Executive Committee that the 2008 budget be extended to cover 2 summer schools and 3 workshops, with the final decision regarding a fourth workshop W2008-08-DLES7 to be made by the Executive Committee.

In summary, the decisions regarding the event sponsorship application were:

S2008-06 ‘*Turbulence and mixing in compressible flows II*’, Marseille, France, 7-12.7.2008.

Ercoftac logo approved and awarded 3000 Euros.

S2008-07 ‘*LES simulation and application in aeroacoustics*’, Balatonfüred, Hungary, 31.8-6.9.2008.

Ercoftac logo approved and awarded 3000 Euros.

W2008-07 ‘*European drag reduction and flow control meeting*’, Mariental, Germany, 8-11.9.2008.

Ercoftac logo approved and awarded 2000 Euros.

W2008-08 ‘*DLES7*’, Trieste, Italy, 8-10.9.2008.

Referred to the Executive Committee for consideration.

W2008-09 ‘*Multiscale methods for fluid and plasma turbulence*’, Luminy, France, 21-25.4.2008.

Rejected since it is a proactive application by non-Ercoftac members.

W2008-10 ‘*13th. Workshop on turbulence modelling*’, Graz, Austria, 25-26.9.2008.

Ercoftac logo approved and awarded 2000 Euros.

W2008-11 ‘*Conference on turbulence and interactions*’, Martinique, France, 31.5-5.6.2009.

Ercoftac logo approved.

W2008-12 ‘*3rd. Workshop on synthetic turbulence models*’, Newcastle, UK, 3-4.7.2008.

Ercoftac logo approved and awarded 2000 Euros.

Prof Rodi reported on the 2nd Young Ercoftac Workshop held in Italy during March 2008. He noted that this event was independent of SIGs or PCs, and was an important means of attracting younger members into the

Ercoftac organisation. Therefore, he encouraged SPC involvement in the event, particularly in the choice of future research topics. Prof. Oliemans agreed that such initiatives by younger members should be encouraged and advised upon by the SPC. Prof. Leschziner praised the workshop organiser's efforts but noted that it was no different from other Ercoftac summer schools apart from the socialising aspect. He stated that summer schools were generally effective forums for attracting younger research scientists, and that the related SIGs should be involved in its future organisation rather than the limited influence of the SPC.

6. Status report on ETMM7 and ETMM8

Prof. Leschziner gave an update on the ETMM7 conference to be held in Limassol, Cyprus over the 4-6th June 2008. He said there would be 115 oral presentations, 6 invited lectures and 20 posters; a total of 141 papers in 3 parallel sessions. He noted that he was disappointed at the low number of submitted papers, their quality, the relatively high 15% withdrawal rate, and the 50% attendance of the advisory committee. He stated that these were indicative of the low priority put on ETMM by the scientific community. Prof. Redondo said that this apathy was probably due to the fact that the ETMM7 webpage gave the impression it was geared towards an industrial audience rather than academic. He added that ETMM should be a forum for presenting Ercoftac SIG activities.

Prof. Leschziner reported that support of £40,000 (not including services in kind) had been obtained from 20 external sources.

Prof. Leschziner also reported that, due to difficulties in advertising ETMM7 on the Ercoftac website, it was hosted by a 3rd party. Furthermore, the conference proceedings were now in print, and would also be available as a non-searchable CD-ROM. He said that selected presentations will be published in a special issue of the FTAC journal, as well as a possible special issue of the 'International Journal of Heat and Fluid Flow' organised by Prof. Gatski.

Prof. Leschziner, then gave a short presentation summarizing the proposal to hold the next ETMM8 in Marseilles, France in June 2010. *This proposal was approved by the SPC.*

7. EROFTAC publications

i. FTAC Journal

Prof. Rodi reported that Prof. Hunt has been promoted to honorary editor, whilst his position as editor has been taken over by Prof. Reeks. He noted that the journal had developed favourably: the inflow of submitted papers had increased to 57 during the last 6 months, resulting in an increase in size of the journal to 120 pages per issue. Furthermore, there will be two special issues per year, but he encouraged conference participants to submit papers to the regular journal. He stated that the impact factor should increase to 0.9 in the near future.

The next issue of the FTAC journal will celebrate its 60th anniversary, with an editorial by the editor-in-chief Prof. Hanjalic and 6 papers.

ii. ERCOFTAC Book Series

Prof. Rodi reported that, apart from a possible volume containing the DLES7 conference proceedings, there was not much activity with the book series. This was probably due to competition by cheaper publishers. He stated that Ercoftac event organisers should be encouraged to publish their proceedings in the book series to keep it a viable enterprise.

iii. ERCOFTAC Bulletin and electronic Newsletter

Dr. Borhani stated that every issue of the bulletin should have a scientific theme as well as event reports and details of SIG activities. Furthermore, the bulletin should be available for download from the Ercoftac webpage in an electronic form.

Prof. Leschziner expressed his wish for an eye catching cover for the bulletin. Prof. Hutton stated that administrative details, such as committee meeting minutes, should be removed from the bulletin.

Dr. Borhani said a regular electronic emailed newsletter, probably just a cut down version of the bulletin, should be implemented. This would be aimed at advertising upcoming Ercoftac events, both academic and industrial, to a global audience. *The SPC approved the creation of this Newsletter.*

8. ERCOFTAC Webpage

Please refer to section 3.i.

9. Ercoftac Autumn Festival

Prof. Leschziner reported that the Leonardo da Vinci award will be part of the Ercoftac Autumn Festival to be held in Brussels on the 20-22nd October 2008. He stated that he will write to all SIGs and PCs to inform them of the nomination procedures for the award.

10. Any other business

No other business was considered.

11. Date of next SPC meeting

The next SPC meeting will be held on the 22nd October in Brussels.

Prof. Leschziner brought the SPC meeting to a close at 13:00.

Navid Borhani, Lausanne, 2008.

European Research Community On Flow, Turbulence And Combustion

MINUTES

INDUSTRIAL PROGRAMME COMMITTEE

STOCKHOLM, MAY 6th 2008

Attendance

Duursma R	Corus RD&T
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

Apologies

None received

The meeting was opened at 09-15 by Dr Lea - IPC Chairman, who also took the minutes.

The main actions are underlined below.

1. Minutes of IAC meeting held in Brussels on October 31st 2007

The minutes of the IAC meeting in Brussels on October 31st 2007 were circulated and agreed without comment.

2. ERCOFTAC Industrial strategy

Dr Richard Seoud – Industry Engagement Officer, was introduced to the meeting and welcomed to ERCOFTAC.

Dr Seoud provided a presentation which explained his role in developing and implementing ERCOFTAC's business plan. The presentation summarised the business plan activities, the planned schedule for delivery of these activities (updated to account for Dr Seoud's April 2008 start date), cash flow and closing balance forecasts. The presentation is available upon request from the IPC Chairman or Dr Seoud.

Dr Lea is to act on behalf of ERCOFTAC as the manager and mentor of Dr Seoud.

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

Profs Hutton, Rodi and Hirsch (KB management team) provided a summary of recent key decisions following a meeting on the day of Richard Seoud's interview. The current status was clarified and agreed as follows:

- The KB is still operational from the University of Surrey, but will be transferred to BAE Systems within the next few weeks. Ultimately it will be developed and maintained by CFMS, as a wiki. (CFMS is a UK-based consortium of major companies and academic establishments, supported by the UK Government, which aims to transform design processes across aerospace, marine, automotive and other industries through the use of innovative computer-based simulation systems. It is led by Airbus UK.)

- The KB-wiki will not be freely open for editing by all-comers. Instead, it is planned that an area for comments/chat regarding each AC/UFR will be made available. In addition, an area will be provided for the uploading of new or replacement material to the KB. To facilitate the uploading of new/replacement material, the QNET-CFD templates will be made available. These comments/chat, and new/replacement material, will periodically be reviewed (under the lead of Prof Rodi – KB editor) to establish whether the controlled content of the KB should be modified or expanded.
- A ‘gold standard’ section of the KB will contain material of high quality. This material will be made available on license from ERCOFTAC, but offered free to members. The ‘gold standard’ material is likely to remain unchanged for periods of approximately two years.
- The ‘gold standard’ abstracts/introductions (only) for AC and UFR will be available for free public view.
- The original members of QNET-CFD will retain full access to the KB.
- The following coordinators will be approached by **Prof Rodi** to obtain their views on the quality of AC and UFR in their Thematic Areas and their suitability for inclusion in the ‘gold standard’ section of the KB-wiki: TA1 – Jan Vos, TA2 – Stan Drobnik?, TA3 – Chris Lea, TA4 – Athena Scaperdas, TA5 – Unknown at this time?, TA6 – Charles Hirsch.
- A target of between 1/2 to 2/3 of the original content of the KB would ideally be met for material suitable for inclusion in the ‘gold standard’ section of the KB-wiki.
- **Prof Hutton** is to provide Prof Rodi with a list of the UFR associated with each TA.
- **Prof Rodi** will explore the possibility of transferring SIG15 material to the KB.
- **Prof Hutton** will give Chris Ramsey of NASA, access to the KB material in TA1 - as he is interested in possibly contributing to the KB.
- The aim is for the KB-wiki to be uploaded by the end of ETMM7.

4. Best Practice Guidelines (BPG)

(i) Dispersed Multi-Phase Flow BPG

Prof Oliemans reported that the final version of the Multi-Phase Flow BPG was currently being polished in collaboration with his co-editors and would be ready at the end of May or during June. This final version addresses the comments made by the three reviewers.

Final comments from the reviewers on this revised version of the BPG will be addressed by the end of Summer 2008. Printing of the BPG is envisaged in early September '08.

SIAMUF (Swedish Industrial Association for Multi-Phase Flows) are to receive 50 copies of the BPG for free. **Prof Oliemans** will arrange for a letter from the President of SIAMUF confirming that copyright of the BPG resides with ERCOFTAC.

A ‘roadshow’ launch of the BPG is envisaged across Europe, for example taking in The Netherlands, Italy, Germany and the UK, possibly hosted at Pilot Centres. The fee for attendance

at these events will include a copy of the BPG. This idea is to be developed by **Prof Oliemans** in collaboration with **Dr Seoud**.

Prof Hirsch was reminded to pursue the possibility of on-line purchase of the BPG with ERCOFTAC's web-site developers.

(ii) Preparation of second edition of BPG

Production of the 2nd edition of the BPG by the existing team has stalled, but has not been abandoned. 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) and Prof Dr Ernesto Casartelli (Lucerne University). It is led by Prof Hutton.

Upon completion, payment of €3000 has been proposed for each contributor to the 2nd edition.

Prof Hirsch kindly offered to provide a section on 'Uncertainties'.

Prof Hutton will circulate the outline contents of the 2nd edition of the BPG, to the IPC members for their comments.

Prof Hutton will provide Dr Seoud with his paper records containing contact details of those who purchased the 1st edition of ERCOFTAC's industrial BPG.

5. Future Development of the IPC

The Chair of the IPC is currently Dr Lea.

Dr Lea is to draft and circulate a remit for the IPC and the role of its Chair.

6. Any Other Business

The next IPC meeting is planned for Brussels, October 22nd 2008.

Meeting closed at 11-20.

Chris Lea
November 2008

European Research Community on Flow, Turbulence and Combustion

EXECUTIVE COMMITTEE MEETING

6th May 2008 Stockholm, Sweden

ATTENDANCE

Borhani, N.	EPFL, Switzerland.
Cambon, C.	LMFA, France.
Comte, P.	LEA CEAT, France.
Duursma, R.	Corus, Netherlands.
Hirsch, C.	Numeca, Belgium.
Hutton, A. G.	Airbus UK, England.
Jakirlic, S.	Darmstadt University, Germany.
Kuhlmann, H.	Vienna University, Austria.
Lea, C.	Lea CFD Associates, England.
Leschziner, M. A.	Imperial College London, England.
Oliemans, R.	Multiphase Flow BV, Holland.
Redondo, J-M	UPC, Spain.
Rodi, W.	University of Karlsruhe, Germany.
Tomboulides, A.	University of West Macedonia, Greece.
Van Steenhoven, A. A.	TU Eindhoven, Netherlands.
Wallin, S.	KTH, Sweden.

APPOLOGIES

Ooms, G.	JMB Centre, Holland.
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European Research Community on Flow, Turbulence and Combustion

EXECUTIVE COMMITTEE MEETING

6th May 2008 Stockholm, Sweden

MINUTES

The meeting was opened by the Ercoftac Chairman, Prof. Hutton, at 14:00. He thanked Prof. Wallin for his efforts in arranging an effective and successful Ercoftac Spring Festival.

1. The agenda was approved.

2. The minutes of the MB-GA meeting held in Brussels on the 31st October 2008 were approved.

3. Review of action items from the MB-GA meeting held in Brussels 31st October 2008

- *‘For the coordination secretary to contact Profs. Monkewitz and Thome, in order to arrange a meeting by mid November to discuss these proposals. If not successful, Ercoftac will go ahead and interview the external short list in December’*

Contact was made by Profs. Hutton and Hirsch, and a favourable response to hosting a fulltime IEO at Lausanne was received. The post was advertised widely in Switzerland with no response from suitable candidates. Therefore, the previous short list of candidates was interviewed in Brussels during February, resulting in the appointment of Dr. Richard Seoud to the role of Ercoftac IEO.

- *Prof. Hutton to forward the Horizon 10 chairman, Prof. Jakirlic, a list of suitable active Ercoftac members to fill positions within the group.*

Around 8 possible candidates were identified and contacted, however, only one responded favourably. Therefore, due to the importance of the Horizon 10 Group to Ercoftac’s future development, this search needs to be repeated. Furthermore, Prof. Jakirlic was invited to sit on the Executive Committee.

- *For the webmaster to incorporate the necessary cross links between the Ercoftac and the European Commission websites.*

The IEO should be notified of this issue.

- *The coordination secretary to suggest to Dr. Lea that profits from the event should be apportioned fairly between the two organisations and this should be made visible.*

Dr. Lea informed the coordination secretary that the event made no profit. Prof. Hutton stated that as the Quality and Reliability Workshops are now being promoted as a Europe wide event, it should now fall exclusively under the Ercoftac label.

4. The evolution of Ercoftac and its future operation

i. The creation of PCs in target non-European countries

Prof. Hutton stated that if the global expansion of Ercoftac was to succeed, there was a need to identify local agents in the target countries. These would then create local PCs to promote Ercoftac and so germinate local interest and members. Furthermore, these agents could advise Ercoftac on how to attract local parties effectively. Potential target countries included: USA, Australia, India, China, and Japan. Prof. Hutton stated that a list of names, with short biographies justifying their suitability, should be drawn up. Prof. Hirsch wondered if it was better to identify individual new members of Ercoftac, rather than soliciting the creation of new PCs. Prof. Hutton and Prof. Oliemans said the by-laws required membership to occur through a local PC.

Prof. Jakirlic noted that such contacts could be made through individuals who already had exposure to Ercoftac during their doctoral studies in Europe. Such individuals, some of whom were now Professors in their own countries, had already expressed their interest to joining Ercoftac to him.

Dr. Lea stated that since such new global members would wish to interact with the Ercoftac community through the Ercoftac website and other discussion forums, it was premature to accept them before the website functioned in an acceptable manner. He said that a delay of 6-9 months would be better, thus allowing time for the improvement of the website. Prof. Oliemans expressed his agreement with Dr. Lea. Prof. Hutton responded by saying the search of such individuals should be carried out in parallel with improvements to the website.

ii. The global rebranding of ERCOFTAC

Prof. Hutton stated that an issue connected with Ercoftac's global expansion was its future branding on the website and on other promotional material such as the bulletin. He said, that while retaining the name Ercoftac, emphasis should be removed from its European origin. This could be achieved by branding it, for example, as 'Ercoftac - The world association for applied fluid dynamics' rather than 'Ercoftac – The European research community on flow turbulence and combustion'. Prof. Leschziner agreed that, due to Ercoftac's present European centred branding and focus, non-European individuals might not be inclined to become members. Prof. Hirsch added that conferences with 'European' in their titles often gave the impression that they were only open to European participants.

iii. ERCOFTAC membership fees for new non-European members

Discussions in the Executive Committee highlighted the possible need for a special launch package that offered Ercoftac membership at attractive reduced rates to new non-European members.

5. ERCOFTAC Autumn Festival 2008 and the 20th Anniversary Celebrations

Prof. Hutton reported that the next Ercoftac Autumn Festival would take place at the Royal Academy in Brussels over the 20-22nd October 2008. He said the festival would start with a one and a half day industrial programme called: 'Innovation and the bottom line'. The afternoon of the second day would then be dedicated to the Da Vinci Award, with the third day set aside for the Ercoftac committee meetings.

Prof. Hutton expressed his wish to formally launch the global expansion of Ercoftac at the next Autumn Festival, using the industrial programme presentation as its platform. He said the proposed programme would be a high level conference with senior industrial, political and academic speakers who had been identified and approached by himself and Prof. Hirsch. Prof. Hirsch reported that such a high profile event would cost on the order of 150,000 Euros, this included: catering, venue costs, promotional material, and local expenses of the invited speakers. He added that this high cost made the venture risky, and implied the need for 150-200 attendees paying around 500 Euros per head to break even. The remaining costs could be covered through external funding. Since Ercoftac can not achieve this level of attendance by itself using its own network, he reported that a professional event organiser in Brussels had been approached to organise, promote, and find external sponsors for the festival. Prof. Hutton stated that since such an ambitious event needed significant up front money once set in motion, particularly to cover the costs of the gala dinner and catering, it needed formal approval by the Executive Committee.

In response, Prof. Rodi stated the 20th Anniversary of Ercoftac should be aimed at its members and that the high attendance cost of the festival would tend to exclude such academic participants. Prof. Oliemans noted that such an event was not related to Ercoftac activities, and that he was not sure what its benefits to Ercoftac would be. Noting the success of the present Spring Festival, he thought the event was far too industry orientated and was effectively a show case for high profile external speakers. He added that there should be some means of presenting Ercoftac related activities such as SIGs at the event, thus promoting the core competencies of Ercoftac to the industrial participants. Prof. Hutton responded that it would be a fantastic platform for launching Ercoftac globally with great promotional benefits. Prof. Oliemans doubted that its effects would be that significant and that Ercoftac was over reaching itself. Dr. Lea agreed and expressed his concern that Ercoftac would not be ready to host and benefit from such an event within the remaining 5 months. Prof. Kuhlmann felt that the scale of the meeting should be reduced, and have a clearer focus, rather than merely being high profile.

The Executive Committee voted unanimously to reject the proposed Autumn Festival format, in favour of organizing a smaller scale Ercoftac focused event. Prof. Oliemans, Prof. Hirsch, Prof. Kuhlmann, and Dr. Seoud were nominated to make the necessary arrangements for this meeting.

Dr. Borhani suggested that since Brussels was the diplomatic heart of Europe, it hosted many foreign embassies and consulates with industrial or research advisors. So it may be effective to invite such people to the Autumn Festival, and present to them the competencies of Ercoftac as part of the global launch.

6. Status of ERCOFTAC products and services

i. ETMM8

Prof. Hirsch stated that since ETMM was now the showcase Ercoftac event, several issues needed to be addressed. The following issues were discussed:

- *Organisation*: Prof. Hirsch suggested that a small committee from Ercoftac should provide infrastructural support to the local organisers of future ETMMs. A committee comprising the SPC and IPC Chairmen, the IEO, and Prof. Rodi was agreed upon.
- *Financial aspects*: Prof. Hirsch said that future ETMM budgets should be submitted for approval from the Executive Committee. He added that a large conference like ETMM should also be a source of income for Ercoftac which can then be used to support other core activities.
- *Integration of ETMM into the global expansion and industrial training plans of Ercoftac*: Prof. Hirsch said that if ETMM was to be promoted as the 'window on Ercoftac', its size and scope should be increased. He added that one possibility would be the coupling of an industry orientation Ercoftac conference with ETMM. In response, Prof. Hutton recommended a course of evolution rather than revolution regarding changes to ETMM's format. Advocating this approach, Prof. Hirsch proposed the gradual introduction of some technologically orientated presentations inside ETMM that were geared towards an industrial audience. Prof. Leschziner noted that local academic conference organisers would not be interested in promoting industrial or commercially orientation events, since they are motivated mainly by their personal research interests. He added that such a trend would create a feeling of alienation in such individuals. Furthermore, Prof. Leschziner stated that this would be counter productive since, if the community perceived ETMM to be commercially or industrially motivated, there would be a dilution of the impact of ETMM and a drop in the quality of submitted presentations. He added that the success of an expanded ETMM would depend strongly on the community's perception of its quality and focus. However, Prof. Leschziner reported that he had recently sounded out the possibility of extending ETMM by 2 days to include an industrial component. As a result of this, he thought that it was a possibility. However, the resulting two parts of the conference would need separate organising committees. Dr. Lea noted it was better to run the two parts sequentially rather than in parallel. Prof. Hutton agreed with this approach. He proposed that ETMM and an Ercoftac Best Practice Workshop should run sequentially at the same venue; each being organised separately but with coherent themes, logistics and promotion. Prof. Rodi added that a combined event might help cross-pollinate interest between the research and industrial participants.

On a related issue, Prof. Hutton said the SPC should devise a clear policy on how to deal with future conferences that applied for Ercoftac support, when they were felt to compete with ETMM in terms of scope and timing. Prof. Leschziner supported this proposal.

ii. BPG-Industrial CFD

Prof. Hutton reported that the overall structure of the 2nd edition of the BPG-Industrial CFD had now been decided, and that its detailed contents were currently being written. He planned for it to be on sale within the next year.

7. Financial report

Prof. Hirsch gave a summary of the Ercoftac finances. For 2007 there was income from membership fees (143 research, 45 industrial, and 1 associated members), BPG-CFD guidelines, and sponsorship of ETMM7. Expenses included: workshops, summer schools, ADO and Coordination Centre expenses, Da Vinci award, Ercoftac Festivals, and the update of QNET-CFD knowledge base. There was a net surplus of around 26k Euros, not including BPG, and cash reserves of 440k Euros.

Prof. Hirsch projected a deficit of approximately 120k Euros for 2008 due to expenses associated with the hiring of the new IEO. He noted that, considering the level of current reserves, this expense can not be sustained for more than a few years without other new sources of income.

Prof. Hirsch reported that detailed accounts had been submitted to the treasurer, Prof. Duursma, for approval.

Prof. Hutton, considering the recommendations of Dr. Lea's business plan, stated that Ercoftac should reassess how it deals with industrial members with multiple sites across Europe, such as Airbus and Alstom. He suggested that such members should be informed of a cover-all sites annual membership fee. Prof. Leschziner added that similar arrangements should be made for multisite research organisation such as DLR and ONERA. *The Executive Committee voted unanimously for this proposal.* The following membership fees were approved:

3000 Euros for multisite industrial membership in Europe

1500 Euros for multisite non-university research institutes in Europe

Prof. Hirsch then brought up the issue of SIG funding for 2008. Prof. Leschziner reported that he will write to all SIG coordinators asking them for their activity plans. Then, based on these reports, decisions regarding their individual support would be taken by the Executive Committee. This funding would be up to 3000 Euro per annum per approved SIG.

8. Report from the Coordination Centre

Dr. Borhani reported that the CC was in the process of moving under the directorship of Prof. Thome. As part of this move the operation of the CC had been reviewed, updated and streamlined. He suggested that a uniform database of members and associates should be used through out the Ercoftac organisation. Prof. Hirsch said that this could be based in the treasurer's database.

Dr. Borhani stated that in the future, the distribution of the Ercoftac Bulletin to member institutions would be in the form of multiple copies in a single envelope to their representative member, rather than single copies to multiple members in the same unit. This would save greatly on postage costs and resources.

9. Report from the Scientific Programme Committee

i. Approval of new events

On the recommendation of the SPC, the Executive Committee approved funding or logos for the following events by increasing the available 2008 budget:

S2008-06 '*Turbulence and mixing in compressible flows II*', Marseille, France, 7-12.7.2008.

Ercoftac logo approved and awarded 3000 Euros.

S2008-07 '*LES simulation and application in aeroacoustics*', Balatonfüred, Hungary, 31.8-6.9.2008.

Ercoftac logo approved and awarded 3000 Euros.

W2008-07 '*European drag reduction and flow control meeting*', Mariental, Germany, 8-11.9.2008.

Ercoftac logo approved and awarded 2000 Euros.

W2008-10 '*13th. Workshop on turbulence modelling*', Graz, Austria, 25-26.9.2008.

Ercoftac logo approved and awarded 2000 Euros.

W2008-11 '*Conference on turbulence and interactions*', Martinique, France, 31.5-5.6.2009.

Ercoftac logo approved.

W2008-12 '*3rd. Workshop on synthetic turbulence models*', Newcastle, UK, 3-4.7.2008.

Ercoftac logo approved and awarded 2000 Euros.

Furthermore, the Executive Committee approved **W2008-08** '*DLES7*', on the condition that it publishes its proceedings in the Ercoftac book series.

ii. Creation of new SIGs

The new SIG on 'Fibre Suspension Flow' was *approved unanimously* by the Executive Committee under the recommendation of the SPC.

ii. Future SPC Chairman and Vice-Chairman

Prof. Hutton expressed his wish that a competent individual be elected to the position SPC Vice-Chairman during the upcoming Ercoftac Autumn Festival. This individual should be motivated to take over as SPC Chairman in a few years time when Prof. Leschziner steps down. Prof. Leschziner commented that the SPC chairman should have scientific authority and a broad range of research interests. During discussions several possible candidates were mentioned: Prof. Hanjalic, Prof. Geurts and Prof. Fröhlich. Prof. Redondo also expressed his interest in the post. Prof. Hutton then asked Prof. Rodi to approach Prof. Fröhlich to gauge his interest in taking over as SPC Vice-Chairman.

10. Report from the Industrial Programme Committee

The IPC Chairman, Dr. Lea, stated that the newly formed IPC committee's objective was the implementation of the industrial strategy laid out in the business plan. He reported that Dr. Seoud had been engaged as a fulltime Industrial Engagement Officer (IEO) and would work under his supervision. Prof. Hutton suggested that the IEO be invited to attend future Executive Committee meetings as an observer. *This was approved unanimously by the EC.*

Dr. Lea stated that a formal 'terms of reference' for the IPC should be prepared for approval by the Ercoftac Managing Board in Brussels.

11. Any other business

- The Executive Committee approved Prof. Thome to take over as the new Ercoftac Coordination Centre Director.
- Prof. Hutton stated that only members of the Executive Committee should be present at future Executive Committee meetings.

12. Date and location of the next EC meeting

It was proposed to the next Executive Committee meeting should be held in Budapest on 4-5th May 2009. This arrangement is to be confirmed.

Prof. Hutton brought the meeting to a close at 16:15.

Navid Borhani, Lausanne, 2008.

European Community on Flow, Turbulence and Combustion

MANAGING BOARD MEETING

Brussels, 31st October 2007

ATTENDANCE

Boguslawski, A.	Czestochowa University, Poland.
Borhani, N.	EPFL, Switzerland.
Braza, M.	IMFT, France.
Cambon, C.	LMFA, France.
Comte, P.	LEA CEAT, France.
Danaila, L.	CORIA, France.
Hanifi, A.	FOI, Sweden.
Hirsch, C.	Numeca-ADO, Belgium.
Hoarau, Y.	IMFS, France.
Hunt, J.	University College London, England.
Hutton, A. G.	Airbus, England.
Jakirlic, S.	Darmstadt University, Germany.
Klaas, M.	RWTH Aachen, Germany.
Oliemans, R.	Multiphase flow BV, Netherlands.
Ooms, G.	JM Burgers Center, Netherlands.
Panidis, T.	University of Patras, Greece.
Rodi, W.	University of Karlsruhe, Germany.
Sommerfeld, M.	University of Halle, Germany.
Tomboulides, A.	University of West Macedonia, Greece.
Ursenbacher, T.	EPFL, Switzerland.
Van Steenhoven, A. A.	TU Eindhoven, Netherlands.
Wallin, S.	KTH, Sweden.

APPOLOGIES

Bodnar, T.	Czech University of Prague, Czech Republic.
Choi, K. S.	University of Nottingham, England.
Haas, J. F.	CEA/DIF, France.
Kuhlmann, H.	Vienna University of Technology, Austria.
Leschziner, M. A.	Imperial College London, England.
Martelli, F.	University of Firenze, Italy.
Monkewitz, P. A.	EPFL, Switzerland.
Rispoli, F.	Universita la Sapienza, Italy.
Stanislas, M.	Ecole Centrale de Lille, France.
Voileau, D.	EDF, France.

European Community on Flow, Turbulence and Combustion

MINUTES

MANAGING BOARD MEETING

Brussels, 31st October 2007

Prof. Hutton, the Ercoftac chairman, opened the meeting at 1:00 PM.

1. The welcome

Prof. Hutton welcomed the participants, and the apologies were noted.

2. Approval of the agenda

The agenda was approved without change.

3. Approval of the minutes of the managing board meeting held in Athens on 27th October 2006

The minutes were approved with no comments.

4. Approval of the minutes of the executive committee meeting held in Berlin on 3rd May 2007

The minutes were approved with no comments.

5. Action items from the executive committee meeting held in Berlin on 3rd May 2007

Prof. Hutton reviewed the list of actions recorded at the Berlin meeting:

- Dr. Ursenbacher has been notified by Prof. Klaas that he is in contact with two possible candidates to take over the role of industrial representative for the Germany West PC.
- The preparation of a portable publicity stand by Prof. Hirsch to advertise Ercoftac at events is still pending.
- Prof. Leschziner has informed the hotel that pre-payment of room bookings by the ETMM conference is not possible.
- Prof. Hirsch and Prof. Oliemans have investigated the global expansion of Ercoftac; their findings were later presented by Prof. Hutton and outlined in section 7(ii) of these minutes.
- Dr. Duursma has not updated the 2007-2008 budget data due to the resignation of Dr. Sick. Prof. Hutton will meet with Dr. Duursma to achieve this.
- Dr. Ursenbacher reported that under the current by-laws it was not possible to give associate Ercoftac membership to SIG members who are not Ercoftac members.
- Dr. Ursenbacher confirmed that Prof. Wallin will be organising the spring 2008 Ercoftac meeting in Stockholm.

6. Election of new managing board members

The meeting was informed that Prof. Bodnar has taken over coordination of the Czech Republic PC. Prof. Braza confirmed that Dr. Arbez has been nominated to take over as the industrial representative of the France South PC.

7. The evolution of Ercoftac and its future members

i. Business model for industrial engagement

During the SPC meeting held earlier in Brussels on the 31st October 2008, Prof. Hutton had given a presentation outlining the future possible development scenarios for Ercoftac, together with a short summary of relevant past studies and actions. The SPC had then approved the proposal to pursue the proposed industrial strategy through employment of a full-time industrial engagement officer.

Prof. Hirsch then summarised two possible ways in which this might be achieved: Firstly, to interview a short list of 4 suitable candidates selected from around 20 applications already received for the post. The interviews are scheduled for the 11-12th December 2008. Secondly, due to recent changes in personnel at the Ercoftac coordination centre in Lausanne, another option is to enquire if the EPFL would be interested in finding and hosting a full-time Ercoftac funded administration officer. This person would then take over both the role of Ercoftac coordination secretary and industrial engagement officer. This would be in place of the current part-time senior academic staff who carries out the duties of coordination secretary.

Action: For the coordination secretary to contact Profs. Monkewitz and Thome, in order to arrange a meeting by mid November to discuss these proposals. If not successful, Ercoftac will go ahead and interview the external short list in December.

ii. Extension of Ercoftac membership beyond Europe

Prof. Hutton stated that Dr. Lea's report on the industrial liaison strategy of Ercoftac had concluded that it would only work if the membership of Ercoftac was expanded world wide. He added that we are now part of a global economy where a number of leading EU engineering companies are considering outsourcing elements of their R&D to highly capable, low-cost countries like India. He said we should be aiming to involve such countries in Ercoftac to benefit from the larger knowledge base and supply chains involved. Prof. Hirsch then explained that, due to its by-laws, the membership of Ercoftac is currently restricted to members of the European community. He said that, since the policies of the EU have opened to allow world wide participation in its technology programs, this restriction now seems out of date. He then proposed that Ercoftac should now open its membership to the global audience with out any restrictions. If accepted, non-EU countries would be allowed to apply for and set up their own PCs provided they complied with current Ercoftac regulations for PCs. In order to prevent an over load of the current Ercoftac administration system, this proposal would be implemented gradually by allowing only 2 members from each new non-EU country to sit on the managing board. If this proposition is approved by the general assembly, changes need to be made to the Ercoftac by-laws.

Dr. Knoerzer noted that European research programs were generally open for the participation of developing countries rather than commercial competitors. Lord Hunt then commented that American institutions, such as the AIAA, host international meetings in which certain forums are only open to American members. He said that Ercoftac should keep this in mind by holding similar closed sessions on topics of strategic importance to the EU.

iii. Engagement of the younger generation in the Ercoftac leadership

Prof. Hutton observed that the current leadership of Ercoftac comprised senior experts in their respective fields with many personal responsibilities. He said that such pressures had led to a number of recent resignations from Ercoftac, namely Dr. Sick and Dr. Haase. This highlighted the need to promote younger people into the leadership. Prof. Hutton said that this could be achieved through the

Horizon 10 group proposed in Berlin. Namely, a team of active younger Ercoftac members who would formulate and explore long-term strategic plans for the future of Ercoftac. The chair of this group would be invited to sit on the managing board of Ercoftac. Prof. Jakirlic then accepted to chair the new Horizon 10 group.

Action: Prof. Hutton to forward Prof. Jakirlic a list of suitable active Ercoftac members to fill positions within the Horizon 10 group.

8. Review of the 1st Ercoftac autumn festival

The success of the event was generally acknowledged. However, Prof. Van Steenhoven noted that not enough young people were present, particularly for the Da Vinci awards ceremony. Lord Hunt and Prof. Knoerzer stated that many governments are now keen to promote the entry of youth into science, and so have set up many schemes to provide sponsorship and funding for such events.

Prof. Rodi noted the recent successful summer school ‘working holiday’ organised by the Germany South PC. He suggested that, as part of the youth engagement policy of Ercoftac, this format should be extended from a local PC event to an Ercoftac wide one.

Actions: 1. The SPC chairman, Prof. Van Steenhoven, to explore with Prof. Knoerzer the co-funding of the working vacations and the Da Vinci award by the European commission. 2. For the Horizon 10 group to assess other possible schemes for the engagement of young students into Ercoftac.

Prof. Hutton noted that 2008 will be the 20th anniversary of Ercoftac. He expressed his desire to repeat the autumn festival format with a special dinner to which the founding fathers and senior commission members would be invited. He proposed that the Da Vinci award could be awarded at this dinner. The festival may be held in Brussels or during the Isaac Newton program on turbulence held in Cambridge. Prof. Hirsch stated his preference on a stand alone Ercoftac event to help enhance the profile of the organisation. Prof. Hutton added that the next meeting should be better advertised, with a timetable well suited for people from industry to attend.

9. Status of Ercoftac products and services

i. FTAC journal

Prof. Van Steenhoven reported that the journal was in good shape. However, he added that they intend to reduce the number of special issues. They would now be inviting presentations from selected events to be further prepared for publication in the regular journal, subject to peer review.

ii. Bulletin

Dr. Ursenbacher reported that everything was in good order and that he continued to receive reports from contributors. He stated that 3 issues had already been produced for 2007, with the last being printed today. This would be sent to members in the near future. He then reminded members that the submission deadlines should be kindly respected.

The following themed issues of the bulletin have been confirmed:

March 2008: Smooth particle methods, coordinated by Prof. Violeau.

September 2008: Environmental fluid mechanics, coordinated by Prof. Geurts.

Prof. Sommerfeld has indicated an interest in coordinating one of the 2009 issues. He proposed the topic of multi-phase flow.

The following PC reports have been scheduled:

December 2007: Reports from Germany North PC and France South PC

June 2008: France – Henri Bénard PC and the Austria-Hungary-Slovenia AHS PC

December 2008: Dutch PC and the Belgium PC

Lord Hunt suggested that non-EU countries, wishing to take advantage of the new global membership expansion of Ercoftac, should submit a report on their possible activities to the bulletin as a condition of their acceptance.

iii. Books

Prof. Rodi reported that the situation had improved slightly. However, not many books on conference proceedings had been published. He noted this was because small workshops do not publish whilst larger conferences prefer to publish in special issues of journals.

Lord Hunt highlighted the need for didactic training books, maybe as part of the industrial engagement plans of Ercoftac.

iv. The ETMM7 conference

Prof. Van Steenhoven reported that the abstract submission deadline had now passed. Around 200 abstracts were received and distributed to reviewers. The final selection will be made at a meeting in January, probably in London. The number of parallel sessions will depend on the quality of the papers. However, not many can be rejected if the wish to have 4 parallel sessions is maintained. It is planned that conference proceedings should be distributed in book and electronic format at the conference. Selected presentations will be published as a volume of the Ercoftac book series. He also stated that extra funding had been obtained and that the conference logistics are satisfactory.

v. The Industrial CFD BPG

Prof. Hutton reported that copies of the BPG were still selling well. However, he noted that people were still waiting for the second version. He stated that a group has been set up to decide on its contents and he hoped that a first draft could be produced early in 2008.

Prof. Hutton added that, due to his recent move to Airbus, he will forward the remaining copies of the industrial CFD BPG to the ADO for distribution.

Action: The coordination secretary to update the BPG address in the bulletin.

vi. The multi-phase flow BPG

Prof. Oliemans reported that the first draft had been printed and reviewed. He said their comments are now being incorporated into a final version which should be ready by the end of the year. This is scheduled for printing and publication early next year. He added that it will be distributed by Ercoftac in Brussels at a price of 100 Euros for members and 200 Euros for non-members.

vii. Website

Prof. Hirsch reported that the website was in operation but that it needed fine tuning. He said that, due to practical reasons, SIG members can not update their own web information. Instead the data should be sent to the webmaster, Mr. Babayan, for publication. Furthermore, he added that such information should be sent in copy to him by email, so that the future performance of the website can be monitored. Members were also reminded to actively update the information contained on their SIG pages.

Dr. Knoerzer expressed the importance of cross linking the Ercoftac webpage with other relevant commission sites. This would help to disseminate information across the community efficiently.

Action: For the webmaster to incorporate the necessary cross links from the Ercoftac website.

viii. The Ercoftac database

Prof. Hutton reported that the database was progressing well. He said that it was now held at the University of Manchester and managed by Dr. Craft. Records show that 300 new people per year have

registered for the database over the last 3 years. Furthermore, it is the number one listed database on websites such as Efluids and CFD on-line. Since Dr. Craft currently manages the database for no pay, it was proposed that Ercoftac should provide him with a small amount of funds of the order of 2000 Euros per year. This proposal was unanimously accepted.

Prof. Hirsch said the possibility of incorporating or associating the database into the future QNET-CFD wiki should be explored.

ix. The QNET-CFD knowledge database

Prof. Hutton reported that it had been decided to launch this as an open source wiki. Contributors would then be encouraged to update and expand it using a predefined template. However, no guarantee of its quality will be given by Ercoftac to its users. The authors of selected notable entries will be contacted and helped to edit their contribution to a 'gold standard' after a suitable expert review process. This gold standard knowledge database will then be guaranteed and provided solely to members of Ercoftac. Prof. Hutton added that industry has indicated that they might also be interested in acquiring the wiki template, under terms and conditions to be decided, for use in managing their own in-house databases. In effect, the QNET-CFD knowledge database would be raised to an Ercoftac asset.

He proposed that a small team, under the editorship of Prof. Rodi, be charged with designing the template and monitoring the progress of the wiki. Prof. Rodi would be paid 15k Euros and provided with a further 15k Euros per year to fund the uplift of material into the gold standard version, using research students as appropriate. This proposal was accepted unanimously by the meeting.

The database is currently hosted by the University of Surrey for a fee of 4000 Euros per year. Prof. Hutton proposed that it should now be moved to the servers of BAE Systems, which would then host the database for a similar annual fee of 4000 Euros. This transfer process would take until the end of this year to complete. Additional income could be earned from the database through the inclusion of Google adverts, with BAE taking no more than 50% of such revenues. This proposal was also accepted unanimously by the meeting.

10. Financial report

Prof. Hirsch reported that the 2006 accounts had been approved by the auditors and the commission. However, as yet no budget had been prepared for 2007-2008. He said that for 2007, a revenue of around 100k Euros had been obtained from membership fees. Noting that Ercoftac now has total current assets of around 500k Euros and total capital of 339k Euros, Prof. Hirsch then stated that the financial situation of Ercoftac is very good. This would allow it to invest in the knowledge base development plan and the hiring of an industrial engagement officer. After the first year, these expenditures would however be reviewed since additional income would be needed.

Regarding membership numbers, he noted that on the research side there are now 142 members, with 3 leaving and 4 joining during 2007. Similarly, on the industrial side there are now 46 members, with 3 leaving and 4 joining. Concerning payment of fees, at present 12 research members and 4 industrial members have not yet paid for 2007. A third payment reminder was sent in September to these lapsed members.

11. Report from the administration and development office

Prof. Hirsch reported on the activities of the ADO in Brussels. He said that the ADO had now taken up responsibility for the Ercoftac web site, with Mr. Babayan appointed as webmaster. He then commented on the follow up of unpaid membership fees. Noting that a number of Ercoftac members had not paid for many years, he proposed that, after 3 years of non payment, members should be excluded.

Actions: 1. ADO to write to the University of Surrey, Université de la Rochelle and KTH, warning them of exclusion if the fees are not paid soon. 2. The ADO to contact NASA-Langley to inform them that they can now become full members of Ercoftac and suggest they pay there outstanding balance.

12. Report from the Ercoftac coordination centre

Dr. Ursenbacher said that the 2006 accounts had now been approved by Dr. Haas. A request for a 37.5k Euros budget was made for 2008; this should provide a positive balance sheet for 2007 and 2008. He added that the exchange rate was no longer fixed by the Swiss federal government for a twelve month period at the start of the year. This rate is now fixed daily.

He then reported on recent staff changes at the coordination centre: Firstly, Dr. Ursenbacher will be stepping down as Ercoftac coordination secretary at the end of January 2008. The position will be taken up by Dr. Borhani on that date. Secondly, due to the departure of Mdm. Dietler, they were searching for a new secretary. Finally, Prof. Monkewitz will be retiring at the end of 2008. He will be replaced as coordination centre director by Prof. Thome.

Dr. Ursenbacher then forwarded his thanks to Prof. Hirsch and Mdm. Laurent for their help in organising the Brussels event.

13. Report from the SPC

Prof. Van Steenhoven informed the meeting of the current status of the SPC. For details, please refer to the minutes of the SPC meeting held in Brussels on 31st October 2007.

Prof. Hirsch then stated his reservations regarding the funding of W2008-05 'Quality and reliability of CFD simulations IV'. He noted that since it is co-organised with Nafems, who makes a profit from it by charging for attendance, Ercoftac should take a part of the proceeds rather than provide scholarships. Prof. Hutton added that Ercoftac was in effect paying Nafems for the students to attend. Furthermore, he said that in the future, as part of the industrial engagement strategy of Ercoftac, this event should move to a solely Ercoftac sponsored event.

Action: The coordination secretary to suggest to Dr. Lea that profits from the event should be apportioned fairly between the two organisations and this should be made visible.

14. Report from the IAC

Prof. Hutton reported that Dr. Sick and Dr. Haase had retired from their respective positions of IAC chairwoman and deputy chairman. As a result of this, several changes have been made to the nature of the IAC. Firstly, the industrial advisory committee IAC will now be known as the industrial program committee IPC; since this name better reflects its function. Secondly, the IPC will now comprise a team of industrial members. Each of these will then focus on a single aspect of the proposed Ercoftac industrial engagement strategy. The IPC will be chaired by Prof. Oliemans.

For details, please refer to the minutes of the IAC meeting held in Brussels on 31st October 2007.

15. Any other business

i. Next spring meeting

The next Ercoftac spring meeting will be held in Stockholm on 6th May 2008. A spring forum, organised by Prof. Wallin, will be organised for the second day of this meeting.

Action: Prof. Hutton to provide a brief to Prof. Wallin on the nature of the forum.

It was suggested that the spring 2009 meeting would be held in Gdansk, Poland. Members will be informed once a decision has been made.

ii. Next autumn festival meeting

The next Ercoftac autumn festival meeting will be held either in Brussels or Cambridge. Members will be informed once a decision has been made.

iii. As a final point, Prof. Hutton expressed his thanks to Thierry for an excellent job as coordination secretary over the last few years.

Navid BORHANI, Lausanne, November 2007.

European Community on Flow, Turbulence and Combustion

MINUTES

GENERAL ASSEMBLY MEETING

Brussels, 31st October 2007

1. Opening

Prof. Hutton, the Ercoftac chairman, opened the meeting at 4:45 PM.

2. Election of managing board members

Dr. Pierre Arbez was unanimously approved as the new industrial representative of the France South PC.

3. Extension of Ercoftac membership beyond Europe

The global expansion of Ercoftac and the necessary changes to the by-laws were approved unanimously.

4. Approval of the 2006 accounts and the 2007-2008 budget

The 2006 accounts were approved unanimously.

The 2007-2008 budget could not be approved.

Action: Preparation of the 2007-2008 budget and its submission for approval by the board at a future date.

5. Closure

Prof. Hutton brought the proceedings to an end at 4:55 PM.

Navid BORHANI, Lausanne, November 2007.

ERCOFTAC Bulletin

Change to Bi-annual format

After gaining the approval of the Ercoftac Bulletin's editorial board, the Coordination Centre requests that the number of issues of the bulletin produced every year be reduced from 4 to 2 (6 monthly). In effect, starting from issue 78, we wish to combine a theme issue with a report issue, resulting in a bulletin of approximately 100 pages in length. This would greatly reduce the present printing resources, scheduling problems and high postage costs, with no real change to the impact of the bulletin; in fact it may even improve it.

Bulletin Themes

- 78, Jan 2009 Environmental Fluid Mechanics (Bernard Guerts)
- 79, July 2009 Transition Modelling (Erik Dick & Witold Elsner)
- 80, Jan 2010 Dispersed multiphase flows (Martin Sommerfeld & Simonin (Toulouse))
- 81, July 2010 Fibre Suspension Flows (Jari Hämäläinen)
- 82, Jan 2011 Fluid-Structure Interaction (Elisabeth Longatte)

PC Reports

- 78, Jan 2009 Dutch PC, Belgian PC

Review of SIGs, Nov.2008

SIGs funded: 12, 15, 20, 28, 35, 42

SIG1: LES (Geurts)

- Not supported financially.
- Empty webpage.
- Activities dominated by LES-AID, which is, effectively, a SIG-like framework, but one that is well supported by COST.
- Major initiative: DLES8, organised in Trieste by V. Armenio.

SIG4: Turbulence in Compressible Flows (Comte)

- Not supported financially.
- Partially completed webpage. No News or information on upcoming events.
- Upcoming events: none.
- Past events: July 2008 18th International Shock Interaction Symposium (relationship to ERCOFTAC?). July 2008: 2nd Summer School on Turbulence and mixing in compressible flows.
- Last Bulletin contribution: 2005.

SIG5: Environmental CFD (Morvan)

- Not supported financially.
- Empty webpage.
- No activity since 2006.

SIG8: Turbomachinery

- Removed from SIG list in Stockholm.
- Some renewed interest through GEC Alsthom (to be discussed in Brussels).

SIG 10: Transition modelling (Dick)

- Not supported financially.
- Partially completed webpage.
- Upcoming events: none.
- Last recorded activity: workshop in 2005.
- Dick reports a meeting in Nov. 2007, but no record appears to exist. Report is said to be in preparation.
- Next activity: mini-symposium at the joint VIII World Conference on Computational Mechanics (WCCM VIII) and V European Congress on Computational. How is this linked to ERCOFTAC?
- No recorded Bulletin contributions.

SIG 12: Dispersed two-phase flow (Sommerfeld)

- Supported financially
- Active

- Upcoming events: 12th Workshop on Two-Phase Flow Prediction, 2009.
- Past events: not recorded.
- Last recorded Bulletin contribution: 1998.
- Major contributions: BPG on multi-phase flows; Database on multi-phase flows (rather hidden in webpage; should be elevated to News).
- SIG is a one-man show.

SIG 14: Stably stratified and rotating turbulence (Rodondo)

- Not supported financially.
- Empty webpage.
- Last recorded activity: 2005.

SIG 15: Turbulence Modelling (Jakirlic)

- Supported financially.
- Active.
- Fairly good webpage
- Upcoming events: none.
- Past events: only one recorded: 13th Workshop on Refined Turbulence Modelling, 2008 (annual or biennial).
- Excellent database on directly on webpage.

SIG 20: Drag reduction and flow control (Choi)

- Supported financially.
- Active.
- Upcoming events: none.
- Activity in 2008: European Drag Reduction and Flow Control Meeting, 2008 (Mariental).
- Past events: none recorded.
- Bulletin contributions: none recorded.
- Looks like a one-man show. What is role of the Committee?

SIG 24: Variable density turbulent flows (Anselmet)

- Not supported financially.
- Virtually inactive.
- Webpage virtually empty. Link to IRPHE Marseille, but last updated 2003.
- Last recorded event: 2006.
- Private communication from Anselmet in June 2008: no plans and asks for another SIG leader).

SIG 28: Reactive flows (Tomboulides)

- Supported financially.
- Active and with good webpage, but requires 2008/9 update, both in respect of past events and upcoming events.
- Upcoming activities (private communication from Tomboulides): Workshop on Turbulent Spray Combustion, June 2009. Possibly Summerschool in 2010.
- Regular events. 3 in 2008, two courses (incl. Technology Awareness Day) and one conference, but require to be recorded in webpage.

SIG 32: PIV (Stanislas)

- Not supported financially.
- Appears inactive.
- Empty webpage.
- Activities confined to PIVnet, divorced from ERCOFTAC. PIVnet now terminated.
- Regular DLR PIV Summerschool in 2008, but is not even mentioned in webpage.

SIG 33: Transition Mechanisms (Hanifi)

- Not supported financially 2008/9.
- Partially completed webpage.
- Upcoming events: none.
- Past events: 7th SIG33 Workshop, Oct. 2008
- Bulletin contributions: 3 recorded, last 2007.

SIG 34: Design Optimisation (Giannakoglou)

- Not supported financially 2008/9
- Headed previously by Haase and Adams. Leadership changed in 2007/8
- Webpage now outdated (Haase) and requires update
- Latest recorded event: EUROGEN 2007
- Upcoming events: none.

SIG 35: Multipoint turbulence structure and modelling (Cambon)

- Supported financially.
- Only partially completed webpage.
- Upcoming events: none.
- Past events: none recorded.
- Webpage requires urgent updating and revamp.

SIG 36: Swirling Flows (Braza)

- Not supported financially in 2008/9.
- Virtually empty webpage
- Upcoming events: none.
- Past events: none recorded.
- Not really operational.

SIG 37: Bio-Fluid Mechanics (van Steenhoven)

- Not supported financially.
- Webpage credibly populated (incl. special issue in Bulletin)
- Upcoming events: none.
- Past event (after 2005): 2008 Summerschool on Turbulence, Plankton and Marine Snow.

SIG 38: Microfluidics and Micro Heat Transfer (Favre-Marinet)

- Not financially supported.
- Virtually empty webpage.

- Link to external webpage at Polish Pilot Centre – recording events up to 2007.
- Upcoming events: none.

SIG 39: Aeroacoustics (Juve)

- Not supported.
- No webpage.
- Defunct for years.
- Plans to revive activities have not materialised.

SIG 40: SPHERIC (Violeau)

- Not supported financially in 2008/9.
- Webpage populated, but organised in idiosyncratic way, through links to external sites.
- Upcoming events: none recorded on webpage (but activities shown in external site).
- Past events: last update in 2006.
- Contribution to Bulletins: 3 recorded (last 2006).
- Very active: workshops, meetings, test cases, conferences. But seems to be a wider network going well beyond ERCOFTAC; hence overlaps only partially with ERCOFTAC.

SIG 41: Fluid Structure Interaction (Longatte, Braza)

- No webpage, no information on activities since 2006, never got off the ground.

SIG 42: Synthetic Models in Turbulence (Nicolleau)

- Financially supported, first time in 2008/9.
- Becoming active.
- New, 2007
- Upcoming events: 4th Workshop on Synthetic Turbulence, Dec. 2008. Nothing else announced.
- Bulletin contributions: 2007 and 2008 on Synthetic Turbulence.

SIG 43: see below.

SIG 101: Q&T in CFD (Hutton)

- Not supported financially
- Empty webpage
- Does not function.

SIG 43: This was approved at the Stockholm meeting, but has not yet become active. **The kick-off meeting is scheduled for Nov. 2008.** To be discussed in Brussels. There is no Webpage. There has been correspondence between MAL and Prof. Hamalainen, in Sept. 2008, about ERCOFTAC support for a Papermaking Research Symposium in 2009. Several suggestions were made by MAL on how to proceed. MAL suggested, in particular, that the SIG should apply for financial support, after being constituted.

ERCOFTAC Workshops and Summerschools

1. Applications for ERCOFTAC event sponsorship

To be considered at the SPC meeting in Brussels, 20th November 2008.

Summer school & Courses

Scholarships

S2009-01	Turbulent mixing and beyond	X
S2009-02	Summerschool in Flow Control and Optimisation	X
S2009-03	Bio-Fluid Mechanics	X

Workshops & Conferences

W2009-02	Immersed boundary methods	X
W2009-03	Quality and reliability of LES II	X
W2009-04	Fluxes and structures in fluids	X
W2009-06	4 th Workshop on synthetic turbulence	X
W2009-07	LES of Turbulence, Acoustics and Combustion	
W2009-08	CFD Simulation in the Aerospace Industry	
W2009-09	Turbulent Spray Combustion	X

2. Overdue reports – plus 6 months from 20th November 2008

W2007-10	Workshop on near wall turbulence	22.3.2007
W2007-14	LES for combustion and transition modelling	29.11.2007
S2008-03	JM Burgers Centre course on combustion	6.5.2008

Workshops & 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			de Goey, L.P.H. Rockaerts, D.	l.p.h.d.goey@tue.nl dirkr@ws.in.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		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		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				Gauthier, S.	serge.gauthier@orange.fr	NSF, AFSOR, EOARD, ICTP, ANL, CEA, LANL, DOE ASC, ILE, IIT.	Yes		Yes	
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	
S2009-03	Bio-fluid mechanics	Eindhoven, Netherlands.	09/03/2009	14/03/2009			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	
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: IAHR/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 & 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			Outa, E. Yoshino, T.		Co: ASME/IGTI. ...	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			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		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.	kwing-so.choi@nottingham.ac.uk wolfram.hage@dlr.de erik.wassen@cfdl.tu-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		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		Nicolleau, F. Reeks, F. Baggaley, C. Cambon, C.	f.nicolleau@sheffield.ac.uk mike.reeks@newcastle.ac.uk a.w.baggaley@newcastle.ac.uk claudie.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		Yes	
W2009-03	Quality & Reliability of LES II	Pisa, Italy.	09/09/2009	11/09/2009			Salveti, M.	mv.salveti@ing.unipi.it	SIGs: 1 Co: University of Pisa, COST Action P20 LES-AID	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	
W2009-05	Papermaking research symposium *Withdrawn*												
W2009-06	4th Workshop on synthetic turbulence modelling	Nancy, France.	11/12/2008	12/12/2008			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	
W2009-07	LES of Turbulence, Acoustics and Combustion	Marseilles, France.	24/08/2009	28/08/2008			Comte, P. Serre, E.	pierre.comte@lea.univ-poitiers.fr eric.serre@L3m.univmrs.fr	PCs: France-West SIGs: 1	No		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	
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	

European Research Community On Flow, Turbulence And Combustion

WORKSHOPS/CONFERENCES/SUMMERSCHOOLS/COURSES SUMMARY SHEET

Title	International Conference and Advanced School "Turbulent Mixing and Beyond" <i>Add a brief summary of the objectives of the activity (or the announcement) on a separate page</i> [] Workshop [X] Summer School [] Conference [] Course
Location and Date	Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste (Italie) August 2009.
Organizer	Name Snezhana I. Abarzhi,
	Address Snezhana I. Abarzhi Research Institutes, 5640 South Ellis Ave, RI-468 Chicago, IL 60637, USA
	Country USA
	Tel +1-773-834-2057; Fax: +1-773-834-3230
	E-mail snezha@flash.uchicago.edu
Pilot Center(s) or SIGs involved	
Co-organizing Associations	NSF (US), AFSOR (US), EOARD, (EU) ICTP (IT), ANL (US), CEA (FR), LANL (US), DOE ASC (US), ILE (Japan), IIT (US).
Scholarships	request scholarships ? Yes
Rules	I have read the document "Rules for holding ERCOFTAC event", which can be found on www.ercoftac.org, ERCOFTAC events: Yes

Please return this form + annexes to

ERCOFTAC Coordination Centre
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CH - 1015 LAUSANNE
Switzerland

Fax: +41.21.693.53.07

To be filled-in by ERCOFTAC

Number	S2009-01
---------------	----------

Date Received	22.08.2008
Discussed SPC & MB	SPC MB
Scholarships	<input type="checkbox"/> Yes, Amount EURO <input type="checkbox"/> No
Announcement	Bulletin
Report	Bulletin

International Conference and Advanced School

Turbulent Mixing and Beyond

*Proposal to the Abdus Salam International Centre for Theoretical Physics
Trieste, Italy*

<i>Duration of the Conference and the School:</i>	<i>10 business days (two calendar weeks)</i>
<i>Dates:</i>	<i>June 2009 or July 2009</i>
<i>Expected number of participants:</i>	<i>150-170 (from developed/developing countries)</i>
<i>Key-note speakers and Invited lecturers:</i>	<i>about 50</i>
<i>Requested Financial Support from the ICTP:</i>	<i>Euro 25,000</i>
<i>Estimated total budget:</i>	<i>\$95,000</i>

Snezhana I. Abarzhi
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Tel: +1-773-834-2057; Fax: +1-773-834-3230
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15 February 2008

Organizing Committee

- Snezhana I. Abarzhi (chairperson, The University of Chicago, USA)
- Malcolm J. Andrews (Los Alamos National Laboratory, USA)
- Sergei I. Anisimov (Landau Institute for Theoretical Physics, Russia)
- Hiroshi Azechi (Institute of Laser Engineering, Osaka, Japan)
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- Alexander L. Velikovich (Naval Research Laboratory, USA)

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- S.I. Abarzhi (USA)
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- A. Schmidt (Naval Research Laboratory, USA)
- K.R. Sreenivasan (International Centre for Theoretical Physics, Italy)
- V. Steinberg (Weizmann Institute, Israel)
- A.L. Velikovich (Naval Research Laboratory, USA)
- P.K. Yeung (Georgia Institute of Technology, USA)
- F.A. Williams (University of California at San Diego, USA)

Objectives of the Conference and the Advanced School

The goals of the Conference and the Advanced School are to expose the generic problem of Turbulence and Turbulent Mixing in Unsteady Flows to a wide scientific community, to promote the development of new ideas in tackling the fundamental aspects of the problem, to assist in application of novel approaches in a broad range of phenomena, where the turbulent processes occur, and to have a potential impact on technology.

The Conference and the Advanced School will provide the opportunity to bring together scientists and young researchers from the areas, which include but not limited to fluid dynamics, turbulence, combustion, applied mathematics, probability and statistics, optics and telecommunications, earth science and geophysics, astrophysics and planetary science, high energy density physics, plasmas, material science, and to have their attention focused on the long-standing formidable task.

The Turbulent Mixing and Turbulence in Unsteady Flows, including multiphase flows, plays a key role in a wide variety of phenomena, ranging from astrophysical to nano-scales, under either high or low energy density conditions. High energy density physics, inertial confinement and magnetic fusion, light-matter interaction and non-equilibrium heat transfer, strong shocks, explosions, blast waves, properties of materials under high strain rates, supernovae and accretion disks, stellar non-Boussinesq and magneto-convection, planetary interiors and mantle-lithosphere tectonics, premixed and non-premixed combustion, unsteady boundary layers, hypersonic and supersonic flows, atmospheric flows, oceanography, are a few examples to list. A grip on unsteady turbulent processes is crucial for cutting-edge technology such as laser-induced breakdown spectroscopy and free-space optical telecommunications, and for industrial applications in areas of aeronautics and aerodynamics.

Unsteady Turbulent Processes are anisotropic, non-local and multi-scale, and their fundamental scaling, spectral and invariant properties differ from those of classical Kolmogorov turbulence. The singular aspect and similarity of the mixing dynamics are interplayed with fundamental properties of the Euler and compressible Navier-Stokes equations, with the problem sensitivity to the boundary conditions at the discontinuities and the initial conditions, and with its stochastic description. The state-of-the-art numerical simulations of the multi-phase non-equilibrium dynamics suggest new methods for capturing discontinuities and singularities and shock-interface interaction, for predictive modeling of the multi-scale dynamics in fluids and plasmas, for error estimate and uncertainty quantification as well as for novel data assimilation techniques.

The Conference and the Advanced School will be structured to encourage the participants' communications with experts from different fields, to promote the exchange of ideas and suggestion of open problems, and to motivate the discussions of rigorous mathematical issues, theoretical approaches and state-of-the-art numerical simulations along with advanced experimental techniques and technological applications. The sessions are intended to run sequentially.

The Organizing Committee hopes the International Conference and the Advanced School "Turbulent Mixing and Beyond" will serve to advance the state-of-the-art in understanding of fundamental physical properties of turbulent mixing and turbulence in unsteady flows and will potentially have an impact on predictive modeling capabilities, physical description and, ultimately, control of the complex turbulent processes.

- **The Structure of the Conference and the Advanced School**

The Conference and the Advanced School will consist of invited lectures by international experts on a broad range of phenomena, where unsteady turbulent processes occur, contributed talks and poster presentations by participants, round tables discussions, and tutorials for undergraduate, graduate and professional education. All sessions are intended to run sequentially.

- **I. Invited lectures and contributed talks on**

- **Turbulence:** *invariant, scaling, spectral properties, scalar transport*
- **Turbulent mixing:** *unsteady and multiphase flows, inhomogeneous, anisotropic non-local dynamics*
- **High energy density physics:** *inertial confinement, heavy-ion and magnetic fusion, Z-pinchs, light-material interaction, non-equilibrium heat transfer, anomalous absorption*
- **Plasmas:** *coupled plasmas, anomalous resistance, ionosphere*
- **Astrophysics:** *supernovae, interstellar medium, star formation, stellar interiors, early Universe, cosmic-microwave background*
- **Magneto-hydrodynamics:** *magneto-convection, magneto-rotational instability, accretion disks, dynamo*
- **Geophysics and Earth Science:** *mantle-lithosphere tectonics, oceanography and turbulent convection under stratification and rotation, planetary interiors*
- **Physics of Atmosphere:** *environmental fluid dynamics, forecasting*
- **Wall-bounded flows:** *structure and fundamentals, canonical, transitional and unsteady boundary layers, hypersonic and supersonic flows*
- **Combustion:** *dynamics of flames and fires, deflagration-to-detonation transition, blast waves and explosions*
- **Material science:** *properties of materials high strain rates, equation of state, impact dynamics, mixing at nano- and micro-scales*
- **Interfacial dynamics:** *the instabilities of Rayleigh-Taylor, Kelvin-Helmholtz, Richtmyer-Meshkov and Landau-Darrieus, strong and weak shocks*
- **Mathematical aspects of multi-scale dynamics:** *vortex dynamics, singularities, discontinuities, asymptotic dynamics, weak solutions, effect of the initial conditions and boundary conditions, well- and ill-posedness and non-locality*
- **Stochastic processes and probabilistic description:** *long-tail distributions and anomalous diffusion, data assimilation and processing methodologies, error estimate and uncertainty quantification*
- **Advanced numerical simulations:** *continuous DNS/LES/RANS, Molecular dynamics, Monte-Carlo, predictive modeling*
- **Experimental diagnostics:** *model experiments in high energy density and low energy density regimes, plasma diagnostics, fluid flow visualizations and control, opto-fluidics, novel optical method, holography, advanced technologies*

II. Poster presentations by participants

III. Round tables and open discussions

IV. Advanced School for undergraduate, graduate and professional learning with Tutorials on

- **theory of hydrodynamic instabilities and turbulence in fluids and plasmas and mathematical aspects of multi-scale dynamics**
 - **experiments and experimental diagnostics in fluids and plasmas**
 - **numerical methods, verification and validation of numerical codes**
 - **data assimilation and data analysis methodologies**
 - **grid computing and high-performance computing systems, next-generation cyber-tools**
- **Tentative list of key-note and invited speakers and lecturers**

S. Abarzhi (Chicago, USA), M. Andrews (TAMU, USA), E. Aglitskiy (NRL, USA), B. Alder (LLNL, USA), S.I. Anisimov (Landau Institute, Russia), H. Azechi (ILE, Osaka University, Japan), S. Atzeni (Universita di Roma “La Sapienza,” INFN Italy), G. Barbastathis (MIT, USA), J. Bell (Lawrence Berkeley Laboratory, USA), E. Bringa (LLNL, USA), W. Cabot (LLNL, USA), F. Capasso (Harvard, USA), F. Cattaneo (The University of Chicago, USA), P. Clavin (University Marseille, France), Y. Couder (l’Ecole Normale Supérieure, France), S. Cowley (UCLA, USA), R. Ecke (LANL, USA), G. Falkovich (Weissmann Institute, Israel), J. Fernando (Arizona State, USA), S. Dalziel (Cambridge, UK), D. Dearborn (LLNL, USA), R.P. Drake (University of Michigan, USA), R. Ecke (LANL, USA), S. Gauthier (CEA, France), M. Gharib (Caltech, USA), G. Glendinning (LLNL, USA), W.A. Goddard III (Caltech, USA), J.F. de Haas (CEA, France), A. Hassanein (ANL, USA), G. Hazak (NRCN, Israel), H. Huppert (ITG, Cambridge, UK), J. Jacobs (University of Arizona, USA), L.P. Kadanoff (The University of Chicago, USA), K. Kadau (LANL, USA), A.R. Khokhlov (University of Chicago, USA), Yu. Kucherenko (VNIITIEF, Russia), E.A. Kuznetsov (Physical Institute RAS, Russia), D. Lathrop (University of Maryland, USA), A. Leonard (Caltech, USA), P. Manneville (LADHYX, Ecole Polytechnique, France), M. Matalon (Northwestern, USA), D. Meiron (Caltech, USA), E.E. Meshkov (VNIITIEF, Russia), A. Miles (LLNL, USA), P. Miller (LLNL, USA), P. Mulser (Technische Hochschule, Darmstadt, Germany), V. L’vov (Weissmann, Israel), H. Nagib (IIT, USA), K. Nishihara (ILE, Osaka University, Japan), A. Olinto (University of Chicago, USA), N. Peters (RWTH Aachen, Germany), R. Piriz (UCLM, Spain), A. Pouquet (UCAR, Colorado USA), D. Psaltis (Caltech, USA), D. Pullin (Caltech, USA), A. Prosperetti (JHU, USA), D. Rempfer (IIT, USA), R. Rosner (ANL, USA), B. Remington (LLNL, USA), H. Robey (LLNL, USA), D. Ryutov (LLNL, USA), W. Schultz (NSF, USA), J.D. Schmissuer (AFOSR, USA), A. Schmitt (NRL, USA), A. Siegel, (ANL, USA), J. Shepherd (Caltech, USA), A. Smith (Princeton, USA), P. Spalart (Boeing, USA), K.R. Sreenivasan (ICTP, Italy), V. Steinberg (Weizmann, Israel), R.A. Syunyaev (Max-Planck Institute for Astrophysics, Germany), K. Takayama, (Tohoku University, Japan), S. Tanveer (Ohio-State, Columbus, USA), N. Tahir (GSI, Germany), A. Title (LMSAL, USA), A.L. Velikovich (NRL, USA), J. Werne (LM, USA), P. Williams (UCSD, USA), S. Winzer (LM, USA), G.J. Wouchuk (Universitat of La Manca, Spain), V. Yakhot (Boston University, USA), P.K. Yeung (Georgia-Tech, USA), D. Youngs (AWE, UK), V.E. Zakharov (University of Arizona, USA)

- **Scope and relevance to the ICTP mission and goals**

The goals of the International Conference and Advanced School “Turbulent Mixing and Beyond” fit naturally into the mission of the ICTP to foster the growth of advanced studies, to promote excellent research, and to provide an international forum for exchange of information and ideas.

The Conference and the School will consist of the key-note and invited lectures by international experts on a broad range of phenomena, where unsteady multiphase turbulent processes occur, contributed talks and poster presentations by participants, open discussions, and tutorials by the leading experts on hydrodynamic instabilities in fluids and plasmas, experimental diagnostics, numerical methods, data assimilation techniques, and next-generation cyber-tools. The results of the Conference and the School will be posted online. The Proceedings of the Conference and the Tutorials given at the School will be published as a topical issue of the *Physica Scripta*.

The characteristic features of this activity are its wide scope, high level of the participants involved, and the focus on the fundamental aspects, predictive modeling capabilities, and connection to experiments and technology. These features will provide a unique opportunity to expose the generic problem of the unsteady turbulent processes to wide and representative international scientific, mathematical and engineering communities, and to have a potential impact on the technology.

The graduate students and young scientists will have a unique opportunity to attend the tutorials given by the world-class scientists in a wide variety of fields and to interact closely and discuss their research and ideas with the leading experts.

- **Relevance to scientists from developing countries**

The participation of scientists from developing countries is crucial for the success of the Conference and the School. The scientists from developing countries will get a wide exposure and access to the world-class research, and will have a unique opportunity to discuss the novel approaches in tackling the fundamental aspects of the real problems along with their applications in industry and cutting-edge technology.

- **Duration of the Conference and the School**

The anticipated duration of the International Conference and the Advanced School “Turbulent Mixing and Beyond” is 10 business days, i.e. two calendar weeks. Two preferred dates are middle of June - end of June 2009 (first choice), end of June – middle of July 2009 (second choice) and end of May – beginning of June 2009 (second choice).

- **Expected number of the participants**

The anticipated number of the participants will be about 150-170 including about 50 key-note speakers and invited lecturers, with the participant from the Universities and National Laboratories in the USA, UK, EU, Japan, Russia, Australia, and from the developing countries.

- **Preferred venue**

The ICTP Main Building, Mail Lecture Hall

- **Info-lab requirements**

Access to internet, emails and other scientific services for the participants and organizers; access to Eya-system developed by the SDU at the ICTP for digital video-recording of lectures, contributed talks and tutorials.

- **Methods of announcement of the Conference and the School**

The announcements on the International Conference and Advanced School “Turbulent Mixing and Beyond” will be distributed at the APS and AMS meetings, as well as through the mailing listings of the Conference Organizing Committee (over 5,000 points of contact), funding agencies and international organizations.

- **Estimated budget and Financial support requested from the ICTP:**

Financial support requested from the ICTP is **Euro 25,000 total (Euro 12,500 per week)** for the support of the participants from the developing countries, young researchers and the lecturers of the Advanced School.

The total estimated budget of the meeting is **\$95,000.00**. It will be provided by several Agencies and Organizations in the USA, Europe, Israel and Japan, including NSF, AFOSR, EOARD, ERCOFAC, RFFI (Russia), CEA-France, ISF-Israel, ILE Osaka Japan, LLNL, LANL, ANL, NRL, and by the participants’ own institutions covering their expenses. No overhead will be charged.

Summerschool in Flow Control and Optimization

Linné FLOW Centre, KTH

A major step forward for the fluid mechanics community, still in its infancy, is the ability to actively control fluid flows. Thanks to the increased computational, experimental and micro-manufacturing capabilities, as well as to enhanced inter-disciplinary collaborations, it is now possible to manipulate the flow to optimize specific design targets. There are indeed high expectations within the fluid mechanics community that flow control will allow fluid mechanics to be ruled, thus making it work to our advantage rather than just being subjected to analysis.

Currently there is no coordination, within Europe, of the training and research efforts in the emerging field of flow control. The main motivation for the proposed summer school is, therefore, that flow control, design and optimization has to be an important part of the training and research of the future scientists and engineers working on fluid-flow systems. Flow control is an interdisciplinary research activity that has the strong potential to improve the efficiency of transport systems, increase the stability of combustion systems, reduce the energy losses in high-speed machines and diminish the emission of harmful gases.

The Linné FLOW Centre at KTH, Stockholm, started in January 2007 and is one of 20 original centers of excellence set up by the Swedish Research Council (VR), as the result of a highly competitive process with international evaluation. The Centre is organizing a summer school on the topic of flow control, with well-known international lecturers. The course will be given during one week from June 29 to July 3 and will take place at KTH, Stockholm. The course will be open to Graduate students within Europe as well to interested participants from industry. The support from ERCOFTAC will be used to support visit of international students and editing/publication of material from the course.

The summer school will cover the following topics.

Introduction to Hydrodynamic Stability, Optimal Control, Feedback Control, Model Reduction, Numerical Methods for Control, Design and Optimisation, Experimental Methods for FLOW Control, Application to fluid-flow systems.

The following teachers have, at the time of this application, already agreed on covering some of the topic proposed.

Prof Dan Henningon and Dr. Luca Brandt from KTH Mechanics, Sweden

Prof Peter Schmid and Carlo Cossu from LadHyX, Ecole Polytechnique, France

Prof Clarence Rowley from Princeton, USA

Prof Bernd Noack from TU Berlin, Germany

Ercoftac/J.M. Burgerscentrum Course "Biological Fluid Mechanics"

This course will give an introduction in the broad field of biological fluid mechanics. Both technical scientists and scientists from the medical and biological fields will share their expertise. The course is open both for JM Burgers PhD-students and members of Ercoftac-groups.

Within Ercoftac (SIG 37) already two in-depth summerschools were organised on the separate topics of internal and external flows, which attracted a broad public and good number of participants:

- 1) Summerschool and Workshop on (internal) Bio-Fluid Mechanics and Heat Transfer, June 2005
- 2) Summer School on Turbulence, Plankton, and Marine Snow, september 2008

The aim of the present course (which is part of the training program for PhD-students within the JM Burgers Research School) is to give an introduction to the field and include:

- a recap of basics of fluid mechanics for non-technical students,
- external flows (swimming and flying, interaction of plankton and turbulence),
- internal flows (microcirculation, hemodynamics in large arteries, flow in flexible tubes, respiratory system, etc.).

Also examples of relevant experimental techniques, as well as simulation techniques will be discussed.

Provisional program

Location: TU/e, Eindhoven, the Netherlands
Date: 9-14 March 2009
Organisers: A.A. van Steenhoven (TU/e, NL), F.N. van de Vosse (TU/e, NL), C. Poelma (TUD, NL)

Monday: Introduction

13.00-13.30: Registration
13.30-17.00: Basics of fluid mechanics by F.N. van de Vosse and A.A. van Steenhoven (both TU/e, NL)
18.00-20.00: Diner with participants

Tuesday: External flows

09.00-10.30: Principles of propulsion of animals: G.J.F. van Heijst (TU/e, NL)
10.45-13.00: Swimming and flying: J.L. van Leeuwen (WUR, NL) and D. Lentink (WUR, NL)
13.00-14.00: Lunch
14.00-15.30: Turbulence influence on plankton and marine snow: H. Clercx (TU/e, NL)
15.45-16.30: Micro-organisms: L. van Duren (NIOO, NL)

Wednesday: Internal flows, part 1

09.00-11.30: Steady and unsteady flows in arteries: F.N. van de Vosse (TU/e, NL)
11.45-12.30: Haemodynamics of large arteries: F. Gijsen (EUR, NL)
12.45-14.00: Lunch
14.00-15.30: Waves in flexible tubes: F.N. van de Vosse (TU/e, NL)
15.45-16.30: Measurements in circulatory system: N. Westerhof (VU, NL)
17.00-18.30: Lab tour and drinks

Thursday: Internal flows, part 2

09.00-10.30: Microcirculation: A.A. van Steenhoven (TU/e, NL)
10.45-11.30: Flow as an epigenetic factor: C. Poelma (TUD, NL)
11.45-12.30: Diagnostic micro-bubbles: M. Versluis (UT, NL)
12.45-14.00: Lunch
14.00-15.30: The respiratory system: to be announced
15.45-16.30: The vocal folds: M. Hirschberg (TU/e, NL)

Friday: Workshop

09.00-12.00: Presentations by participants (20 minutes each)
12.00-13.00: Lunch

**WORKSHOPS/CONFERENCES/SUMMERSCHOOLS/COURSES
SUMMARY SHEET**

Title	Immersed boundary methods: current status and future research directions.		
	Workshop		
Location and Date	June 2009, in either a building of the Royal Dutch Academy of Sciences in Amsterdam, Netherlands or at the Pier in The Hague, Netherlands		
Organizer	Name M. J. Pourquie, W-P Breugem, B.J. Boersma, S. Turek		
	Address Lab. for Aero- and Hydrodynamics Dept Mech Engng, TU Delft Mekelweg 2 2628 CD Delft Netherlands		
	Country Netherlands		
	Tel +31-15-2782997		Fax +31-15-2782947
	E-mail m.j.b.m. pourquie@tudelft.nl		
Pilot Center(s) or SIGs involved	Burgers center, Netherlands		
Co-organizing Associations	Euromech, request submitted to Royal Dutch academy of Sciences		
Scholarships	request scholarships ?	Yes	
Rules	I have read the document "Rules for holding ERCOFTAC event", which can be found on www.ercoftac.org, ERCOFTAC events: Yes		

Please return this form + annexes to

ERCOFTAC Coordination Centre
EPFL-STI-IGM-ERCOFTAC
CH - 1015 LAUSANNE
Switzerland

Fax: +41.21.693.53.07

To be filled-in by ERCOFTAC

Number	W2009-02
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Date Received	29.5.2008		
Discussed SPC & MB	SPC	MB	
Scholarships	<input type="checkbox"/> Yes, Amount	EURO	<input type="checkbox"/> No
Announcement	Bulletin		
Report	Bulletin		

Summary of the planned workshop

Over the last years, so-called immersed boundary methods have become increasingly popular in computational fluid dynamics. In these methods, the boundaries of obstacles in a fluid are represented on a non-conforming grid, for instance curved obstacles are represented on a Cartesian grid. The reasons for the popularity of these methods are ease of programming and cost-effectiveness. These issues are of primary importance

for applications which involve costly simulations, such as LES and DNS. Moreover, these methods retain much of their elegance if additional physics complicates matter, for instance if there are moving boundaries, as in biological flows, or when many particles are added.

After a review article by Mittal and Iaccarino in *Ann. Rev. Fluid Mech* in 2005 and some conference special sessions (for instance, *Eccomas* 2006, 2008) we think it is useful to hold a colloquium specifically focused on immersed boundary methods.

We plan to organise a *Euromech/Ercoftac* colloquium on these methods in June 2009, addressing currently interesting subjects as theory, error analysis, applications, implementation-issues, and best-practice. The goal is to bring together people who are known as experts, possible users and other interested people to assess the current status and future research directions.

Date and venue: the colloquium is planned in June 2009 in the Netherlands and is planned to last three days. The venue will be (if possible) a building of the Royal Dutch Academy of Sciences (KNAW) in Amsterdam. We have applied for this but the amount of place is limited. Otherwise it will be the Pier at Scheveningen, near The Hague. The Hague is approximately 35 minutes by train from Amsterdam Airport.

The organising committee consists of the following persons:

Dr. M. Pourquie
Laboratory for Aero- and Hydrodynamics
Dept. of Mechanical Engineering
Mekelweg 2
2628 CD Delft

Dr. W.P. Breugem
Laboratory for Aero- and Hydrodynamics
Dept. of Mechanical Engineering
Mekelweg 2
2628 CD Delft

Prof. B.J. Boersma
Laboratory for Aero- and Hydrodynamics
Dept. of Mechanical Engineering
Mekelweg 2
2628 CD Delft

We have found several well-known experts in the field of immersed boundary methods who are willing to attend as invited speaker. They are (continued on next page):

Prof. R. Verzicco
Dipartimento di Ingegneria Meccanica
Universita' degli Studi di Roma "Tor Vergata"
Via del Politecnico 1, 00133 Roma

Prof. G. Iaccarino
Mechanical Engineering and Institute for Computational Engineering
Stanford University
Stanford, California 94305
USA

Prof. A. Prosperetti
Faculty of Applied Physics and Twente Institute of Mechanics
University of Twente
AE 7500 Enschede
The Netherlands

Prof. S. Turek (Co-Chair)
Universitaet Dortmund
Fachbereich Mathematik, Lehrstuhl LSIII
Vogelpothsweg 87
44227 Dortmund
Germany

Dr.ir. M.J.B.M. Pourquie
Lab for Ero- and Hydrodynamics, faculty of 3mE, TU Delft
Mekelweg 2
2628 CA Delft, The Netherlands
Telefax +31-15-2782947

ERCOFTAC Coordination Centre
EPFL-STI-IGM-ERCOFTAC
CH-1015 Lausanne VD
Switzerland

Your reference and date	Our reference	Office telephone	Date
		+31-15-2782997	29-05-2008
Subject		Electronic mail m.j.b.m.pourquie@tudelft.nl	

Dear Reader,

Please find enclosed the application for an ercoftac workshop. As I emailed, we are organising a workshop called

”Immersed boundary methods: current status and future research directions”.

It is already a Euromech colloquium, Euromech colloquium 507, but in view of the subject prof. Huerre told me that I should also ask Ercoftac to see if the workshop can get a joint sponsorship. He also told me to contact prof. Hirsch personally on this but I could not find which email address to use.

If there are any questions remaining, please contact me.

Yours sincerely,

Mathieu Pourquie

Dr.ir. M.J.B.M. Pourquie
Lab for Ero- and Hydrodynamics, faculty of 3mE, TU Delft
Mekelweg 2
2628 CA Delft, The Netherlands
Telefax +31-15-2782947

ERCOFTAC Coordination Centre
EPFL-STI-IGM-ERCOFTAC
CH-1015 Lausanne VD
Switzerland

Your reference and date	Our reference	Office telephone	Date
		+31-15-2782997	29-05-2008
Subject		Electronic mail m.j.b.m.pourquie@tudelft.nl	

Dear Reader,

This letter explains why we ask for a joint euomech/ercoftac sponsorship for a workshop we are planning in Summer 2009. As I emailed, we are organising a workshop called

”Immersed boundary methods: current status and future research directions”.

It is already a Euomech colloquium, Euomech colloquium 507, but in view of the subject prof. Huerre told me that I should also ask Ercoftac to see if the workshop can get a joint sponsorship. He also told me to contact prof. Hirsch personally on this but I could not find which email address to use.

The main reason to ask for a joint sponsorship of Euomech/Ercoftac was given by Prof. Huerre from Euomech, namely that the subject is of big interest to the turbulence community.

The subject is immersed boundary methods, which are often used for computations of turbulent flows, especially where complicated geometries are involved, for instance flows with moving walls and flows with finite-sized particles. The methods have been in use for some time now with success, and the workshop is meant to bring together developers and users of the method to assess the current status and future possibilities of the method. A joint sponsorship by Ercoftac would make it easier to reach people from the turbulence community.

If there are any questions remaining, please contact me.

Yours sincerely,

Mathieu Pourquie

European Research Community On Flow, Turbulence And Combustion

WORKSHOPS/CONFERENCES/SUMMERSCHOOLS/COURSES SUMMARY SHEET

Title	Quality and reliability of large eddy simulations II – QLES2009 <i>Add a brief summary of the objectives of the activity (or the announcement) on a separate page</i>
	X Workshop <input type="checkbox"/> Summerschool <input type="checkbox"/> Conference <input type="checkbox"/> Course
Location and Date	Pisa, Italy, 9-11 th September 2009.
Organizer	Name Maria Vittoria SALVETTI Address Dipartimento Ingegneria Aerospaziale Via G. Caruso 8 I-56122 Pisa Country Italy Tel +39 050 221 7262 Fax +39 050 221 7244 E-mail mv.salvetti@ing.unipi.it
Pilot Center(s) or SIGs involved	LES
Co-organizing Associations	University of Pisa, Cost Action P20:LES-AID
Scholarships	request scholarships ? X Yes <input type="checkbox"/> No
Rules	I have read the document "Rules for holding ERCOFTAC event", which can be found on www.ercoftac.org, ERCOFTAC events: X Yes <input type="checkbox"/> No

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 CH - 1015 LAUSANNE
 Switzerland

Fax: +41.21.693.5960

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Number	W2009-03
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Date Received	16.6.2008
Discussed SPC & MB	SPC MB
Scholarships	<input type="checkbox"/> Yes, Amount EURO <input type="checkbox"/> No
Announcement	Bulletin
Report	Bulletin

Main objectives of the workshop

The focus of the workshop ‘Quality and reliability of Large-Eddy Simulations II – QLES2009’ will be on issues related to assessing, assuring and predicting the quality of LES. The tendency to apply LES methodologies to turbulent flow problems of significant complexity, such as arise in various applications in technology and in a many natural flows puts this workshop in timely context. Different error sources in LES are related to sub-grid modeling, to numerical discretization techniques, to boundary condition treatments, etc. To establish the credibility of LES as a tool for the innovation of industrial flow applications and the study of complex physics problems, a comprehension of non-linear error accumulation arising in large-eddy simulations is required. The QLES2009 workshop is the second workshop in the QLES series. Its predecessor, QLES2007, was organized from 24-26th October in Leuven, Belgium.

The QLES2009 workshop invites original contributions which enhance the knowledge on error sources and their interaction in LES, and may lead to criteria for the prediction and optimization of simulation quality. The workshop will concentrate on topics such as:

- Mathematical analysis and foundation for subgrid modeling,
- Numerical and mathematical analysis of subgrid-scale-model and discretization errors,
- Computational error assessment,
- High Reynolds number modeling and error assessment of near wall flows,
- Error assessment in complex application,
- Treatment of boundary conditions, inflow boundaries, generation of artificial turbulence, and related errors.

A connection with benchmark problems studied in the COST Action LES-AID is further pursued. In this program, a benchmark on particle laden channel flow is currently investigated. As in QLES2007, QLES2009 provides a platform for the reporting of results.

**INTERNATIONAL CONFERENCE "FLUXES AND STRUCTURES IN FLUIDS:
PHYSICS OF GEOSPHERES"
June 24 - 27, 2009**

The conference continues the traditions of all-union (till 1990) and international sessions of the Working Group "Laboratory Modelling of Dynamic Processes in the Ocean".

The scientific program of the conference "Fluxes and structures in fluids" includes the most relevant and well-developed research topics. The conference is the fifteenth in the series and we have fortunate opportunity to invite you to join the scientific program of conference in June 2009.

The conference program includes invited lectures, oral and poster presentations.

This Conference follows the highly successful Meetings held in

Svetlogorsk (1987), Kanev (Ukraine 1988), Novosibirsk (1989),

Jurmala (Latvia 1990), Vladivostok (1991), Saint-Petersburg (1992),

Moscow (1993), Saint-Petersburg (1995), Svetlogorsk (1996),

Moscow (1997, 2001, 2005), Saint-Petersburg (1999, 2003, 2007)

SCIENTIFIC PROGRAM:

- Macro- and micro-structures in environmental systems: the atmosphere, hydrosphere, cryosphere and geosphere;
- Interaction of the geospheres;
- Physics and mechanics of heterogeneous fluids, gas-fluid systems and suspensions, including ones in external electric and magnetic fields;
- Physical and chemical effects on formation of liquid structures;
- Analytical, numerical, and laboratory modelling of environmental systems;
- Waves, vortices, coherent structures and turbulence;
- Technical and technological applications.

Papers on other related topics are equally welcome.

More than one abstract may be submitted.

THE CONFERENCE IS ORGANISED BY:

M.V. Lomonosov Moscow State University (MSU)
The Institute for Problems in Mechanics of the Russian Academy of Sciences
Russian State Hydrometeorological University

CONFERENCE SPONSORS:

- The Russian Academy of Sciences (RAS)
- Russian Foundation for Basic Research

CONFERENCE IS SUPPORTED BY ERCOFTAC Special Interest Groups:

SIG 14. Stably Stratified and Rotating Turbulence

Professor J.M. Redondo, UPC Barcelona, E

redondo@fa.upc.es

New SIG 42. Synthetic models in turbulence

Dr. Franck Nicolleau

Institution: University of Sheffield,

Email: F.Nicolleau@sheffield.ac.uk

Dr J.C. Vassilicos

Department of Aeronautics

Imperial College of Science, Technology and Medicine

Prince Consort Road

LONDON SW7 2AZ

UNITED KINGDOM

Telephone: +44 20 7594 5137(International), 020 7594 5137(UK)

Facsimile: +44 20 7584 8120 (International), 020 7594 5137 (UK)

Email: J.C. Vassilicos: j.c.vassilicos@ic.ac.uk

Claude Cambon

Laboratoire de Mécanique des Fluides et d'Acoustique

École Centrale de Lyon

36, av. Guy de Collongues

F-69134 Ecully cedex

tél. 04 72 18 61 61

Fax 04 78 64 71 45

Email: claude.cambon@ec-lyon.fr

The Conference is dedicated to the 75th Anniversary
of the Physical Faculty of MSU

INTERNATIONAL CONFERENCE

FLUXES AND STRUCTURES IN FLUIDS: PHYSICS OF GEOSPHERES



Moscow

June 24 – 27, 2009

Conference venue:
Physical Faculty of the M.V. Lomonosov
Moscow State University



Main Building of Moscow State University
(Leninskie Gory, dom 1)

CALL FOR PAPERS

FIRST CIRCULAR

The conference program includes invited lectures
and oral (contributed or seminar) presentations

CALL FOR PAPERS

Conference languages are Russian and English.
Authors submit electronically:

Filled out **registration form** and up to 3-page
abstract

Templates, forms and instructions can be found at
Conference webpage: <http://lfm-ipm.ipmnet.ru>
or requested from the organizers via e-mail

Abstract books will be distributed at the conference
among registered participants.

The Programme will contain invited lectures (30
min, including questions), oral contributed (15 min)
and oral seminar papers accompanied by poster
presentations (3 min. oral + showing the poster
1(w) x 1.5(h) m).

Lecture rooms are equipped with blackboards,
overhead, NTSC VCR and PC video projection
units.

There is no limit on papers presented by one au-
thor.

KEY DATES

Submission of the registration form and
abstracts

March 15, 2009

Notification to authors

April 15, 2009

REGISTRATION FEE

Regular participant fee is \$300 that includes all
registration materials, attendance of the confer-
ence, coffee/tea breaks and *ice-break* reception.

Accompanying person fee is waived.

Student conference fee is \$30.

HOUSING INFORMATION

Participants will be accommodated at municipal
hotels

<http://hotels.avelonbeta.ru/moscowhotels2.php>.

Limited number of rooms in the University dormi-
tory will be available via the organizing committee.

SCIENTIFIC PROGRAM

- **Macro- and micro-structures in environ-
mental systems: the atmosphere, hydro-
sphere, cryosphere and geosphere;**
- **Interaction of the geospheres;**
- **Physics and mechanics of heterogeneous
fluids, gas-fluid systems and suspensions,
including ones in external electric and mag-
netic fields;**
- **Physical and chemical effects on formation
of liquid structures;**
- **Analytical, numerical, and laboratory model-
ing of environmental systems;**
- **Waves, vortices, coherent structures and
turbulence;**
- **Technical and technological applications.**



REGISTRATION

Registration will take place in the building of the
Physical Faculty of the M.V. Lomonosov
Moscow State University
starting from June 23, 2009.

The 15th Session of the Working Group
“Laboratory Modelling of Dynamic Processes
in the Ocean” of the Scientific Council
on the World Ocean Problems
of the Russian Academy of Sciences.



CONFERENCE SPONSORS

Russian Academy of Sciences
Russian Foundation for Basic Research

The Conference is organised by

M.V. Lomonosov Moscow State
University

Institute for Problems in Mechanics
of the Russian Academy of Sciences

Russian State Hydrometeorological
University

This Conference follows the highly successful meetings held in Svetlogorsk, 1987; Kanev (Ukraine), 1988; Novosibirsk, 1989; Jurmala (Latvia), 1990; Vladivostok, 1991; Saint-Petersburg, 1992; Moscow, 1993; Saint-Petersburg, 1995; Svetlogorsk, 1996; Moscow, 1997; Saint-Petersburg, 1999; Moscow, 2001; Saint-Petersburg, 2003; Moscow, 2005; Saint-Petersburg, 2007.

GENERAL INFORMATION

The M.V. Lomonosov Moscow State University is one of the oldest universities in Russia, and was founded in January 25, 1755. Physico-mathematical department had been established in 1850. Today's Physical Faculty, which is one of the leading Russian educational and scientific centers in physics, geophysics and astronomy, was founded in 1933.

During the period of its existence, the Physical Faculty graduated more than 25,000 specialists. These days, the Physical Faculty is represented by 2500 students, 400 post-graduate students, 130 professors including 20 academicians and correspondent members of the RAS, and 300 faculty members. More than 500 doctors and 4000 candidates obtained their scientific degrees from scientific councils of the Faculty

Breadth and thoroughness of the university education allow the graduates to freely navigate through all fields of modern physics and other areas of human activity, such as economy, finances, and management.

Basic and applied studies are conducted in research institutes and departments of the faculty in close collaboration with the Russian Academy of Sciences. Scientific schools successfully working here set the world-level standards for the research and realize large national and international projects. Scientific and technical cooperation of the Physical Faculty is established with 80 universities and scientific institutions all over the world. The University takes an active part in federal programs and carries on scientific research funded by the governments of Russian Federation, Moscow City, Russian Academy of Sciences, and international partners.

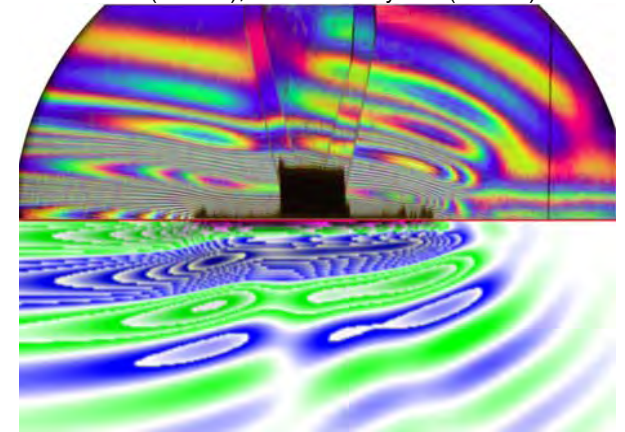
How to get to the conference venue

10 min walk or one trolley stop (Lebedev street) from the metro station "Universitet".

Participants are responsible for their travel plans and expenses. International participants, who need Russian visa, will be provided by the organizing committee with the invitation letters upon request.

INTERNATIONAL PROGRAM COMMITTEE

Corr.-m. RAS Yu.N. Avsyuk (Russia) (IPE RAS), Dr. V.G. Baydulov (Russia) – Sc. secretary, Prof. Yu.D. Chashechkin (Russia) – Chair, Acad. G.G. Chernyi (Russia), Prof. P. Davies (UK), Prof. J.H.S. Fernando (ASU, USA), Prof. Ph. Fraunie (France), Acad. G.S. Golitsyn (Russia), Prof. G.J. Van Heijst (The Netherlands), Dr. H.-P. Huang (USA), Prof. V.P. Karlikov (Russia), Prof. L.N. Karlin (Russia), Acad. D.M. Klimov (Russia), Prof. S. Kimura (Japan), Acad. V.V. Kozlov (Russia), Prof. V.B. Lapshin (Russia), Prof. J.H.-K. Lee (Hong-Kong, China), Acad. V.A. Levin (Russia), Prof. P.F. Linden (UCSD, USA), Prof. V.Yu. Lyapidevsky (Russia), Dr. N.A. Maximenko (UH, USA), Acad. R.I. Nigmatulin (Russia), Corr.-m. NASU. V.I. Nikishov (Ukraine), Dr. Yu.M. Okunev (Russia), Prof. K.V. Pokazeev (Russia), Prof. P.L. Read (UK), Prof. J.M. Redondo (Spain), Prof. W. Robinson (USA), Prof. S. Sukoriansky (Israel), Corr.-m. RAS S.T. Surzhikov (Russia), Prof. N.N. Sysoev (Russia), Prof. V.I. Trukhin (Russia), Dr. P.O. Zavyalov (Russia).



CONFERENCE CONTACTS

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E-mail: chakin@ipmnet.ru

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Tel.: +7/495-434-6063
E-mail: bayd@ipmnet.ru
Institute for Problems in Mechanics of the RAS
101(1) Vernadskogo Prospect,
Moscow 119526, Russia.
Fax: +7/499-739-9531.

Conference webpage: <http://lfm-ipm.ipmnet.ru>

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Number	W2009-06
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Date Received	16.9.2008
Approval	SPC MB
Scholarships	<input type="checkbox"/> Yes, Amount EURO <input type="checkbox"/> No
Announcement	Bulletin
Report	Bulletin

ERCOFTAC/SIG 42

4th Workshop on Synthetic Turbulence Models

11th-12th December 2008, Nancy

Synthetic turbulence model and particle-laden flows

Co-organizer (local): Dr J.-R. Angilella

Jean-Regis.Angilella@ensem.inpl-nancy.fr

Nancy-Université

LAEGO (Laboratoire Environnement, Géomécanique et Ouvrages)

rue du doyen Roubault, B.P 40,

54501 Vandoeuvre-les-Nancy Cedex, France

Co-organizer: Dr C. Cambon

Claude.Cambon@ec-lyon.fr

Ecole Centrale de Lyon, LMFA,

36 avenue Guy de Collongue - BP 163,

69131, Ecully CEDEX, France

Co-organizer: Dr F. Nicolleau

F.Nicolleau@sheffield.ac.uk

+44 (0)114 222 7867

University of Sheffield

Department of Mechanical Engineering

Mappin Street

Sheffield S1 3JD, United Kingdom

Aims of the workshop

This workshop is the 4th workshop held by the ERCFOFTAC Special Interest Group on Synthetic Turbulence Models. It follows those held on:

29th-30th May 2007, [The University of Sheffield](#), ERCOFTAC bulletin 75, December issue, 2007

29th-30th November 2007, [UPC, Vilanova i la Geltru](#), ERCOFTAC bulletin 76, March issue, 2008

3th-4th July 2008, [The University of Newcastle, UK](#), ERCOFTAC bulletin

Workshop Program

Preliminary talks

A. Abou ElAzm, University of Sheffield (UK)
J.-R. Angilella, Nancy-Universit^{ts}, LAEGO, France
S. Coleman and J. C. Vassilicos, Imperial College, London
B. Favier, ECL, Lyon, France
F. Godefert, ECL, Lyon, France
T. Michelitsch, Universit^{ti} Pierre et Marie Curie (Paris 6), Institut Jean le Rond d'Alembert
F.C.G.A. Nicolleau, University of Sheffield, Mechanical Engineering, UK
A. F. Nowakowski & H. Zheng, University of Sheffield, Mechanical Engineering, UK
D. Queiros-Conde & M. Feidt

Audience

This workshop will be the fourth on Synthetic turbulence organised by ERCOFTAC/SIG 42. It is open to anyone interested in "synthetic turbulence" including the so-called Kinematic Simulation, (KS hereinafter). More fundamental talks on particle-laden flows are also welcome.

Motivation

KS is widely used in various domains, including Lagrangian aspects in turbulence mixing/stirring, particle dispersion/clustering, and last but not least, aeroacoustics. Flow realisations with complete spatial, and sometime spatio-temporal, dependency, are generated via superposition of random modes (mostly spatial, and sometime spatial and temporal, Fourier modes), with prescribed constraints such as: strict incompressibility (divergence-free velocity field at each point), high Reynolds energy spectrum, ... Recent improvements consisted in incorporating linear dynamics, for instance in rotating and/or stably-stratified flows, with possible easy generalisation to MHD flows, and perhaps to plasmas. On the other hand, the absence of "sweeping effects" in present conventional KS versions is identified as a major drawback in very different applications: inertial particle clustering (Vassilicos et al.) as well as in aeroacoustics. Nevertheless, this issue was addressed in some basic papers (Fung et al.), and merits to be revisited in the light of new studies in progress. The present workshop will investigate the link between KS and other classical Lagrangian models for the particular application of particles with inertia and in the presence of gravity.

A non-exhaustive list of related topics can be proposed as follows:

- improvement of the modelling of small scales advection by largest scales (sweeping),
- introduction of strongly anisotropic energy spectra with better randomization of the wave-vector,
- analogy with initialisation of DNS/LES and with "Particle Representation Models",
- use of specific modes consistent with geometric constraints, e.g. solid walls, instead of 3D spatial Fourier modes,
- improvement of KS as a subgrid model for LES : Lagrangian diffusion and aeroacoustics,
- competition between "wavy" (really spatio-temporal, propagating) and "vortical" structures of the velocity field for organizing
- Lagrangian turbulence diffusion, from fluid to plasma turbulence,
- other "synthetic" models, e.g. to afford intermittency, possibly very different from conventional KS.

Participants (preliminary)

J.-R. Angilella	Nancy-University, LAEGO, France
A. Baggaley	University of Newcastle, Mathematics & Statistics, UK
S. Coleman	Imperial College, London, Aeronautics, UK
B. Favier	Ecole Centrale de Lyon, LMFA, France
M. Feidt	Nancy-University, LAEGO, France
F. S. Godeferd	Ecole Centrale de Lyon, LMFA, France
R. Ijzermans	University of Newcastle, School of Mech & Systems Eng., UK
Y. Li	University of Sheffield, Applied Mathematics, UK
E. Meneguz	University of Newcastle, School of Mech & Systems Eng., UK
T. Michelitsch	University of Pierre et Marie Curie
F.C.G.A. Nicolleau	University of Sheffield, Mechanical Engineering, UK
A. F. Nowakowski	University of Sheffield, Mechanical Engineering, UK
K. Ohkitani	University of Sheffield, Applied Mathematics, UK
D. Queiros-Conde	ENSTA (Paris), Chimie et Procédés, France
M. Reeks	University of Newcastle, School of Mech & Systems Eng., UK
H. Zheng	University of Sheffield, Mechanical Engineering, UK

European Research Community On Flow, Turbulence And Combustion

WORKSHOP – CONFERENCE – SUMMER SCHOOL - COURSE

APPLICATION SHEET

Title	<i>LES of Turbulence, Acoustics and Combustion (LESTAC)</i>
	Add a brief summary of the objectives of the activity (or the announcement) on a separate page <input checked="" type="checkbox"/> Workshop <input type="checkbox"/> Summer School <input type="checkbox"/> Conference <input type="checkbox"/> Course
Location and Date	Marseilles, August 24-28 2009
Organizer	Name Prof. Comte Pierre ¹ and Dr. Serre Eric
	Address ¹ Laboratoire d'Etudes Aérodynamiques (LEA), CEAT, 43 route de l'Aérodrome, F-86036 Poitiers Cedex Laboratoire M2P2 UMR 6181, CNRS/Aix-Marseille Université Technopole de Château-Gombert, La Jetée, 38 rue F. Joliot-Curie, 13451 Marseille cedex 20
	Country FRANCE
	Tel +33(0)549366011 (P. Comte) Fax +33(0)549366001 (P.Comte)
	Tel +33(0)491118535 (E. Serre) Fax +33(0)491118502 (E. Serre)
	Email pierre.comte@lea.univ-poitiers.fr, eric.serre@L3m.univ-mrs.fr
Pilot Center(s) or SIGs involved	SIG 1 (LES-SIG), PC France West
Co-organizing Associations	GDRE DFG/CNRS "Computational Fluid Dynamics" (French-German research Group), AFM (Association Française de Mécanique; GST 13 on "Turbulence and Fluid Mechanics")
Scholarships	Scholarship request? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Rules	I have read the document "Rules for holding ERCOFTAC events", which can be found on www.ercoftac.org <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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Fax: +41 21 693 5960

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Number	W2009-07
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Date Received	5.11.2008
Approval	SPC MB
Scholarships	<input type="checkbox"/> Yes, Amount EURO <input type="checkbox"/> No
Announcement	Bulletin
Report	Bulletin

Workshop LESTAC
LES of Turbulence, Acoustics and Combustion
August 24-28, 2009, Marseilles, FRANCE

Large eddy simulation (LES) has evolved into a powerful tool of central importance in the study of turbulence not only because of its capabilities of predicting fluctuating quantities like the source term for aero-acoustic simulations, but also because of its improved accuracy compared to the numerically less expensive Reynolds Averaged Navier-Stokes Simulations (RANS). In this sense, LES can be regarded as key-technology for new developments in computational aero-acoustics (CAA), in fluid-structure interactions, fatigue analysis, aerodynamics, process technology etc.

The scope of the workshop will cover recent developments in the field of LES of complex flows including: modelling and analysis of subgrid scales, numerical issues in particular for complex geometries, DES, RANS-LES coupling, flows simulations in the fields of acoustics, aero- and hydro-dynamics, combustion and magnetohydrodynamics.

Moreover, discussions and cross-over comparisons will be performed around several generic configurations and practically relevant problems provided by the benchmarks of the French-German research group CNRS/DFG GDRE on Computational Fluid Dynamics. In particular, the potential of newly developed SGS models and discretization schemes, RANS-LES coupling strategies and approximate wall conditions for predictions of complex flows will be assessed against with reference data from carefully designed experimental studies as well as databases from high-resolution numerical simulations provided by these test cases.

LES has been selected as a key topic to augment the international visibility of the French Congress of Mechanics. The Workshop LESTAC will deliver an up-to-date vision of the state of the art of LES in a broad range of applications. Hosted within the French Mechanical Conference which is held every two years with an attendance reaching nearly 1500 participants, the Workshop will be held under the joint auspices of the European CNRS/DFG Network on CFD, and the AFM (Association Française de Mécanique), which has strong institutional links with Euromech, both on the Fluid Mechanics and Solid Mechanics sides. Thus, LESTAC will invite strong cross over discussions with the audience, hence a workshop-type event, not likely to compete with conferences and/or summerschools.

Authors wishing to contribute to the conference are invited to submit a short abstract of 500 characters directly on the web page of the CFM09 (<http://www.cfm2009.cnrs-mrs.fr>). The organizers will invite contributors to submit full length papers to an ERCOFTAC publication.

Registration cost: a reduction of 10% will be granted to ERCOFTAC members (average between junior/senior early/late registration rates)

Scientific committee

Prof. C. Bailly, France
Prof. P. Comte, France
Prof. J. Froehlich, Germany

Local organizing committee

Prof. B.J. Geurts, Netherlands
Prof. D. Laurence, UK
Prof. O. Métais, France
Prof. P. Sagaut, France
Prof. R. Schiestel, France
Dr. E. Serre, France
Prof. J. Sesterhenn, Germany

Prof. P. Comte (ENSMA, Poitiers, France)
Dr. E. Serre (CNRS, Marseilles, France)

Quality & Reliability in Aerospace CFD

This proposed one-day conference will be the fifth joint meeting co-organised by ERCOFTAC and NAFEMS in the UK. The first meeting was held on 9th March 2004, the second on 13th September 2005, the third on 14th March 2007 and the fourth on 5th March 2008. Each of these three events was judged to be a success. At the 2008 meeting there were 36 participants, slightly less than at the 2007 event.

For this fifth event in the series the proposed theme is Aerospace applications. By focusing on a particular industry, we are hoping to address all aspects of the supply chain. Presentations will be sought from OEMs and suppliers to the aerospace industry that provide either practical case studies or methodologies that ensure the quality and reliability of the simulation results. We are seeking contributions that will provide delegates with insight into the successful application of CFD, and in particular how the quality and reliability of the simulation results are assured.

Presentations will be made by invited speakers from a number of industrial, commercial, consulting organisations and academia. There will be at least one speaker who is closely associated with ERCOFTAC.

For the 2009 event, John Parry, who is a recent member of the NAFEMS CFD Working Group, will take primary responsibility for organising and planning the meeting, and inviting guest speakers. Local arrangements will again be made by Hervé Morvan of Nottingham University, chairman of SIG5, who will be a co-organiser of the event.

NAFEMS will underwrite the costs of holding the meeting, and will print and distribute proceedings. They will also handle the administration of registrations. Note that NAFEMS usually do not generate any surplus from this event.

The meeting will be publicised throughout ERCOFTAC and NAFEMS membership. It will be open to non-members and members of ERCOFTAC and NAFEMS. Attendance fees will be charged at a level intended to cover direct costs. ERCOFTAC and NAFEMS members will be offered the same discount on attendance.

John Parry, 29th September 2008

CFD Simulation in the Aerospace Industry

State-of-the-art in Quality & Reliability V

CALL FOR PRESENTATIONS

Wednesday 4th March 2009

East Midlands Conference Centre, Nottingham, UK



For commercial aircraft, concerns over carbon emissions and the high cost of fuel help drive the quest for improved efficiency. Noise impact on densely populated areas provides another environmental concern. Minimizing drag is clearly important for efficient high speed cruise, but high lift is essential for safe low-speed takeoff and landing. CFD plays a major role in aircraft aerodynamics, where the requirements continue to push the capabilities of CFD technology.

Modern aircraft are stuffed with electronics systems, with uses ranging from control surface actuation to providing in-flight entertainment systems. CFD has a role to play in designing cooling strategies for many of these systems, some of which are safety critical, with fuel being actively considered as a cooling fluid for the electronics. Long service lifetimes require all aspects of the design to be highly durable, from the airframe to the electronics, which impacts weight, requiring more lift, which results in more drag and consequently requires more thrust. Turbomachinery design has also pushed the development of CFD, which plays a critical role in engine and nacelle design.

In-cabin environmental systems is yet another area where CFD finds application, where there are concerns about cabin air pollution. Non-commercial aircraft share many of the same design challenges, and more, such as rotor modelling for rotorcraft, and more recently the design of UAVs, their associated equipment and payloads have all become topical. Aircraft design clearly involves compromise, yet safety is paramount. High quality, reliable results from the CFD analysis are essential to many aspects of design in the industry that was the earliest adopter of CFD technology.

Call for Presentations

Presentations are sought from OEMs and suppliers to the aerospace industry that provide either practical case studies or methodologies that ensure the quality and reliability of the simulation results. The organisers are seeking contributions that will provide delegates with insight into the successful application of CFD, and in particular how the quality and reliability of the simulation results are assured.

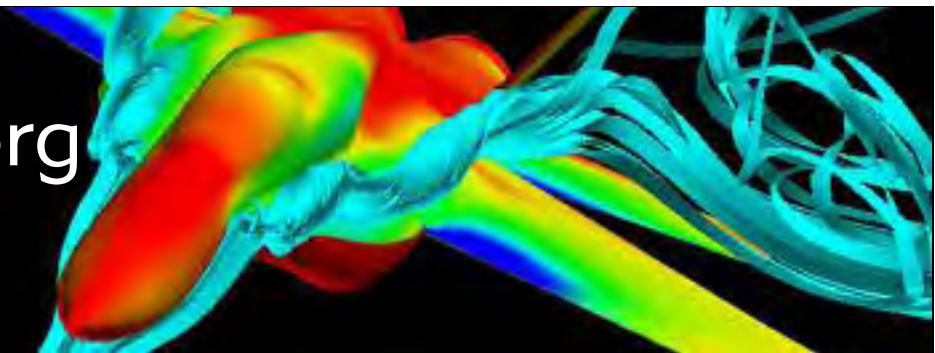
If you are interested in making a presentation at the event, please complete and return the attached reply form or register your interest online at www.nafems.org. Guidance notes are also available from the website.

Once you have registered your interest, you will be asked to submit an abstract of 300-600 words by 1 September 2008. Authors whose abstracts are accepted will be asked to prepare an extended abstract and a PowerPoint presentation which will be informally reviewed before the event. Full written papers will not be required.

For more information contact:

Dr John Parry, CEng - Flomerics Ltd - 020 8487 3108 - john.parry@flomerics.co.uk

www.nafems.org



Exhibition

A limited number of exhibition spaces will be available for vendors of software, hardware and associated services to demonstrate their wares and meet with the delegates. The cost of an exhibition stand at the seminar is £400 + VAT. Please complete the reply form or contact NAFEMS if you would like more information.

Venue

East Midlands Conference Centre
University Park
Nottingham NG7 2RJ

Tel: 0115 846 8000

REPLY FORM

I plan to submit a presentation for consideration

Presentation Title (if available) _____

My abstract is attached

I will submit my abstract by September 1st 2008

Please send me further information on Exhibition opportunities

I am not interested in presenting or exhibiting, but keep me informed when further information on the event is posted

Please send me further information on NAFEMS

Title _____ Initials _____ Family Name _____

Organisation: _____

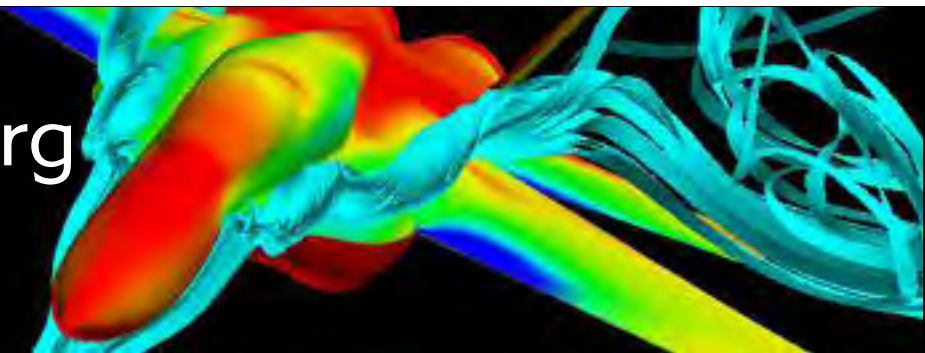
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Please Return To-

Jo Davenport, NAFEMS Ltd, Springwood House, Booths Park, Chelford Road, Knutsford, Cheshire, WA16 8QZ
Fax: +44 1565 654 774 email:- jo.davenport@nafems.org Tel: +44 1355 225688

www.nafems.org



International Workshop on Measurement and Computation of Turbulent Spray Combustion (TSC)

Porticcio – Ajaccio, Corsica, France, June 7, 2009

The ERCOFTAC special interest group 28 “Combustion” and the Belgian Section of the Combustion Institute are co-organizing a workshop on Measurement and Computation of Turbulent Spray Combustion. This workshop will report on the progress of experimental and numerical techniques in two-phase flows with emphasis on spray combustion and will take place one day before and at the same venue with the 6th Mediterranean Combustion Symposium, in Porticcio – Ajaccio Corsica, June 7, 2009.

Turbulent spray combustion of liquid fuels is important in many technical applications. Design and optimization of industrial combustion devices is nowadays supported by numerical simulations. Whereas single phase turbulent gaseous reacting flow simulations are becoming more and more mature, with the help of very well documented experimental flame databases, this is not yet the case for multi-phase combustion. One aspect is the difficulty to perform accurate experiments. The other aspect is that the complexity of the interacting physical and chemical processes occurring in spray combustion requires accurate modelling and advanced numerical methods.

The objective of this meeting is to bring researchers together to discuss and exchange ideas on recent developments in the field of turbulent spray combustion and related subjects. Two invited lectures, given by experts in the field of turbulent spray combustion (one experimental and one computational), will initiate discussions, whereas participants will have the opportunity to present their work in contributed poster presentations. An important aspect of this workshop will be round-table discussions, which will focus on the assessment of state-of-the-art and on initiation of future collaboration in experimental as well as computational techniques in spray combustion. It is the intention to define some ‘target test cases’, for which experimental databases will be developed and on which modelling and numerical algorithm issues will be tested.

A small registration fee will be paid by participants. The ERCOFTAC contribution will be used towards reducing the registration fee for ERCOFTAC members as well as to allow free participation for a number of young researchers. Other expenses of the workshop include workshop room rental, travel expenses of the two invited lecturers, lunch and coffee breaks.

Local Organising Committee:

Prof. B. Merci (Ghent University, Belgium)

Prof. D. Roekaerts (Delft University of Technology, The Netherlands)