European Research Community on Flow, Turbulence and Combustion

SCHEDULE

ERCOFTAC COMMITTEE MEETINGS

11th October 2011, TU-Darmstadt, Germany

CSI- Center of Smart Interfaces (CSI) Building

Petersenstr. 32

9:00-12:00	*SPC and IPC Committee Meetings to be held in parallel* SPC*:* Building: CSI, Room: 23 IPC: Building: CSI, Room: 23
12:00-14:00	Lunch
14:00-17:00	*Managing Board - General Assembly Committee Meeting* Building: CSI, Room: 23

Documents attached

1. Agendas for the SPC, IPC and MB-GA meetings
2. Minutes of the ERCOFTAC Committee meetings held in Gdansk on the 13th May 2011
3. Minutes of the ERCOFTAC MB-GA meeting held in Lisbon on the 12th October 2010
4. Report on the 'Future administration of ERCOFTAC'
5. Amended ERCOFTAC Bylaws
6. ERCOFTAC PC Coordinators and their SPC, IPC, MB representatives
7. ERCOFTAC SIG documentation
8. ERCOFTAC Workshop and Summerschool status report and sponsorship applications
9. ERCOFTAC financial report

European Research Community on Flow, Turbulence and Combustion

AGENDA

SCIENTIFIC PROGRAMME COMMITTEE MEETING

11th October 2011

Technische Universität in Darmstadt, Germany.
Center of Smart Interfaces Building
Rooms No. 23, Petersenstr. 32

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

1. Approval of the agenda
2. Approval of minutes from the SPC meeting held in Gdansk on 13.5.2011
3. Action items from the from the SPC meeting held in Gdansk on 13.5.2011
4. Special Interest Groups
   i. Current status report
   ii. Clustering of SIG activities
   iii. 2012 SIG funding requests
   iv. Presentations by new SIGs
5. Pilot Centres
6. Workshops and summer schools
   i. Status of reports from previous events
   ii. Consideration of new proposals
7. Status of ETMM9
8. Review of the ERCOFTAC 2012 DaVinci Award
9. Discussion of ERCOFTAC's relationship with the FTAC Journal
10. Status of ERCOFTAC products and services
11. Any Other Business
12. Dates and location of the next SPC meeting

12:00 **End of meeting**

European Research Community on Flow, Turbulence and Combustion

AGENDA

INDUSTRIAL PROGRAMME COMMITTEE MEETING

11th October 2011

Technische Universität in Darmstadt, Germany.
Center of Smart Interfaces Building
Rooms No. 23, Petersenstr. 32

9:00 **Industrial Programme Committee meeting, chaired by Dr. Geuzaine**

1. Approval of the agenda
2. Approval of minutes from the IPC meeting held in Gdansk on 13.5.2011
3. Action items from the from the IPC meeting held in Gdansk on 13.5.2011
4. Status on industrial strategy
5. Status on QNET-CFD knowledge base
6. Brainstorming on IPC future
7. Any Other Business
8. Dates and location of the next IPC meeting

12:00 **End of meeting**

European Research Community on Flow, Turbulence and Combustion

AGENDA

MANAGING BOARD – GENERAL ASSEMBLY MEETINGS

11th October 2011

Technische Universität in Darmstadt, Germany.
Center of Smart Interfaces Building
Rooms No. 23, Petersenstr. 32

14:00 Managing Board Meeting, chaired by Prof. Tomboulides

1. Approval of the agenda
2. Approval of minutes of the MB-GA meeting held in Lisbon on 12.10.2010
3. Approval of minutes of the EC meeting held in Gdansk on 13.5.2011
4. Action items from the EC meeting held in Gdansk on 13.5.2011
5. Election of new ERCOFTAC Chairs and Managing Board members:
   - ERCOFTAC Second Deputy Chairman (Prof. Hirsch)
   - IPC Deputy Chairman (Candidates)
   - SPC Chairman (Prof. Geurts)
6. Future administration structure of ERCOFTAC
7. Financial report and 2011-12 budget
8. Report from Administration and Development Office
9. Report from Coordination Centre
10. Report from Scientific Programme Committee
11. Report from Industrial Programme Committee
12. The ERCOFTAC Knowledge Network
    - Programme of Events 2011 and 2012 (IEO)
    - QNET Knowledge Base Wiki
    - Best Practice Guidelines
13. Any Other Business
14. Dates and location of the next EC and MB-GA meetings

16:45 End of meeting

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

1. Approval of the agenda
2. Changes to the ERCOFTAC bylaws
3. Election of new ERCOFTAC Chairs and Managing Board members
4. Approval of the 2010 accounts and the 2011-12 budget

17:00 End of Meeting

European Research Community On Flow, Turbulence and Combustion

SCIENTIFIC COMMITTEE MEETING

13th May 2011, Gdansk, Poland

ATTENDANCE

Boguslawski, A.
Borhani, N.
Cambon, C.
Choi, K-S.
Drobniak, S.
Elsner, W.
Geurts, B.J.
Hamalainen, J.
Jakirlic, S.
Le Touze, D.
Nowakowski, A.
Rokicki, J.
Rodi, W.
Tomboulides, A.
Von Terzi, D.

APPOLOGIES

Anderson, H.
Braza, M.
Dick, E.
Gauger, N.
Hanifi, A.
Martelli, F.
Oliemans, R.
Redondo, J.
Thome, R.
Wallin, S.
van Steenhoven, A.

SUMMARY OF ITEMS ARISING FROM THE MEETING

- *The SPC voted to ask the EC to increase the annual budget for Workshops and Summer Schools by 10k Euros to 34k Euros.*

MINUTES

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

1. Approval of the agenda

The agenda was approved.

2. Approval of minutes of the SPC meetings held in Lisbon on 12.10.2010

The minutes were approved.

3. Action items from the SPC meetings held in Lisbon on 12.10.2010

The action items were reviewed.

4. Special Interest Groups

i. Current status report

Prof. Geurts reported that SIG 5 *'Environmental fluid mechanics'* was being revitalised under the coordination of Vincenzo Armenio.

ii. SIG funding requests for 2012

Based on their submitted proposals, the SPC voted to recommend to the Executive Committee that the following SIGs should be funded up to 3000 Euros for 2012:

SIG 12 *Dispersed turbulent two-phase flows*
SIG 20 *Drag reduction and flow control*
SIG 33 *Transition mechanisms, prediction and control*
SIG 43 *Fibre suspension flows*

iii. Creation of new SIGs

The SPC approved the creation of two news SIGs:

SIG 44 *Fundamentals and application of fractal turbulence*	Coordinator: Veronique Fortune
SIG 45 *Uncertainty quantification in industrial analysis and design*	Coordinator: Johan Meyers

5. Pilot Centres

Prof. Gauger reported that the Germany North and Germany West Pilot Centres would be merging.

Prof. Geurts asked the SPC to think of ways of increasing the visibility of the PCs in the ERCOFTAC community. Possibilities to achieve this include: Creation of a concordat similar to that for the SIGs, the sponsorship of local PhD competitions at the PCs to feed the DaVinci Award, and encouraging all of the PCs to submit short annual reports to the ERCOFTAC Bulletin. Prof. Hamalainen asked if there was a mechanism to close inactive PCs. Prof. Geurts replied that this would be hard to achieve since at present ERCOFTAC membership occurs through the PCs.

6. Workshops and summer schools

i. EC-AERO support for ERCOFTAC Workshops and Summer Schools

The SPC commented that although some event sponsorship applicants had followed the EC-AERO procedures, the funds had not been released by the ADO. Prof. Geurts said that he would ask for clarification from Prof. Hirsch.

ii. Status of reports from previous events

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

iii. Consideration of new proposals

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

W2011-10 *'6th International SPHERIC SPH workshop'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-11 *'4th Symposium on Hybrid RANS-LES methods'*
Application for use of the ERCOFTAC logo was approved.

W2011-12 *'Instabilities and transition in 3-dimensional flows with rotation'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-13 *'7th Workshop on Synthetic Turbulence Models'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-14 *'Biomedical Flows at Low Reynolds Numbers'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-15 *'VII International symposium on stratified flows'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-16 *'Fundamental problems of turbulence'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-17 *'ASTROFLU II'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

S2011-02 *'Fluid-structure Interaction for biomedical applications'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 3000 Euros was awarded.

S2012-01 *'New challenges in turbulence research II'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 3000 Euros was awarded.

After discussions:

** The SPC voted to ask the EC to increase the annual budget for Workshops and Summer Schools by 10k Euros to 34k Euros.*

7. Status of ETMM9

Prof. Tomboulides reported that the location of ETMM9 had been changed from Mikonos to Thessaloniki, resulting in a small increase in fees. He added that a list of keynote speakers would be finalised shortly. He then asked that, since there were EUROMECH members on the advisory committee of ETMM9, would the event be eligible of funding from the EC-AERO programme. In response, Prof. Geurts urged him to clarify the matter with Prof. Hirsch.

8. ERCOFTAC 2011 DaVinci Award

Prof. Geurts will be contacting SIG and PC Coordinators to ask them for their 2010 DaVinci Award nominations and inform them of the procedures and deadlines. Prof. Rodi suggested that these procedures should also be advertised on the ERCOFTAC Website. He added that the jury composition should be spread evenly across Europe with a broad range of expertise. Prof. Geurts then expressed his wish for a diverse and pan-European range of submissions for the 2011 DaVinci Award.

9. Discussion of ERCOFTAC's relationship with the FTAC Journal

Prof. Rodi reported that the FTAC Journal's Editor-in-chief, Prof. Hanjalic, wished to review the Journal's relationship with ERCOFTAC. He added that Nathalie Jacobs from Springer would like to attend the next ERCOFTAC meeting in Darmstadt. Prof. Geurts asked if the SPC could or should promote the FTAC Journal to increase its visibility. Prof. Rodi replied that this should be the responsibility of Prof. Hanjalic since he was the Editor-in-chief.

Prof. Rodi commented on the need for additional or replacement editors for the FTAC Journal. Therefore, he asked the SPC to identify five suitable candidates for review by the Journal's Editorial Board.

Prof. Rodi reported that the FTAC Journal was performing well with an impact factor slightly higher than 1.0 and 150 online downloads per day. He added, that if Springer agreed, the FTAC Journal could be made freely available online for a limited time period to ERCOFTAC members. However, he also noted that the annual subscription price for ERCOFTAC members was already very low at 160 Euros.

10. Status of ERCOFTAC products and services

Prof. Rodi indicated that both he and Prof. Oliemans wished to eventually step down from their ERCOFTAC Book Series editorial duties. Prof. Geurts urged him to identify suitable younger candidates for this post, and provide them with suitable training during a transitional period.

11. Any other business

None.

12. Dates and location of the next SPC Committee Meeting

The next SPC Committee Meeting will be held in Darmstadt on the 11th October 2011.

The meeting was closed by the SPC Chairman, Prof. Geurts, at 12:30.

Navid Borhani
Lausanne, 2011.

MINUTES
INDUSTRIAL PROGRAMME COMMITTEE MEETING

13th May 2011,
Polish Academy of Sciences, Warsaw, Poland

Attendance

Prof. Piotr Doerffer	Polish Academy of Sciences
Dr. Philippe Geuzaine	Cenaero
Prof. Charles Hirsch	Numeca International
Prof. Anthony Hutton	Airbus UK
Prof. Wolfgang Rodi	K.I.T.
Dr. Richard Seoud	ERCOFTAC

Excused: Dr. Chris Lea, Prof. René Oliemans and Prof. Stefan Wallin.

Approval of the agenda: the agenda was approved as listed.

The meeting was opened by the chairman, Dr. P. Geuzaine, at 09.00 and closed at 12.00.

1. Minutes of IPC meeting held in Lisbon on 12th October 2010
The minutes were approved.

2. Industrial Strategy (Dr. R. Seoud)
Events
The scheduled events for 2011 and 2012 are presented and discussed (see slides for the details about the location and financial status of the events). The first of the six events in 2011 has been delivered in March (Uncertainty Quantification in Munich) and has generated a net income of 1k Euros. The IPC decides to explore the possibility of having an additional course (Hybrid RANS-LES) in October 2011. Target locations are Poland (Warsaw?), Berlin or Brussels (Academy of Sciences, see Action #1). Regarding the 2012 schedule, the IPC decides to postpone the repeat of the Transition Modeling course after 2012 and to add a new course on Aeroacoustics. Prof. T. Hutton will be the course coordinator for Best Practice for CFD. In order to allow a feedback to the course coordinator, a procedure (based on the actual Excel sheet) to review comments on the course will be implemented (see Action #2).To further increase the audience of the courses, a LinkedIn account will be set-up (see Action #3) and NAFEMS will be contacted to know how they do it (see Action #4).

Membership
The list of those who joined ERCOFTAC is also presented (see slides). The case of Atkins who did not pay for the past 4 years is to be discussed in the EC.

Financial status
New ideas for development beyond 2012 and a financial summary are presented (see slides). A major conclusion is that the IEO supporting activities and new industrial/research memberships in the period May 2010 to May 2011 have been sufficient to cover all employment costs and associated expenses. A suggestion is made to present these numbers per calendar year.

2 Best Practice Guidelines (BPG)
No progress is reported on the 2ND Edition of CFD for Single Phase. Prof. Hutton will send a draft with authors (see Action #5). A delivery for ETMM9 is suggested.

3. QNET-CFD Knowledge Base (Prof. W. Rodi)

Five new cases have been added since the launch of the Web site. Prof. Rodi hopes for ten new cases by the end of this year and that some results of the FP7 ATAAC project will be stored on the Wikki. Prof. Rodi reports that the forum does not work (no activity) and that there is no input by people themselves. The IPC decides to publish the new cases in the Bulletin (see Action #6). Prof. Rodi also reports on his assessment of the different cases. His proposal is to leave the cases as they are. Finally, the IPC proposes (to be validated by the EC) to organize a mini-symposium at the next ECCOMAS conference.

4. Web Site (Dr. P. Geuzaine)

Following the report on the management of the Web site and the associated quotes (see email from Dr. C. Lea dated May 6 2011), the IPC decides to order the RSS feed, to ask for a revision (lower amount) of the quote for the slide show and to get a quote for statistics (have a counter per page for 6 months) (see Action #7). It also decides to remove the forum and to have a better split between news and events (see Action #8).

5 Membership of IPC

As already raised during the last meeting, the main issue is how to invigorate further the meetings that we currently have. A message will be sent to the industrial members following the attempt by Prof. Oliemans (see Action #9).

6. Any Other Business

None

7. Date and location of next IPC

Darmstadt, Germany, October 11 2011 (following the Autumn festival on October 10).

Philippe Geuzaine
Gosselies, 27 July 2011

Action list

	Description	Owner	Issued	Deadline
1	Price of Academy of Sciences (Brussels)	Prof. C. Hirsch	May 2011	TBD
2	Implement feedback procedure for course	Dr. R. Seoud	May 2011	TBD
3	Create a LinkedIn account	Dr. R. Seoud	May 2011	TBD
4	Contact NAFEMS about their way of doing it	Prof. T. Hutton	May 2011	TBD
5	Draft with authors for BPG Single-Phase CFD	Prof. T. Hutton	May 2011	TBD
6	Publish new QNET cases in the Bulletin	Prof. Rodi	May 2011	TBD
7	Contact Dr. Lea for Web site quotes	Dr. P. Geuzaine	May 2011	July 2011
8	Contact Dr. Lea to remove forum and rearrange news/events	Dr. P. Geuzaine	May 2011	July 2011
9	Send industrial email to Prof. Hutton	Prof. Oliemans	May 2011	TBD

European Research Community On Flow, Turbulence and Combustion

EXECUTIVE COMMITTEE MEETING

13th May 2011, Gdansk, Poland

ATTENDANCE

Borhani, N.
Cambon, C.*
Doerffer, P.*
Drobniak, S.*
Geurts, B.J.
Geuzaine, P.
Hirsch, C.
Hutton, T.
Jakirlic, S.
Nowakowski, A.*
Rodi, W.
Rokicki, J.*
Seoud, R.
Tomboulides, A.
von Terzi, D.

** not Executive Committee members*

APPOLOGIES

Oliemans, R.
Ooms, G.

SUMMARY OF ITEMS ARISING FROM THE MEETING

- *The Executive Committee approved ERCOFTAC's 2010 accounts.*
- *The Executive Committee decided to hold a workshop in Brussels to discuss the future administration structure of ERCOFTAC, and to report the results at the next Managing Board meeting.*
- *The Executive Committee approved that the Coordination Centre budget of 60k CHF should be paid in Swiss Francs for 2010.*
- *The Executive Committee voted to increase the annual budget for Workshops and Summer Schools by 10k Euros to 34k Euros.*

MINUTES

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

1. Approval of the agenda

The agenda was approved.

2. Approval of minutes of the MB-GA meetings held in Lisbon on 12.10.2010 and the EC meeting held in Delft on 18.5.2010

The minutes were approved.

3. Action items from the MB-GA meetings held in Lisbon on 12.10.2010 and the EC meeting held in Delft on 18.5.2010

The action items were reviewed.

4. Financial Report and Approval of the 2010 accounts

Prof. Hirsch presented details of the 2010 accounts. These indicated total assets of 451k Euros, total revenues of 329k Euros, total expenses of 309k Euros, and a net operating loss of 20k Euros. He added that the ADO was currently following up unpaid membership fees, but in some cases invoices had been sent to the wrong contacts.

** The Executive Committee approved ERCOFTAC's 2010 accounts.*

5. Report from the Administration and Development Office

Prof. Hirsch reported that the ADO's activities were increasing beyond its current budget. Therefore, he proposed that ERCOFTAC should hire someone in the UK, with accounting and administration experience, to prepare the ERCOFTAC accounts and provide secretarial support to the IEO. Dr. Borhani said that such an individual should also have marketing expertise. Prof. Geurts then indicated his wish for the administration structure of ERCOFTAC to evolve naturally into a more professional organisation with permanent salaried staff independent of Numeca. He proposed a timescale of one year to allow suitable candidates to be found and trained with the help of the ADO, and to secure suitable UK office space. He added that such an evolution should take into consideration how big ERCOFTAC wishes or could get in the coming years. Prof. Hutton then said that there was a need to start a discussion on the evolution of ERCOFTAC over the next five years. He added that this should also focus on the reinvigoration of the scientific base of ERCOFTAC. After further discussions:

** The Executive Committee decided to hold a workshop in Brussels to discuss the future administration structure of ERCOFTAC, and to report the results at the next Managing Board meeting.*

6. Report from the Coordination Centre

Dr. Borhani reported that, due to the current strength of the Swiss Franc, the Coordination Centre was operating at a loss. Therefore, he requested the Coordination Centre budget of 60k CHF, as agreed in 2008, should be paid in Swiss Francs rather than in Euros at the 2008 exchange rate. The Executive Committee agreed to this request for 2010, but stated that the matter would be reviewed for 2011 as part of the future evolution of ERCOFTAC.

** The Executive Committee approved that the Coordination Centre budget of 60k CHF should be paid in Swiss Francs for 2010.*

Dr. Borhani then noted the absence of communication between the Executive Committee and the Coordination Centre.

7. Report from the Scientific Programme Committee

i. SIG status and funding requests

Prof. Geurts reported that SIG 5 *'Environmental fluid mechanics'* was being revitalised under the coordination of Vincenzo Armenio. Furthermore, he reported the creation of two news SIGs:

SIG 44 *Fundamentals and application of fractal turbulence*	Coordinator: Veronique Fortune
SIG 45 *Uncertainty quantification in industrial analysis and design*	Coordinator: Johan Meyers

Based on the recommendation of the SPC, the Executive Committee voted to fund the following SIGs for up to 3000 Euros during 2012:

SIG 12 *Dispersed turbulent two-phase flows*
SIG 20 *Drag reduction and flow control*
SIG 33 *Transition mechanisms, prediction and control*
SIG 43 *Fibre suspension flows*

Prof. Geurts then expressed his wish to create SIG clusters around topics of current interest in order to provide thematic focus.

ii. Workshop and summer school funding requests

Based on the recommendation of the SPC, the Executive Committee approved the following actions regarding sponsorship of future events.

W2011-10 *'6th International SPHERIC SPH workshop'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-11 *'4th Symposium on Hybrid RANS-LES methods'*
Application for use of the ERCOFTAC logo was approved.

W2011-12 *'Instabilities and transition in 3-dimensional flows with rotation'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-13 *'7th Workshop on Synthetic Turbulence Models'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-14 *'Biomedical Flows at Low Reynolds Numbers'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-15 *'VII International symposium on stratified flows'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-16 *'Fundamental problems of turbulence'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-17 *'ASTROFLU II'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

S2011-02 *'Fluid-structure Interaction for biomedical applications'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 3000 Euros was awarded.

S2012-01 *'New challenges in turbulence research II'*
Application for use of the ERCOFTAC logo was approved.
A scholarship of 3000 Euros was awarded.

After a request by the SPC:

* *The Executive Committee voted to increase the annual budget for Workshops and Summer Schools by 10k Euros to 34k Euros.*

Furthermore, the Executive Committee urged Prof. Geurts to also contact the organisers of these events to identify which could be funded through the EC-AERO project by involving ECOMMAS and/or EUROMECH.

8. Report from the Industrial Programme Committee

Dr. Geuzaine reported on the success of Dr. Seoud's activities as ERCOFTAC's IEO, noting that revenue generated by his efforts now covered his expenses. He added that the QNET Knowledge Base has added 5 new cases and would add a further 5 by the end of 2011. Regarding the ERCOFTAC Website, he said that the setting up of an RSS feed was being investigated.

Prof. Hutton then said that the IPC would like to add an industrial component to ETMM9, perhaps by organising an industrial meeting the day before. Prof. Geurts proposed that an industrially orientated person could be invited to be a keynote speaker at the event.

9. Evolution of ERCOFTAC and its future operation

See items 5 and 6 above.

10. Executive operational decisions

None.

11. Any Other Business

None.

12. Dates and location of the next ERCOFTAC Committee Meetings

The 2011 ERCOFTAC Autumn Festival and Committee Meetings will be held in Darmstadt on the 10th and 11th October 2011, respectively. The 2012 ERCOFTAC Spring Festival and Committee Meetings will be held in Helsinki on the 10th and 11th May 2012, respectively.

The meeting was closed by the ERCOFTAC Chairman, Prof. Hutton, at 16:00.

Navid Borhani
Lausanne, 2011.

European Research Community On Flow, Turbulence and Combustion

MANAGING BOARD MEETING

12th October 2010, Lisbon, Portugal

ATTENDANCE

Borhani, N.
Comte, P.
da Silva, C.
Geurts, B.J.
Geuzaine, P.
Hirsch, C.
Hutton, T.
Jakirlic, S.
Leschziner, M.
Oliemans, R.
Ooms, G.
Rodi, W.
Seoud, R.
Tomboulides, A.
Von Terzi, D.

APPOLOGIES

Braza, M.
Choi, K-S.
Dick, E.
Gauger, N.
Jansohn, P.
Lea, C.
Le Touze, D.
Martelli, F.
Reichl, C.
Sommerfeld, M.
Tardu, S.
Thome, J.
Van Steenhoven, A.
Wallin, S.

SUMMARY OF ITEMS ARISING FROM THE MEETING

** Prof. Tomboulides will circulate a costs and organisational breakdown of ETMM9 to the Executive Committee.*

** Prof. Geurts to prepare a proposal for an increase in the annual funding of SPC events for discussion at the next Executive Committee meeting.*

MINUTES

The meeting was opened by the ERCOFTAC Chairman, Prof. Hutton, at 14:15.

1. Approval of the agenda

The agenda was approved.

2. Approval of minutes from the MB-GA Meeting held in Lausanne on 2.10.2009

The minutes were approved.

3. Approval of minutes from the EC Meeting held in Delft on 18.5.2010

The minutes were approved.

4. Action items from the EC Meeting held in Delft on 18.5.2010

These will be addressed below.

5. Election of new ERCOFTAC Chairs and Managing Board members

The Managing Board unanimously elected:

- Prof. Hutton as the ERCOFTAC Chairman
- Prof. Tomboulides as the ERCOFTAC 1st Deputy Chairman
- Dr. Geuzaine as the ERCOFTAC IPC Chairman
- Prof. Oliemans as the ERCOFTAC IPC Deputy Chairman
- Dr. von Terzi as the ERCOFTAC SPC Deputy Chairman

Prof. Hutton and the managing Board thanked Prof. Leschziner for his work and efforts as SPC Chairman during the previous four years.

6. Financial report and 2010-11 budget

Prof. Hirsch reported that to date in 2010 there was revenue of around 235k Euros, this included: 122k Euros from membership fees, 10k Euros from ETMM8, 6k Euros from BPGs, 55k Euros from industrial related seminars, and 42k from EC-AERO related projects. Furthermore, total expenses to date were around 168k Euros. He added that ERCOFTAC has total current assets of around 477k Euros of which 405k Euros is cash and 72k Euros is accounts receivable.

Concerning the 2010-11 budget, Prof. Hirsch projected an expenditure of 225k Euros and a revenue of 210k Euros, thus indicating his wish to balance the budget.

Prof. Hirsch then expressed his wish that the ADO should manage all financial issues for future ETMM events. Prof. Leschziner responded that this would be hard to coordinate, and that local companies had greater knowledge of relevant procedures and languages. Prof. Hutton added that this matter should be resolved offline.

** Prof. Tomboulides will circulate a costs and organisational breakdown of ETMM9 to the Executive Committee.*

7. Report from the Administration and Development Office

Prof. Hirsch outlined the activities of the ADO since 2004, noting the recent significant increase due to the activities of the IEO.

Prof. Hutton reminded Prof. Hirsch that any future changes in the ADO budget need to be announced 6 months in advance to the Executive Committee.

8. Report from the Coordination Centre

Dr. Borhani reported that the Coordination Centre was operating normally and was not seeking an increase in funding. He added that the PCs will be invited again to provide a list of their Managing Board members.

9. Report from the Scientific Programme Committee

Prof. Geurts proposed an increase in the annual budget for academic orientated scientific events. He suggested an increase in the funding of Summer Schools from 3k to 4.5k Euros. Furthermore, he proposed that funding for future Workshops should be in the form of scholarships of 200 Euros per student, with the total amount per event being capped at 4k Euros. He predicted that this would involve a total increase of 15-20k Euros per year. Prof. Hutton said that this proposal needed to be debated further and encouraged Prof. Geurts to prepare a plan for review at the next EC meeting. Prof. Hirsch added that such a review should include the planning of industrially orientated Summer Schools, possibly in the form of mixed IPC-SPC events in collaboration with the IEO. Prof. Oliemans suggested that such an event should be treated as an IPC Summer School.

** Prof. Geurts to prepare a proposal for an increase in the annual funding of SPC events for discussion at the next Executive Committee meeting.*

As part of ERCOFTACs efforts to attract younger research scientists, Prof. Geurts then expressed his wish for EC members to identify younger candidates who would gradually take over administration of ERCOFTAC activities such as the FTAC journal and the book series. Furthermore, he added that SPC events should be marketed better on the ERCOFTAC website to increase their visibility to the community.

Prof. Geurts then suggested that the SPC should identify areas of promising research around which 'clusters' of SIGs and individuals can be arranged to focus research efforts and resources. In response, Prof. Hirsch indicated his wish that the SPC should have a greater active involvement in the development of the Knowledge Base.

i. SIG funding requests

Based on the recommendation of the SPC, the Managing Board voted to fund five SIGs for up to 3000 Euros during 2011. These SIGs were:

SIG 15 *Turbulence modelling*
SIG 28 *Reactive flows*
SIG 33 *Transition mechanisms, prediction and control*
SIG 35 *Multipoint turbulence structure and modelling*
SIG 42 *Synthetic models in turbulence*

Requests for reimbursements by these funded SIGs should be made to the ERCOFTAC ADO in Brussels. For invoiced items, the ADO should be provided with receipts, a short justification, and bank details. All reimbursement requests will be audited by the ADO before payment.

ii. Workshop and summer school funding requests

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

W2011-05 '*Workshop on Turbulence Modelling'*, Chatou, France, 1.10.2011.
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-06 *'Simulation of Multiphase Flows in Gasification and Combustion'*,
Dresden, Germany, 1.9.2011.
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-07 '*Progress in Transition Modeling and Control'*, Toldeo, Spain, 28.9.2011.
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-08 '*Young ERCOFTAC workshop'*, Montestigliano, Italy, 27.3.2011.
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2011-09 *'Statistical mechanics, fractals, instabilities and turbulence, in fluids and superfluids'*, Paris, France, 13.4.2011.
Application for use of the ERCOFTAC logo was approved.
A scholarship of 2000 Euros was awarded.

W2012-01 '*Unsteady separation in fluid-structure interaction'*, Mykonos, Greece, 18.6.2012.
Application for use of the ERCOFTAC logo was approved.

S2011-01 '*Morphology and dynamics of anisotropic flows'*, Cargèse, France, 18.7.2011.
Application for use of the ERCOFTAC logo was approved.
A scholarship of 3000 Euros was awarded.

Prof. Geurts reported that details of the EC-AERO project had been advertised to the SPC. Prof. Hirsch highlighted the importance of identifying suitable events, especially Summer Schools, to be funded by this initiative.

10. Report from the Industrial Programme Committee

Prof. Oliemans reported that Prof. Rodi was in the process of preparing 5 new cases to be included in the Knowledge Base by the end of the year. Furthermore, the IPC agreed that Profs. Hirsch, Hutton and Rodi would look for suitable subjects for these cases. Prof. Oliemans also reported that the viewing statistics and feedback from the present Knowledge Base were being reviewed to further improve its quality.

Regarding Best Practice Guidelines, Prof. Oliemans reported that Prof. Tomboulides was in the process of preparing one on combustion.

Prof. Hutton then indicated the importance of identifying new avenues of commercial growth for ERCOFTAC through industrially orientated activities.

11. The ERCOFTAC Knowledge Network

Dr. Seoud reported that six IPC related events were being prepared for 2011, including a hybrid-RANS course to be held in Cleveland, USA.

12. Any other business

None.

13. Dates and location of the next ERCOFTAC Committee meetings

The next ERCOFTAC Spring Festival and Committee Meetings will be held at the Institute of Fluid Flow Machinery - Polish Academy of Sciences, Gdansk, Poland, on the 12-13th of May 2011. The next ERCOFTAC Autumn Festival and Committee Meetings will be held at TU Darmstadt in Germany on the 10-11th October 2011.

Prof. Hutton closed the Managing Board meeting at 16:00, and thanked those attending.

Navid Borhani
Lausanne, 2011.

European Research Community On Flow, Turbulence and Combustion

GENERAL ASSEMBLY MEETING

12th October 2010, Lisbon, Portugal

The meeting was opened by the ERCOFTAC Chairman, Prof. Hutton, at 16:00.

1. Approval of the agenda

The agenda was approved.

2. Election of ERCOFTAC Officers and Management Board members

The General Assembly voted unanimously to approve the following appointments:

- Prof. Hutton as the ERCOFTAC Chairman
- Prof. Tomboulides as the ERCOFTAC 1st Deputy Chairman
- Dr. Geuzaine as the ERCOFTAC IPC Chairman
- Prof. Oliemans as the ERCOFTAC IPC Deputy Chairman
- Dr. von Terzi as the ERCOFTAC SPC Deputy Chairman

3. Approval of the 2009 accounts

The 2009 accounts were approved unanimously.

4. Approval of the 2010-11 budget

The 2010-11 budget was approved unanimously.

Prof. Hutton closed the assembly at 16:10, and thanked those attending.

Navid Borhani,
Lausanne, 2011.

The Future Administration of ERCOFTAC

A Proposal for Consolidating all Functions and Costs in a Central Office

Background and Motivation

The business plan, as managed and implemented by the IEO (Richard Seoud) has met with much success over recent months and is starting to produce impressive results. This is leading to an increasing portfolio of services (courses etc.) and products (books, manuals etc.) that are being delivered with increasing frequency both in Europe and abroad. The impact of these services on the FTAC community has been very positive leading to a significant increase in membership applications. This success is, of course, to be welcomed. However, it has been accompanied by a rapidly increasing administrative burden, particularly for the ADO which receives requests for membership and services; issues invoices and manages them through to payment; and deals with all costs and expenses related to IEO activities. This burden can only continue to grow. Furthermore, in future, ERCOFTAC will capitalise on this growth in engagement activity by levering increasing investment in its research and science based activities (thus spinning a virtuous circle of incubating new knowledge and expertise, underpinning ever wider and deeper provision of services). This investment will result in further administration burdens, particularly in Lausanne. The associated costs threaten to increase substantially year-on-year not least because they are incurred in Swiss currency, the value of which against the Euro increases inexorably.

These issues were raised at the 2011 Spring Executive Committee in Gdansk. It was suggested that the best way to manage and contain these cost escalations was to bring all administration functions into a single, professional office located in a 'cost stable' country. Furthermore, given ERCOFTAC's burgeoning global presence, it was time to present the world with a dedicated, single identity administration headquarters. An action was placed to organise a one-day workshop to explore and flesh out such a proposal. This took place in Brussels over 17th-18th June. Participants comprised Tony Hutton, Charles Hirsch, Bernard Geurts, Ananias Tomboulides, Richard Seoud and Navid Borhani. Valuable input was provided in the form of an inventory of administrative tasks carried out by the ADO (Appendix-1) and a list of tasks undertaken to edit and prepare the publication of the Bulletin (Appendix 2). The key outcome was that Richard and Tony were asked to explore the logistics and costs of setting up an office in London UK, initially manned by Richard (as manager) and a full time Administrative Support Officer (ASO). The job description of the ASO is attached as Appendix 3. Tony was asked to prepare a paper for the October Managing Board setting out the case for creating a single, integrated administration office located in the UK plus a detailed office budget. It was also requested that the paper should address the issue of editing and publishing the Bulletin should we lose the services of Lausanne. This document is that requested paper.

Considerations

The proposal and costing presented here are conservative, in that they are realistic and somewhat on the high side. The aim is to establish whether or not an effective administration office, robust to future growth, can be set up and operated within the current 2011 budget. On implementation, the final costs may be a little less but will not be more. These costs are based on an two-to-three desk office in a modern fully serviced office complex in Chiswick, London (http://www.enjoy-work.com/). A good

candidate for the ASO post, who is competent and well organised should be able to deliver the functions described in Appendix 3 against a backdrop of growing activities. A competitive salary that such a candidate will expect has been set as advised by Brook Street Recruitment Agency, London.

The practicality of editing (see Appendix 2) and publishing the Bulletin at the University of Czestochowa, under the stewardship of Prof Elsner has been investigated. Enquiries have proved fruitful, and Prof. Elsner is to be thanked for his positive cooperation.

Cost Analysis

A full analysis of all annual costs as well as set-up costs is set out in Appendix 4. It can be seen that the greatest source of uncertainty is the Euro/pound exchange rate. At current rates the annual cost is Eur71,612. Under a worst case scenario in which the value of the pound climbs against the Euro to 1.4286 (1 Euro = 0.7 Pounds), the annual cost is Eur85,904 [1]. These figures should be viewed in the context of a ERCOFTAC 2011 administrative budget (ADO plus CC) of Euro 87,000 (ADO, 37K; CC, 50K). Thus immediate savings could be made and there is a healthy margin for unforeseen contingencies.

At current exchange rates, the set up costs amount to approximately Eur 14,717 (see Appendix 4.)

Recommendation

The Executive Committee recommends that the ERCOFTAC Managing Board formally agrees to set up a Central Administration Office in London, UK, in compliance with the operational and cost model set out above. The Managing Board is also invited to sanction the modifications to the Byelaws that are necessary to enable this development in ERCOFTAC administration.

[1] The IEO annual cost are self supporting

Appendix 1. ADO Set of Administration Tasks

List of Ercoftac Tasks

1. **Memberships**
   - **1.1. Existing Membership**
     - Each January/February, invoice all existing members the annual membership fee, print out the invoices and send them to the members. Save a copy of said invoice in Ercoftac binder.
     - Make an Excel list of all existing members and keep track of who has paid and who has not.
     - Follow-up on all unpaid invoices by email and phone. Send reminders.
     - Process requests for cancelling membership: make a sales credit note if necessary, send said credit note to cancelling member, save a copy of said credit note in Ercoftac binder, cancel member in Navision by changing the membership ID (e.g.: R-B-00 becomes ZOUT-R-B-00) and keep an Excel list of all cancelled memberships.
     - Send list of cancelled memberships to Chris Lea and David Ellacott

   - **1.2. New Member**
     - Process membership requests: create a member ID, invoice new member, print out invoice and send it to new member along with a welcome letter and complimentary copies of both BPGs. Send new member an email with their member ID and tell them that the invoice and BPGs were shipped.
     - Save a copy of said invoice in Ercoftac binder.
     - Inform Richard, Navid, Chris, David and Mr Hutton about new member.
     - Keep an Excel list of all new members.

2. **BPG Purchases**
   - **2.1. Via Paypal**
     - Create an invoice in Navision and specify that it was paid via PayPal
     - If buyer is an existing member, issue the invoice using the buyer's member ID; if the buyer is not a member, create a non-member ID and issue the invoice.
     - Send a copy of the invoice to the buyer (for their records).
     - Save a copy of said invoice in Ercoftac binder.
     - Send BPG if it is BPG for multi-phase flows. If it is BPG for single-phase flows, Ask A. Hutton to ship it and send him a copy of the invoice.
   - **2.2. Via form downloaded on Ercoftac website**
     - Create an invoice in Navision

- If buyer is an existing member, issue the invoice using the buyer's member ID; if the buyer is not a member, create a non-member ID and issue the invoice.
- Send a copy of the invoice to the buyer.
- Send BPG if it is BPG for multi-phase flows. If it is BPG for single-phase flows, Ask A. Hutton to ship it and send him a copy of the invoice.
- Save a copy of said invoice in Ercoftac binder.
- Follow up on payment.

3. Courses

3.1. Via PayPal

- Create an invoice in Navision and specify that it was paid via PayPal.
- If buyer is an existing member, issue the invoice using the buyer's member ID; if the buyer is not a member, create a non-member ID and issue the invoice.
- Send an email to buyer, cc'ing Richard, confirming the purchase and registration and attach the invoice.
- Save a copy of said invoice in Ercoftac binder.
- Keep an Excel list of Course attendees with (non-)member ID, name of attendee, date on which the invoice was sent, date on which the payment was received.

3.2. Via Richard

- Create an invoice in Navision
- If buyer is an existing member, issue the invoice using the buyer's member ID; if the buyer is not a member, create a non-member ID and issue the invoice.
- Send an email to buyer, cc'ing Richard, confirming the purchase and registration and attach the invoice. Also send a paper version of the invoice by snail mail.
- Keep an Excel list of Course attendees with (non-)member ID, name of attendee, date on which the invoice was sent, date on which the payment was received.
- Save a copy of said invoice in Ercoftac binder.
- Follow up on payment.
- A few days before the course, send Richard the Excel list with the names of the attendees and the list of paid and unpaid registration fees.

4. Workshop and summerschool

- Preparation of the budget according the Navid's list.
- Reception of the bill, checking if the bill fulfilled the rules of the grants
- Checking if the budget has not yet been used

- Payment of the bill

5. **Sig**
   - Preparation of the budget according the Navid‘s list.
   - Reception of the bill and checking if the budget has not yet been used
   - Payment of the bill

6. **ETMM**
   - Create an invoice for sponsoring
   - Payment of bills
   - Follow up of payments
   - Follow up and integration of accounting performed by the “event organization”

7. **Accounting**
   - Check bank statements and paypal statements for received payments
   - Follow up on all payments, send payment reminders to members or course attendees if necessary
   - Entries of Richard ‘s salary
   - Preparation of :
     budget
     income and balance sheet, and explanation of income
     seminar report
     workshop and summer school report
     SIG report
     Membership list and cancellation list
     unpaid membership report
     unpaid seminar report
     BPG report (number of orders, income, list of buyers)
     Payroll table
     ADO activity report

8. **Miscellaneous**

   - Coordinate website with Chris Lea
   - Coordinate shipment of BPGs for Single-Phase Flows with A. Hutton

Appendix 2. Editing and Preparing Bulletin Content Set of Tasks (Supplied by N. Borhani)

1. Collect and check submissions. The Workshop and Summer School reports come directly to me from the organisers. The PC reports and theme issue contents are solicited for and organised by the Chairman of the Editorial Board, then sent to me.
2. Each item is then reformatted into the Bulletin Latex Style. This typically involves cutting, pasting or retyping from every file format imaginable, especially equations, tables, figures and bibliographies. Although a Latex style file exists, it is either rarely used or submitted with additional incompatible exotic packages.
3. Optimise the page layout of each submission.
4. Update front and back matter, and the cover.
5. Insert adverts.
6. Define the global bulletin layout, the order of the articles, and the page numbers. Then create the table of contents.
7. Prepare and update the upcoming academic and industrial events insert.
8. Create the final complete electronic bulletin, check it and then email it out to members.
9. Send the electronic Bulletin to the printers, then check printing proof before ordering the final print run of around 250 copies (1 per member, 1 per EC member, and 1 per SIG coordinator).
10. Print address labels.
11. Insert into envelopes and post.

Appendix 3. Administration Support Officer Job Description

The European Research Community on Flow, Turbulence and Combustion (ERCOFTAC) is Europe's premier research association in the fields of flow, turbulence and combustion (http://www.ercoftac.org). Membership comprises over 130 research institutes plus many of Europe's foremost engineering companies and consultancies. The majority of Europe's leading academic figures and researchers in the field are involved in ERCOFTAC activities through its network of Special Interest Groups (SIGs). ERCOFTAC believes it is very important to harness this vibrant resource of knowledge and expertise to the needs of industry, not only within Europe, but across the world. To this end a number of products and services have been developed in recent years and these are being delivered to an ever expanding global user community. The increasing administrative burden associated with this growth in activity has led to the decision to pull together all ERCOFTAC administration functions into a single central office located in London, U.K. Initially, this new office will be run by a general business manager supported by a full-time Administration Support Officer (ASO). The duties of the ASO are as follows:

Administration of the ERCOFTAC Membership Register

The ASO will keep and maintain a register of ERCOFTAC members. This will indicate those that are fully paid up and those that are in arrears. Each January/February the ASO will prepare and issue invoices for annual membership fees. He/she will regularly contact those members in arrears (by phone and email) asking them to settle their account or explain their intentions and cancel membership for those who wish to withdraw from the organization. During the year, new membership applications will be processed by creating a unique member ID, entering this on the register and sending out a welcome pack plus invoice.

Administration of the Science Base Activities

Research members can apply to the Scientific Programme Committee (SPC) for support in running workshops and summerschools. The ASO will administer this process. He/she will receive and file these applications and table them at the six-monthly SPC meetings for consideration by the Committee. He/she will then process the payments of any agreed support and elicit and file mandatory post-event reports from the organizers.

Certain ERCOFTAC Special Interest Groups (SIGs) that adhere to a performance protocol are eligible for an annual support grant. The ASO will administer and keep records of this process

The ASO will also provide (modest) secretarial support to the organizers of the ERCOFTAC ETMM International Conference which is held every other year. This will include:

- Invoicing event sponsors and the follow up of payments.
- Integration of the event's local organiser's accounts into ERCOFTAC accounts

Administration of Products and Services Provision

The ASO will collect requests for products (i.e various books and publications) and also requests for services (i.e. attending courses and technology awareness events etc.) either from the web portal or directly from the Industry Engagement Officer (IEO). He/she will issue invoices and secure payments of such; dispatch products

when payment has been received; and will maintain registers of course/event attendees.

Administration of Accounts

The ASO will administer the ERCOFTAC accounts, using a professional business administration system. He/she will ensure this is kept up to date with all invoices issued and received; all money flows in and out and associated ledgers etc. At each year end, the ASO will deliver a full statement of accounts to the ERCOFTAC Seat in Brussels in a form that is suitable for audit under Belgian law.

Report Preparation

The ASO will assemble a report for scrutiny and consideration by the ERCOFTAC governing committee that meets twice per year (Spring and Autumn). This will comprise:

- A comprehensive financial statement (income and expenditure against budget; balance sheet etc.)
- Membership Register
- Administration Office activity report
- Workshop/Summer School and SIG reports (with support from the SPC)
- Products and Services report (with support from the IEO)

Competencies

The ASO must be competent in the use of Microsoft Office software tools and must be experienced in administering business accounts (i.e. book-keeping competencies). Also he/she must be highly self organized in order to deal efficiently with a fairly complex, multi-layered role.

Appendix 4. Cost Analysis

Consolidated of ERCOFTAC Administration Function - Estimate of Costs

Item	Cost/mth	Annual Costs	Currency	€/£ rate	€ AnnualCost	Notes & Assumptions
ANNUAL RECURRING COSTS						
Office Costs						
Serviced office rental	1530	18360	Sterling			Chiswick Park, London. Costs in first year will be lower due to introductory offer - £1020/mth
IT and telecom connection service	237.6	2851.2	Sterling			Broadband connection for two desks - phone call charges not included
Phone comms package	34.46	413.52	Sterling			Package offered by Chess telecom. Unlimited landline calls anywhere plus unlimited to UK mobiles
Car Parking	60	720	Sterling			Unlimited visits for less than 2hours plus one full day visit per week
Office miscellaneous	150	1800	Sterling			Estimate for paper, ink cartridges, postage, stationary etc. This is probably overgenerous
ASO Employment Costs						
Annual Salary		24000	Sterling			Full time person with competencies set out in Job Description. Advice from Brook Street Agency
Employer National Ins. Contribution		2336	Sterling			
Compulsory minimum pension contribution		720	Sterling			
	Total Cost	51200.72	Sterling	1.14943	58851.64	Using Current Euro/Pound exchange rate
		51200.72	Sterling	1.42857	73143.81	Worse case scenario in deterioration of Euro/pound exchange rate
Editing & Production of Bulletin						
Printing and distribution			Euros		10400	Printed and distributed by University of Czestochowa. Assumes 250 copies per issue - 76 pages. Cost reduces to €8000 for 36 page issues
Preparation and layout of material			Euros		2360	Fee charged by University of Czestochowa based editor
	Total Bulletin Costs		Euros		12760	
OVERALL ANNUAL COST PROJECTION						
	Current €/£ Exchange Rates		Euros		71611.64	
	Worst case €/£ Exchange Rates		Euros		85903.81	
SET UP COSTS						
Deposit To Office Provider		3060	Sterling			Refundable at termination of contract
Office set up costs		357.6	Sterling			IT, Passes, ERCOFTAC signage etc.
Laptop for ASO		650	Sterling			Includes laptop plus MS Office
						NOTE: Richard already has laptop plus ERCOFTAC supplied printer
Registration with UK Companies House incl of legal fees		2400	Sterling			
Recruitment Agency Fee		6336	Sterling			22% of Annual Salary plus VAT
	Total Cost	12803.6		1.14943	14716.84	

ERCOFTAC

EUROPEAN RESEARCH COMMUNITY ON FLOW, TURBULENCE AND COMBUSTION

AMENDED BY-LAWS

LIST OF MODIFIED ARTICLES

Articles:	**11**
	12

October 2000

EUROPEAN RESEARCH COMMUNITY ON FLOW, TURBULENCE AND COMBUSTION (ERCOFTAC)

ARTICLES OF ASSOCIATION

NAME AND SEAT

Article 1

An international association with scientific objectives is founded, named: EUROPEAN RESEARCH COMMUNITY ON FLOW, TURBULENCE AND COMBUSTION (ERCOFTAC) (hereafter referred to as the Association). This Association is established at ~~B-1160 Brussels, Triomflaan 43~~ B-1170 Brussels, Terhulpsesteenweg, Chausse de la Hulpe 189. The seat can be transferred to any place in Belgium by ordinary decision of the Board, after promulgation in the "Official Publications of Laws and Statutes" ("Bijlagen tot het Belgisch Staatsblad") within one month after said decision. The Association is founded according to the Act of 25th October 1919, amended by the Act of 6th December 1954.

AIMS OF THE ASSOCIATION

Article 2

2.1. To promote joint efforts of European Research Institutes and Industries which are active in the fields of Fluid Flow, Turbulence and Combustion, with the object of:
- exchanging technical and scientific information concerning basic and applied research;
- developing, validation and maintenance of numerical codes and data bases;
- promoting industrial application of research by stimulating collaboration between industry, governments, professional societies and research groups;
- stimulating the creation of advanced training activities in all the fields related to flow, turbulence and combustion.

2.2. To promote European Centers (involving super computers, data base organisation, research institutes and experimental facilities) and networks for the advancement of flow, turbulence and combustion.

2.3. To promote the establishment of an ~~Administration and Development Office, and a Coordination Center.~~ Administration and Coordination Office. To promote Centers, hereafter called ERCOFTAC Pilot Centers, in several European countries, and further abroad as the organization develops, to act as regional centers for collaboration, stimulation and application of research.

2.4. To establish and promote contacts with the international community in the field of Flow, Turbulence and Combustion.

2.5. To advise governments and the European Union on research priorities and the strengthening and establishing at European Research Centers on Flow, Turbulence and Combustion.

2.6. To stimulate, through the creation of Special Interest Groups, well-coordinated ~~Europe-wide~~ worldwide research efforts on specific topics in Flow, Turbulence and Combustion.

2.7. The fulfillment of the aims of the Association shall, with the exclusion of any economic acquisition, exclusively and directly serve to promote the development of science and research and its application in Flow, Turbulence and Combustion.

2.8. The Association shall act in an economically disinterested way and will use its proper funds only in agreement with its aims stated in the by-laws. The members comprising the Association do not receive any remuneration from the Association. No person must be favored by expenses that are outside the aims of the association or by excessive compensations or reimbursements. Employees of and contractors to the Association will be engaged by means of proper and appropriate contracts in compliance with laws of the land in which such employees and contractors operate.

ACTIVITIES OF THE ASSOCIATION

Article 3

The members of the Association will meet in a General Assembly at least once a year in order to discuss and decide upon actions to be taken in agreement with its aims, with special attention to:

- the work of the Industrial ~~Advisory~~ Programme Committee and the Scientific Program Committee which are appointed by the General Assembly;
- the activities of the ERCOFTAC Pilot Centers and Special Interest Groups;
- the work of the ~~Administration and Development Office and the Coordination Center~~; Administration and Development Office
- informing the public, the research community and industry about the aims and activities of the Association.

MEMBERSHIP OF THE ASSOCIATION

Article 4

The members of the Association are:

a) voting members;
b) associate members;
c) honorary members and Presidents.

Article 5

5.1. Voting membership is available to:

- Research entities in academic or governmental organizations; and
- industrial corporations;

located in the EU and certain other ~~European~~ countries determined by the Managing Board; and engaged in activities involving research on Flow, Turbulence and Combustion. Members who represent the entity or corporation are obliged to give evidence of their authorizations to act in the name of the corresponding organization or corporation.

There shall be separate voting registers for research entities and industry. Each member must choose the register on which it wishes to enroll. This preference will be reviewed by the Managing Board, hereafter called the Board. If the Board rejects the preference, the member will have the right of appeal to the Assembly that should have the final decision.

5.2. Associate membership is available, without voting rights, to

- research entities in academic, governmental or industrial organizations
- industrial corporations

~~of countries not referred to in article 5.1~~, that are engaged in activities involving research on Flow, Turbulence and Combustion. Associated Membership will be granted by the General Assembly, on proposition of the Managing Board, for an initial period of two years. This period can be extended by the Board upon acceptance of an activity report. A separate membership fee will be defined by the Board.

5.3. The title of Honorary Member or Honorary President may be granted by the General Assembly to persons who have rendered outstanding services to the Association. Honorary President take juris et de jure part in the General Assembly and Managing Board meetings without voting rights nor obligation to pay a membership fee.

Article 6

Prospective members must apply in writing to the Seat of the Association that should then accept or refuse the application in writing. The membership fee will be fixed by the General Assembly, acting on prior advice from the Managing Board, hereafter called the Board. The membership begins on receipt of the membership fee. Members can be excluded from membership by the General Assembly on the prior advice of the Board on the following grounds:

1. non-payment of membership fee;
2. actions that contravene the Aims or the by-laws of the Association.

The proposal of exclusion of membership will be explicitly mentioned on the agenda of the General Assembly. A member, whose exclusion is being considered, will be formally notified two months prior to any action and will be given the opportunity to give a written defense. The decision of exclusion shall be adopted by a two third's majority of the votes cast by the members present at the General Assembly.

The members of the Association can resign by sending a written notification to the Chairman of the Association, hereafter called the Chairman. Any institution ceasing to be a member of the Association will have no claim on its membership fee.

GENERAL ASSEMBLY

Article 7

The General Assembly is composed of the representatives of voting members. Associated, Honorary and Corresponding members may attend the General Assembly without voting rights. The General Assembly is fully competent to carry out the aims and objectives of the Association. To this end the General Assembly has fullness of competence. The agenda of the General Assembly is drawn up by the Chairman of the Board.

Article 8

The General Assembly will set up a Scientific Program Committee, which will recommend the research goals of ERCOFTAC and propose special activities. It also will set up an Industrial ~~Advisory~~ Programme Committee that will advise on matters of industrial importance and may also propose special activities.

Article 9

At the General Assembly the Board will present the annual accounts and annual report of the Association. The General Assembly will discuss and approve the annual accounts, will vote on the next year's budget, will discuss any other items on the agenda and will appoint the Board members.

The General Assembly must be convened by the Chairman of the Board and will be presided over by him. It may be held at any place specified in the notice convening the meeting.

The General Assembly can also be convened by the Board or when a call for a meeting is presented to the Chairman by no less than 15 members.

Any member with voting rights may be represented by another member with voting rights, provided written authorization has been given. No member qualified to vote may have more than three proxy votes.

Article 10

Except in extraordinary circumstances, as stated in the by-laws, a resolution shall be adopted by simple majority of the votes cast by those members with voting rights who are present or represented. A resolution adopted by the General Assembly will be valid if and only if at least the lower of five or one third of the members of each of the two voting registers of research members and industry members are present or represented and both groups separately have a majority in favor of the resolution. No resolution can be adopted concerning an item that was not included in the agenda.

If the quorum is not reached a new General Assembly will be convened which can decide validly, independently of the number of voting members present or represented.

Resolutions of the General Assembly shall be recorded in a register signed by the Chairman and kept at the ~~office~~ seat of the Association, who will make it available to the members. All members of the Association shall be notified of the result.

MANAGING BOARD

Article 11

The Association shall be managed by a Board composed of a minimum of 10 members, of whom at least one has Belgian nationality.

The Board shall be composed of elected representatives of voting members. All Pilot Centres may nominate one Industry and one Research representative to the General Assembly for election and no more. The representatives approved by the General Assembly are hereafter referred to as Board members. The Board may propose up to five additional members to the General Assembly. The chairmen and deputy chairmen of the Scientific Program Committee and the Industrial ~~Advisory~~ Programme Committee and the treasurer and deputy treasurer are ex-officio members of the Board.

The Board members are appointed by the General Assembly on the following conditions:

- Each Board member shall be elected for a 2 year term and is eligible for re-appointment.
- They are serving in a personal capacity only. Each year up to half the Board may be changed. This applies only to Board members who have completed two year service.
- In case of a vacancy the Board will nominate a temporary substitute. The next General Assembly will elect a permanent replacement. A Board member's two year term shall begin from the date of election by the General Assembly.
- The position of a Board member is unsalaried.

Article 12 **Executive Committee**

The Board elects among its members the:

- Chairman;
- The "first" Deputy Chairman;
- The "second" Deputy Chairman;
- Treasurer;
- Deputy Treasurer;
- Scientific Programme Committee Chairman;
- Deputy Scientific Programme Committee Chairman;
- Industrial ~~Advisory~~ Programme Committee Chairman;
- Deputy Industrial ~~Advisory~~ Programme Committee Chairman.

Either the Chairman, or the "first" Deputy Chairman, will be elected from the Industrial Register. The "first" Deputy Chairman is elected with the specific expectation that he would normally become the next Chairman of ERCOFTAC and hence is regarded as the "Chairman-elect".

An Executive Committee, formed by the Chairman, Deputy Chairmen, Treasurer and Deputy Treasurer, the Chairmen and Deputy Chairmen of the Scientific Programme and

Industrial ~~Advisory~~ Programme Committees, the Administration and Coordination Office Manager, the Knowledge Base Editor, two elected representatives of the Scientific Programme Committee and two elected representatives of the voting members, will supervise the daily course of affairs.

With the exception of the Administration and Coordination Office Manager who will serve for the term of his/her contract, the members of the Executive Committee are appointed in their position for a duration of two years, and may be re-elected twice.

Article 13

The Board will convene at least once a year. Its resolutions will be adopted by simple majority of the Board members present: The Chairman will hold the casting vote in the event of a tied vote. A decision of the Board is valid if a minimum of 5 Board members is present. No Board member may have more than one proxy vote.

The Chairman is obliged to convene an Extraordinary Board Meeting if requested in writing by 5 voting Board members. If this Extraordinary Meeting has not been convened within four weeks after the written request, the five Board members themselves will convene a meeting, and notice of this Extraordinary Meeting will be sent to every Board member.

The resolutions of the Board will be recorded in a register signed by the Chairman and kept at the seat of the Association, who will make it available to the members of the Association.

REPRESENTATION

Article 14

The Board is vested with all powers necessary for the Administration and Management, except for the powers granted to the General Assembly. The Board can empower the Chairman, or a Board member, or an employee, with responsibility for daily administration. All acts binding on the Association, unless special powers of attorney are granted, shall be signed by the Chairman or the Treasurer who will not be obliged to prove their power of attorney to third parties.

The Executive Committee has the power to meet between Board meetings and take decisions as the Board has deemed to pass on to it.

All legal actions, whether the Association acts as plaintiff or a defendant, shall be taken, initiated or proceeded with by the Board, represented by its Chairman or a Board member appointed for that purpose.

ANNUAL ACCOUNTS

Article 15

The financial year begins on January 1st and ends on December 31.

The Board shall each year present the annual accounts of the financial year and the budget for the next financial year to the General Assembly for approval. An audit Committee, appointed by the General Assembly, will verify the accounts before presentation to the Board, and they will report their findings to the General Assembly.

AMENDMENTS OF THE BY-LAWS AND DISSOLUTION

Article 16

Without prejudice of Article 5 of the law of 25th October 1919, any voting member can present to the Board a proposal to amend the by-laws or to dissolve the Association. Each proposal that has as its purpose the amendments of the by-laws or the dissolution of the Association shall be considered by the Board and communicated to the General Assembly.

If the Board wishes this proposal to be discussed by the General Assembly it shall give at least three months notice of its intention.

A decision is adopted only if passed by a two-thirds majority of the members qualified to vote.

If at the General Assembly no such two-thirds majority of members qualified to vote is obtained, a second General Assembly pursuing the identical procedure as mentioned above, shall be convened to definitely and validly decide on the proposal, on the basis of a two-thirds majority of those members qualified to vote, who are present or represented.

The amendments to the by-laws will become effective after approval by "Arrêté Royal" and after the publicity conditions required by Article 3 of the law of 25th October 1919 will have been satisfied.

The General Assembly will decide the manner according to which the Association will be dissolved.

GENERAL CLAUSE

Article 17

Everything that is not foreseen by the by-laws and all the promulgation to be made in the "Annexes au Moniteur Belge" (in Bijlagen Belgisch Staatsblad), will be carried out according to the legal provisions of the law.

Article 18

The General Assembly can adopt internal working rules on proposal of the Board.

PC Centre	Coordinator	Scientific representative	Industrial representative
Alpe-Danube-Adria	Reichl, C. christoph.reichl@ait.ac.at	Reichl, C. christoph.reichl@ait.ac.at	Tatschl, R. reinhard.tatschl@avl.com
Belgium	Geuzaine, P. philippe.geuzaine@cenaero.be	Deconinck, H. deconinck@vki.ac.be	Geuzaine, P. philippe.geuzaine@cenaero.be
Czech Republic	Bodnar, T. bodnar@marian.fsik.cvut.cz	Kozel, K. kozelk@fsik.cvut.cz	Macek, J. Jan.Macek@fs.cvut.cz
France - Henri Bénard	Cambon, C. claude.cambon@ec-lyon.fr		
France South	Braza, M. marianna.braza@imft.fr	Braza, M. marianna.braza@imft.fr	Arbez, P. Pierre.Arbez@airbus.com
France West	Comte, P. pierre.comte@ensma.fr	Danaila, L. Danaila@coria.fr	Llor, A. Antoine.Llor@cea.fr
Germany North	Gauger, N. nicolas.gauger@dlr.de	Gauger, N. nicolas.gauger@dlr.de	Eggels, R. ruud.eggels@rolls-royce.com
Germany South	Becker, S. sb@ipat.uni-erlangen.de	Becker, S. sb@ipat.uni-erlangen.de	Menter, F. Florian.Menter@ansys.com
Germany West	Schröder, W. ek@aia.rwth-aachen.de		
Greece	Papailiou, K.D. kpapail@ltt.ntua.gr		
Iberian East	Onate, E. onate@cimne.upc.es		
Iberian West	Theofilis, V. vassilios.theofilis@upm.es		
Italy	Martelli, F. francesco.martelli@unifi.it	Rispoli, F. f.rispoli@dma.ing.uniroma1.it	Poloni, C. poloni@units.it
Netherlands	Ooms, G. G.Ooms@tudelft.nl	Ooms, G. G.Ooms@tudelft.nl	Duursma, R. Rene.Duursma@TataSteel.com
Nordic	Wallin, S. stefan.wallin@foi.se	Andersson, H. helge.i.andersson@ntnu.no	Wallin, S. stefan.wallin@foi.se
Poland	Drobniak, S. drobniak@imc.pcz.czest.pl	Rokicki, J. jack@meil.pw.edu.pl	Doerffer, P. doerffer@imp.gda.pl
Switzerland	Jenny, P. jenny@ifd.mavt.ethz.ch	Jenny, P. jenny@ifd.mavt.ethz.ch	Sick, M. mirjam.sick@vatech-hydro.ch
United Kingdom	Barton, I. Iain.Barton@baesystems.com	Choi, K-S. kwing-so.choi@nottingham.ac.uk	Lea, C. chris.leabuxton@btinternet.com

SIG	Name	Coordinator	Email	2010	2011	2012
1	Large Eddy simulation	Geurts, B.J.	b.j.geurts@math.utwente.nl			
4	Turbulence in compressible flows	Comte, P.	pierre.comte@tea.univ-poitiers.fr			
5	Environmental CFD	Armenio, V.	armenio@dica.units.it			
10	Transition modelling	Dick, E.	erik.dick@ugent.be			
12	Dispersed turbulent two-phase flows	Sommerfeld, M.	martin.sommerfeld@iw.uni-halle.de	Budapest, 5-09	Delft, 5-10	Gdansk, 5-11
14	Stably stratified and rotating flows	Redondo, J.M.	redondo@fa.upc.es			Darmstadt, 10-11
15	Turbulence modelling	Jakirlic, S.	s.jakirlic@sla.tu-darmstadt.de	Budapest, 5-09	Lisbon, 10-10	Darmstadt, 10-11
20	Drag reduction and flow control	Choi, K-S.	kwing-so.choi@nottingham.ac.uk	Lausanne, 10-09	Delft, 5-10	Gdansk, 5-11
24	Variable density turbulent flows	Anselmet, F.	fabian.anselmet@irphe.univ-mrs.fr			
28	Reactive flows	Tomboulides, A.	ananiast@enman.auth.gr	Lausanne, 10-09	Lisbon, 10-10	Darmstadt, 10-11
32	Particle image velocimetry	Stanislas, M.	stanislas@ec-lille.fr			
33	Transition mechanisms, prediction and control	Hanifi, A.	ardeshir.hanifi@foi.se	Budapest, 5-09	Lisbon, 10-10	Gdansk, 5-11
34	Design optimisation	Giannakoglou, K.	kgianna@central.ntua.gr			
35	Multipoint turbulence structures and modelling	Cambon, C.	claude.cambon@ec-lyon.fr	Lausanne, 10-09	Lisbon, 10-10	
36	Swirling flows	Braza, M.	braza@imft.fr			
37	Bio-fluid mechanics	Van Steenhoven, A.A.	a.a.v.steenhoven@wtb.tue.nl			
38	Micro-Thermofluidics	Borhani, N.	navid.borhani@epfl.ch			Darmstadt, 10-11
39	Aeroacoustics	Bailly, C.	Christophe.Bailly@ec-lyon.fr			
40	Smoothed particle hydrodynamics	Le Touzé, D.	David.LeTouze@ec-nantes.fr	Budapest, 5-09		
41	Fluid structure interaction	Longatte, E.	elisabeth.longatte@edf.fr			
42	Synthetic models in turbulence	Nicolleau, F.	f.nicolleau@sheffield.ac.uk	Lausanne, 10-09	Lisbon, 10-10	Darmstadt, 10-11
43	Fibre suspension flows	Hämäläinen, J.	jari.hamalainen@uku.fi	Budapest, 5-09	Delft, 5-10	Gdansk, 5-11
44	Fundamentals and applications of fractal turbulence	Fortune, V.	Veronique.Fortune@lea.univ-poitiers.fr			Darmstadt, 10-11
45	Uncertainty quantification in industrial analysis and design	Meyers, J.	Johan.Meyers@Mech.KULeuven.be			
102	ERCOFTAC database interests group	Laurence, D.	dominique.laurence@manchester.ac.uk			

Special Interest Groups SIGS

To be discussed at the SPC meeting in Gdansk on the 11th October 2011.

SIG 2012 funding applications

SIG14 - Stably stratified and rotating flows * *no documentation*
SIG15 - Turbulence modelling
SIG28 - Reactive flows
SIG38 - Micro-Thermofluidics
SIG42 - Synthetic models in turbulence
SIG44 - Fractal turbulence

ERCOFTAC SIG 15 (Turbulence Modelling)

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

Report on activities in the past year
Plan of future activities

(October 2, 2011)

- **Activities in the period October, 2010 – September, 2011**

The SIG15 was involved in organizing the 15th workshop on turbulence modelling:

- The 15th Workshop will be hosted by Prof. Dominique Laurence, Dr. Sofiane Benhamdouche and Dr. Richard Howard on October 17-18, 2011 at ***Électricité de France - EDF, Département Mécanique des Fluides Energies et Envoronnement, 6 Quai Watier, 78401 Chatou, France***. Dr. Remi Manceau, as the SIG15 representative, has also participated in the organization. It will be a two-day workshop dealing with the back-report on the previous workshops and the collaborative computations of the following three test cases:
  - SIG15 Case 15.1: Flow and heat transfer in a suddenly expanded pipe. Exp.: Baughn, Hoffman, Launder et al.. (1984, 1989)
  - SIG15 Case 15.2: Flow and heat transfer in a pinned passage (channel with a wall-bounded staggered pin matrix), Exp. Ames, Dvorak et al. (2005, 2006, 2007)
  - SIG15 Case 15.3: Thermal mixing in a T-junction. Exp.: Hirota, Mohri, Asano and Goto (2010)
- The lectures dealing with the experimental works on SIG15 Cases 15.2 and 15.3 will be given by their originators Profs. Ames (The University of North Dakota, Grand Forks, USA) and Hirota (Mie University, Tsu-city, Japan). A survey lecture concerning with "***Trends and prospects in RANS modelling of turbulent convection***" will be given by Prof. Hanjalic (TU Delft). In addition a new experimental database of the staggered pin matrix configuration (SIG15 case 15.2) obtained by employing the Magnetic Resonance Velocimetry will be given by Dr. Grundmann and Westermann (CSI, TU Darmstadt).
- The cross-plot presentations with results analysis and interactive discussion will be given by R. Manceau (SIG15 Case 15.1), S. Benhamadouche (SIG15 Case 15.2) and R. Howard (SIG15 Case 15.3)

- Following the Mini Symposium on "***Current trends in modelling and simulation of turbulent flows***", Dr. Dominic von Terzi and myself have successfully organized on behalf of the SIG15 in the framework of the 5th European Conference on Computational Fluid Dynamics – ECCOMAS CFD 2010, which was held in Lisbon, June 14-17, 2010 (see 1-page report in the ERCOFTAC Bulletin No. 87, June, 2011) we submitted the proposal for the continuation of these Mini Symposium series to the ECCOMAS CFD conference which will be held in Vienna in September, 2012 (proposal is accepted). Let me recall that ERCOFTAC is a member of the ECCOMAS association.

- **Activities planed for the next two years**
  - The computational workshops will be still the most important activity; the next 16th workshop on turbulence modeling will be organized. The discussion about it as well as about the appropriate test cases will be done during the 15th Workshop in Chatou.

  - (**still not realized, an idea exists since a few years**) Work on establishment of the SIG-15 Forum (members from industry, research centers, CFD companies and academia) will be undertaken in order to establish a kind of advisory board which will be actively involved in the life of the SIG15 (e.g. test case selection in a market-search-way, enabling the potential contributors would be known in advance). The potential members have to be recognized and directly contacted. Self editing of the new ERCOFTAC Web Site (still not officially published) offers very good possibility to that.
  - **The SIG15 part of the New ERCOFTAC web site was completed by the largest extent** (see http://www.ercoftac.org/). This site includes the entire information (case descriptions, instruction for computations, cross-plotts, etc.) of all 14 workshops organized hitherto, all workshop reports published in the ERCOFTAC Bulletins, two special issues (on "Turbulence Modelling" coordinated by Hanjalic and Laurence, March, 1999 and on "Wall Modelling in LES" coordinated by Suad Jakirlic, March 2007), and relevant details/links, etc.
  - Organization of Summer-schools/Seminars on SIG15-related topics: SIG15 didn't organize such events in the past. However, I should emphasized that the content of one event ("***Hybrid LES/RANS methods for industrial CFD***") organized regularly by ERCOFTAC (Dr. Richard Seoud) since some years has been almost entirely covered by the SIG15 Steering Committee Members (Prof. Leschziner, Dr. Menter, Dr. von Terzi). Similar is with another event ("***Best practice for engineering CFD***") which took place at EDF on September 13-14, 2010. The lectures at this event were given by Profs. Hanjalic, Laurence, Leschziner and Rodi. They all are SIG15 steering committee members.

- **The SIG 15 representative/representatives will regularly attend the SPC meetings!**
- **SIG 15 will closely follow the obligations defined in the ERCOFTAC-SIG Concordat:**
  - The industrial engagement activity of ERCOFTAC will be actively supported by contributing to the Best-Practice-Guidelines edition including also the contribution to the Best-Practice courses in industrial CFD. The results/outcomes of the workshops will be included into the Knowledge Base and the joint efforts on its marketing will be undertaken. Currently, S. Jakirlic and D. von Terzi are working on including the 3D diffuser case in the Knowledge Base.

Darmstadt; 02.10.2011 SIG 15 Coordinator: S. Jakirlic

SIG28 Activities: ERCOFTAC Autumn SPC Meeting Darmstadt, October 11, 2011

The events that should be listed as **upcoming events for 2012**:

1. 3rd Workshop on Measurement and Computation of Turbulent Spray Combustion (TCS3), 2/9/2012 Heidelberg. Organized by D. Roekaerts, B. Merci and E. Gutheil. Request for EROCFTAC Logo as well as Funding (Scholarships).
2. "Introductory Short Course in Combustion" ("Kurzlehrgang Grundlagen und moderne Anwendungen der Verbrennungstechnik", in german language), 13. - 16.3.2012 in Erlangen (Germany). Organised by A. Leipertz, L. Zigan, F. Dinkelacker. Request only for EROCFTAC Logo.
3. Preparation of the Combustion BPG by a contributors' team which has been selected; budget still needs to be finalized and the estimated delivery date is Spring 2012.

SIG28 events **listed as past events for 2011**:

1. Highly resolved experimental and numerical diagnostics for turbulent combustion (HRTR-1), took place in Rouen, France, 25-26/5/2011

2. 2nd Workshop on Measurement and Computation of Turbulent Spray Combustion (TCS2), 11/9/2011 Sardinia

3. Simulation of Multiphase Flows in Gasification and Combustion, 18-21/9/2011, Dresden, Germany

4. Flame stabilization for industrial burners, a course which took place 26-27/9/2011, at the GE Center in Munich.

SIG28 events **listed as past events for 2010**:

1. A Summer Schooland Workshop in 2010 on ""Non-normality and non-linearity in thermo-acoustics" at TU Munich in May 17-20, 2010, organized by W.Polifke.

2. In preparation of a TOC on BPG on Combustion with D. Roackerts, P. de Goey, W. Polifke, M. Pfitzner for discussion with SPC about funding

SIG28 events **listed as past events in 2009**:

1. a workshop on Turbulent Spray Combustion organized by Bart Merci and Dirk Roekaerts in Corsica, June 7, 2009 (report enclosed).

2. A Technology Awareness Day on "Advances in Mixing and Combustion: Architectures, Measurement Techniques and Numerical Modelling", which took place **April 8, 2009** in Munich

3. Organized a meeting of all members of SIG28 on April 14, 2009 in Vienna during the European Combustion Meeting; the meeting was attended by about 10 SIG28 members.

SIG28 events **listed as past events in 2008**:

1. The JM Burgers Centre course on Combustion, which took place May 6-9, 2008 at Maastricht and was organized by TU/e in Eindhoven.
2. a workshop on 'DNS and LES of reacting flows' October 22-24, 2008 in Eindhoven
3. The "LES for Combustion and on Transition Modelling" event that took place in November 2007 at Ghent.
4. a workshop on "LES and DNS of ignition processes and complex structure flame with local extinction" organized by Andjei Boguslawski at Czestochova University in Poland, November 20-21st, 2008
5. A Combustion meeting in Erlangen March 2008, in the German language

Request for 2012 funding of SIG 38 'Micro-Thermofluidics'

Coordinator: Navid BORHANI

Summary of activities proposed for 2012

Aim to reset and completely revitalise this SIGs activities by carrying out a comprehensive review of its scope in order to plan future academic and industrial activities. This realignment aims to incorporate the multidisciplinary nature of this topic, both in its fundamental physics and industrial applications.

This will involve:

1. A search for suitable individuals, both academic and industrial, to create a dynamic Steering Committee which will then sit regularly to plan and organise the evolution of the SIG and its activities.

2. To put in place an administration structure for coordinating the SIGs activities.

3. To integrate the SIGs activities into the current international microfluidics community, and to identify sources of research funds for micro-thermofluidic studies.

4. The creation of a SIG webpage.

5. To set up bi-annual academic events, to occur in the Spring and Autumn periods of each year. The first will be the support of an already internationally established Summer School on single and two-phase micro-thermofluidics with particular focus on the thermal management of electronic devices. ERCOFTAC studentship funding of this event has been requested separately at the SPC meeting in Darmstadt. The second event will be a Winter School or Workshop focused on other aspects of micro-thermofluidics such as lab-on-chip, experimental measurement techniques for microfluidic systems, and micro-reactors. The nature of this event has yet to be fully defined.

6. To investigate with the IEO, the creation of a number of industrial training events in the field of micro-thermofluidics.

7. To discuss with colleagues and the IEO the possibility of editing a book or best-practice-guidelines relating to micro-thermofluidics.

8. This SIG will respect the concordat and aims to attend future SPC meetings.

Navid Borhani

Lausanne, 1.10.2011.

SIG 42, Synthetic models in turbulence

Franck Nicolleau, Coordinator
Department of Mechanical Engineering, The University of Sheffield, UK.

September 29, 2011

This is the application for fundings for the year 2012.

Brief Reminder of the context:

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

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

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

Brief Reminder of topics:

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

1 Past activities

SIG 42 is now in its 4th year, it was set up after a meeting in London IMS/ERCOFTAC/SIG 35/COST 20 workshop, IC London, March 26-28, 2007, where it appeared that there was a KS community and a critical mass of researchers to justify the creation of a new SIG dedicated to KS. To get its appeal broader and attract more people the new SIG was named 'Synthetic models in turbulence' as KS is thought of in a broader context, as an approach rather than a specific Lagrangian modelling.

So far 7 workshops have been organised. The last two were:

- SIG 42 6th workshop on Synthetic Turbulence Models and environment (Ecole Centrale de Lyon, 5th-7th July 2010) *submitted to ERCOFTAC bulletin*

- SIG 42 7th workshop. How to assemble and disassemble turbulence and how do things assemble and disassemble in it? Imperial College, London, 22nd-23rd September 2011 *submitted to ERCOFTAC bulletin*

The SIG is organising one formal workshop once a year. There are regular informal meetings between the members of the steering committee throughout the year. The formal workshops are more international with speakers and participants from outside the SIG and European institutions.

The SIG publishes regularly a summary of its activities in ercoftac bulletin. The main contributions to the SIG will be published in Ercoftac Series:

New approaches in modelling multiphase flows and dispersion in turbulence, fractal methods and synthetic turbulence
F.C.G.A. Nicolleau and C. Cambon and J.-M. Redondo and J.C. Vassilicos and M. Reeks and A.F. Nowakowski
Springer Science **18**, *Ercoftac Series*, December 2011, isbn 978-94-007-2505-8

So far the practical objectives of the SIG have remained the same:

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

A european COST application was submitted last year and will be resubmitted in 2012.

2 Plan of activities and initiatives in end of 2011 and 2012

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

- A SIG 42 steering committee meeting in Paris or Lyon (November-December 2011).
- A SIG 42 steering committee meeting at Imperial College in March 2012.
- A workshop at Institut Jean le Rond d'Alembert, Paris July 2012. *Synthetic models and multiscale theories*, co-organised by T. Michelitsch and F. Nicolleau (both ERCOFTAC label and scholarships will be requested.)
- There will be a contribution to Ercoftac bulletin in the form of a special issue (March 2012).

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

Funding for the organisation of the workshops and to cover travel expenses for the co-ordinator or a leading member of the SIG to attend SPC meetings are needed at this early stage of the SIG development (thanks to last year fundings it was possible to have at least one representative at all SPC meetings in 2011).

3 Agreement with the 'concordat'

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

SPECIAL INTEREST GROUP
ON
TURBULENT FLOWS GENERATED/DESIGNED IN MULTISCALE/FRACTAL WAYS: FUNDAMENTALS AND APPLICATIONS

Coordinating Team:
V. Fortuné (P', Poitiers, France), J. Peinke (Oldenburg, Germany), J.C. Vassilicos (ICL, UK).

Application for funding for 2011-2012.

1. SCIENTIFIC AND ENGINEERING CONTEXT

After more than a century of exhaustive research on the aerodynamics and hydrodynamics of geometrically simple shapes, whether streamlined as in wings or bluff as in spheres and cylinders, it is blindingly natural to expect much of the future in fluid mechanics to lie in the aerodynamics and hydrodynamics of geometrically complex, and thereby multiscale, shapes. There has of course been work over the past decades on how to model and simulate complex turbulent flows, but the emphasis here is on working out the rules for the design of multiscale objects so as to obtain desired flow effects beneficial for particular applications.

The simplest cases of multiscale shapes are fractal shapes, which is why they have been a good start in this new research area. These are multiscale shapes with a complex appearance which can nevertheless be defined with only a small number of scaling parameters.

The study of turbulent flows generated/designed in multiscale/fractal ways started in the UK with an experimental publication in 2001. These multiscale/fractal ways include multiscale/broadband forcings as well as multiscale/fractal boundary and/or initial conditions. The first computational model of turbulence subjected to fractal/broadband forcing which was neither motivated by nor limited to intricacies of Renormalisation Group theory appeared in 2002, also from the UK. A lot of the current activity in the field is in the EU, in particular the UK, Holland, Germany and France. This is a research area born in Europe and being developed in Europe with, however, parallel efforts which have already appeared in Japan (Nagoya and Okayama) and the USA (Johns Hopkins and Arizona).

The primary idea is to interfere with the multiscale dynamics and inner geometry and topography of the turbulence itself and find out whether qualitatively different types of turbulence can be created. Multiscale/fractal generation/design is about using multiscale/fractal objects (such as grids, fences, profilers etc) to shape the nature of the resulting turbulent flow over a broad range of scales for a broad range of applications. Examples of applications already pursued include fractal mixers, fractal combustors, fractal spoilers and fractal wind breakers/fences. There are more applications being currently worked on in at least two or three European labs which will appear in due course.

2. PLAN FOR ACTIVITIES AND INITIATIVES IN 2011-2012:

The following meetings are planned:

– A SIG steering committee meeting in Poitiers before the end of 2011 to discuss ways to enhance intra-European collaborations and the possibility of European grant applica-

tions.

– A Workshop at Imperial on 26-27 March 2012. We have applied separately for the necessary funds to support the attendance of young European researchers.

– A SIG steering committee meeting in London by mid 2012 to discuss the outcomes of the first SIG workshop and take intra-European collaborations and grant applications further.

– The creation of a webpage for this SIG wherefrom we may also make data widely available.

Funding for the organisation of the workshops and meetings and to cover travel expenses for the coordinating team (to the meetings mentioned above and to SPC meeting) and leading members of this new SIG (to the meetings mentioned above) are needed at this early and initial stage of the SIG development.

3. AGREEMENT WITH THE 'CONCORDAT'

We seek an agreement with the concordat and we confirm our commitment to attending SPC meetings.

V. Fortuné, J. Peinke and J.C. Vassilicos, 28 September 2011.

Code	Title	Location	Start date	Report due	Bulletin	Organisers	Email addresses	Co-organisers	Funding Requested	Funding Decision	Logo Requested	Logo Decision	Reviewed
S2007-01	Small scale turbulence	Cargèse, France.	13/10/2007	13/04/2008	75	Danaila, L.		PCs: France West SIGs: 4, 35	Yes	Yes, 3000	Yes	Yes	Athens, 10.2006
S2007-02	DLES of reacting and two-phase flows	Berlin, Germany.	01/09/2007	01/03/2008	75	Thevenin, D. Tomboulides, A.		SIGs: 28	Yes	Yes, 3000	Yes	Yes	Athens, 10.2006
S2008-01	Int. ss. on turbulence, plankton and marine snow	Vilanova, Spain.	01/09/2008	01/03/2009	79	Clercx, H.	h.j.h.clercx@tue.nl	SIGs: 37 Co: JM Burgers Center, Lille University, SMSE, CNRS, AGAUR.	Yes	Yes, 3000	Yes	Yes	Athens, 10.2006
S2008-02	Application of PIV	Göttingen, Germany.	25/02/2008	25/08/2008	77	Schröder, A.		PCs: North Germany, Netherlands, France. SIGs: 32	Yes	Yes, 3000	Yes	Yes	Brussels, 10.2007
S2008-03	JM Burgers Centre course on combustion	Eindhoven, Netherlands.	06/05/2008	06/11/2008	79	de Goey, L.P.H. Roekaerts, D.	l.p.h.d.goey@tue.nl dirkr@ws.tn.tudelft.nl	SIGs: 28	Yes	Yes, 3000	Yes	Yes	Brussels, 10.2007
S2008-04	Modern applications of combustion technology	Nürnberg, Germany.	25/02/2008	-	-	Dinkelacker, F. Leipertz, A.		SIGs: 28	No	-	Yes	No	Brussels, 10.2007
S2008-05	Modelling of atomisation and sprays	Halle, Germany.	21/07/2008	21/01/2009	79	Sommerfeld, M.	martin.sommerfeld@iw.uni-halle.de	PCs: Germany North SIGs: 12	Yes	Yes, 3000	Yes	Yes	Brussels, 10.2007
S2008-06	Turbulence and mixing in compressible flows II	Marseille, France.	07/07/2008	07/01/2009	79	Dussauge, J-P.	jean-paul.dussauge@polytech.univ-mrs.fr	PCs: France South SIGs: 4	Yes	Yes, 3000	Yes	Yes	Stockholm, 5.2008
S2008-07	LES simulation and application in aeroacoustics	Balatonfüred, Hungary.	31/08/2008	03/03/2009	79	Lajos, T. Lohasz, M.	lajos@ara.bme.hu lohasz@ara.bme.hu	PCs: AHS SIGs: 1, 39 Co: COST ACTION P20 LES-AID, CFD.hu	Yes	Yes, 3000	Yes	Yes	Stockholm, 5.2008
S2009-01	Turbulent mixing and beyond	Trieste, Italy.	01/10/2009	-	-	Abarzhi, S.I. Gauthier, S.	snezha@flash.uchicago.edu serge.gauthier@orange.fr	Co: NSF, AFSOR, EOARD, ICTP, ANL, CEA, LANL, DOE ASC, ILE, IIT.	Yes	No	Yes	No	Brussels, 11.2009
S2009-02	Summerschool in Flow Control and Optimization	Stockholm, Sweden.	29/06/2009	29/12/2009	83	Brandt, L. Hanifi, A.	luca@mech.kth.se ardeshir.hanifi@foi.se	SIGs: 33	Yes	Yes, 3000	Yes	Yes	Brussels, 11.2009
S2009-03	Bio-fluid mechanics	Eindhoven, Netherlands.	09/03/2009	09/09/2009	79	van Steenhoven, A.A van de Vosse, F.N. Poelma, C.	a.a.v.steenhoven@tue.nl	PCs: JM Burgers Centre SIGs: 37	Yes	Yes, 3000	Yes	Yes	Brussels, 11.2009
S2010-01	PIV course	Gottingen, Germany	22/03/2010	22/09/2010	-	Schröder, A.	andreas.schroeder@dlr.de	PCs: Germany North, Netherlands, France SIGs: 32 Co: AG Stab, Uni. Oldenburg, Uni. Munich	Yes	No	Yes	Yes	Lausanne, 10, 2009
S2010-02	Non-normality and non-linearity in thermo-acoustics	Munich, Germany	17/05/2010	17/11/2010	87	Polifke, W. Zellhuber, M. Tomboulides, A.	polifke@td.mw.tum.de zellhuber@td.mw.tum.de ananiast@googlemail.com	SIGs: 28 Co: Marie Curie RTN AETHER	Yes	Yes, 3000	Yes	Yes	Lausanne, 10, 2009
S2010-03	Turbulence and mixing in compressible flows	Oléron Island, France.	13/09/2010	13/03/2011		Comte, P.	Pierre.Comte@lea.univ-poitiers.fr	PCs: France West SIGs: 4, 35	Yes	Yes, 3000	Yes	Yes	Lausanne, 10, 2009
S2010-04	New challenges in turbulence research	Les Houches, France.	21/02/2010	21/08/2010	83	Bourgoin, M. Rousset, B. Pinton, J-F. Cambon, C.	mickael.bourgoin@gmail.com Claude.Cambon@ec-lyon.fr	PCs: France Henri-Bénard SIGs: 4, 35 Co: CNRS	Yes	Yes, 3000	Yes	Yes	Lausanne, 10, 2009
S2010-05	Fundamentals of microscale heat transfer	Lausanne, Switzerland.	07/06/2010	07/12/2010	83	Thome, R.	John.Thome@epfl.ch		Yes	Yes, 3000	Yes	Yes	Delft, 5.2010
S2011-01	Morphology and dynamics of anisotropic flows	Cargèse, France.	18/07/2011	18/01/2012		Danaila, L. Godeferd, F.S. Blor, J.B.	luminita.danaila@coria.fr Fabien.Godeferd@ec-lyon.fr jan-bert.flor@hmg.inpg.fr	PCs: France Henri-Bénard, France-West SIGs: 35 Co: CNRS	Yes	Yes, 3000	Yes	Yes	Lisbon, 10.2010
S2011-02	Fluid-Structure Interaction for Biomedical Applications	Prague, Czech Republic.	29/08/2011	29/02/2012	Rec.	Bodnar, T.	bodnar@marian.fsik.cvut.cz	PCs: ADA PC Co: MIASCR	Yes	Yes, 3000	Yes	Yes	Gdansk, 5, 2011
S2012-01	New challenges in turbulence research II	Les Houches, France.	18/03/2012	18/09/2012		Naso, A. Bourgoin, M. Pumir, A. Rousset, B.	Aurore.Naso@ec-lyon.fr	PCs: France Henri Bénard SIGs: 35 Co: CNRS, LMFA, LEGI, LP-ENSL, SBT	Yes	Yes, 3000	Yes	Yes	Gdansk, 5, 2011
S2012-02	Fundamentals of microscale heat transfer	Lausanne, Switzerland.	11/06/2012	11/12/2012		Thome, R.	John.Thome@epfl.ch	SIGs: 38	Yes		Yes		Darmstadt, 10, 2011
W2007-01	Quality & reliability of CFD simulations III	Nottingham, UK.	14/03/2007	14/09/2007	73	Lea, C.		PCs: UK SIGs: 5, 101	No	-	Yes	Yes	Florence, 5.2006
W2007-02	Micro PIV and applications in microsystems	Delft, Netherlands.	-	-	-	Lindken, R.		SIGs: 32, 38	Yes	Yes	Yes	Yes	Florence, 5.2006
W2007-03	Langrangian techniques in multiphase flow	Trieste, Italy.	05/09/2007	05/03/2008	75	Kuerten, J.			Yes	Yes	Yes	Yes	Athens, 10.2006
W2007-04	Spheric II	Madrid, Spain.	01/05/2007	01/11/2007	73	Gomez-Gesteira, M. Souto Iglesias, A.		SIGs: 40	Yes	Yes	Yes	Yes	Athens, 10.2006
W2007-05	New developments in multipoint turbulence modelling	London, UK.	01/03/2007	01/09/2007	73	Cambon, C.		Co: COST	Yes	Yes	Yes	Yes	Athens, 10.2006
W2007-06	LES simulation for design of combustion systems	Rouen, France.	24/05/2007	24/11/2007	73	Vervisch, L. Tomboulides, A.		Co: EC COST P20, GST	Yes	Yes	Yes	Yes	Athens, 10.2006
W2007-07	IUTAM: Unsteady separated flows and their control	Corfu, Greece.	18/06/2007	18/12/2007	75	Braza, M.		PCs: France South Co: IUTAM	No	-	Yes	Yes	Athens, 10.2006
W2007-08	Laminar-turbulent transition mechanisms	Freudenstadt, Germany.	13/06/2007	13/12/2007	75	Rist, U. Hanifi, A.		SIGs: 33	Yes	Yes	Yes	Yes	Athens, 10.2006

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W2007-09	International gas turbine conference	Tokyo, Japan.	02/12/2007	-	-	Outa, E. Yoshino, T.		Co: ASME/IGTI. ...	No	-	Yes	No	Athens, 10.2006
W2007-10	Workshop on near wall turbulence	Viterbo, Italy.	22/03/2007	22/09/2007	X	Stanislas, M.			No	-	Yes	Yes	Athens, 10.2006
W2007-11	Synthetic turbulence models	Sheffield, UK.	29/05/2007	29/11/2007	75	Nicolleau, F.		PCs: France Henri Bénard, UK. SIGs: 1, 35	Yes	Yes	Yes	Yes	Berlin, 5.2007
W2007-12	Quality & reliability of LES	Leuven, Belgium.	24/10/2007	24/04/2008	75	Meyers, J. Geurts, B.J. Sagaut, P.		SIGs: 1	Yes	Yes	Yes	Yes	Berlin, 5.2007
W2007-13	PAN-EUROPEAN lab on non-homogeneous turbulence	Vilanova, Spain.	29/11/2007	29/05/2008	77	Redondo, J.M.		PCs: Iberian East, France Henri Bénard SIGs: 14, 35	Yes	Yes	Yes	Yes	Brussels, 10.2007
W2007-14	LES for combustion and transition modelling	Ghent, Belgium.	29/11/2007	29/05/2008	79	Dick, E. Elsner, W.	erik.dick@ugent.be	SIGs: 10, 28	No	-	Yes	Yes	Brussels, 10.2007
W2008-01	ETMM7	Limassol, Cyprus.	04/06/2008	04/12/2008	-	Leschziner, M.A. Kassinos, S.	mike.leschziner@imperial.ac.uk	Co: University of Cyprus	Yes	-	Yes	-	Florence, 5.2006
W2008-02	Spheric III	Lausanne, Switzerland.	04/06/2008	04/12/2008	77	Maruzewski, P.	pierre.maruzewski@epfl.ch	SIGs: 1	Yes	Yes, 2000	Yes	Yes	Brussels, 10.2007
W2008-03	Sound source mechanisms in turbulent shear flows	Poitiers, France.	07/07/2008	07/01/2009	83	Jordan, P.	peter.jordan@lea.univ-poitiers.fr	PCs: France West	No	-	Yes	Yes	Brussels, 10.2007
W2008-04	DNS and LES of reacting flows	Eindhoven, Netherlands.	22/10/2008	22/04/2009	X	de Goey, L.P.H.	l.p.h.d.goey@tue.nl	SIGs: 28 EC COST P20	Yes	No	Yes	Yes	Brussels, 10.2007
W2008-05	Quality & reliability of CFD simulations IV	Nottingham, UK.	05/03/2008	05/09/2008	79	Lea, C.	chris.leabuxton@btinternet.com	PCs: UK SIGs: 5, 101 Co: NAFEMS	Yes	Yes, 2000	Yes	Yes	Brussels, 10.2007
W2008-06	SIG33: Open issues in transition and flow control	Genova, Italy.	16/10/2008	16/04/2009	79	Bottaro, A. Hanifi, A.	alessandro.bottaro@unige.it ardeshir.hanifi@foi.se	SIGs: 33	Yes	Yes, 2000	Yes	Yes	Brussels, 10.2007
W2008-07	European drag reduction and flow control meeting	Mariental, Germany.	08/09/2008	08/03/2009	77	Hage, W. Wassen, E.	kwing-so.choi@nottingham.ac.uk wolfram.hage@dlr.de erik.wassen@cfd.tu-berlin.de	SIGs: 20	Yes	Yes, 2000	Yes	Yes	Stockholm, 5.2008
W2008-08	DLES 7	Trieste, Italy.	08/09/2008	08/03/2009	77	Armenio, V. Fröhlich, J. Geurts, B.J. ...	armenio@dica.units.it froehlich@ict.uni-karlsruhe.de b.j.geurts@math.utwente.nl	SIGs: 1	Yes	Yes*, 2000	Yes	Yes	Stockholm, 5.2008
W2008-09	Multiscale methods for fluid and plasma turbulence	Luminy, France.	21/04/2008	-	-	Schneider, K.	kschneid@cmi.univ-mrs.fr	PCs: France Henri Bénard SIGs: 35 Co: CNRS, CEA, ONR, Franco-Allemande Uni.	Yes	No	Yes	No	Stockholm, 5.2008
W2008-10	13th. Workshop on turbulence modelling	Graz, Austria.	25/09/2008	25/03/2009	79	Brenn, G. Jakirlic, S.	brenn@fluidmech.tu-graz.ac.at s.jakirlic@sla.tu-darmstadt.de	PCs: AHS SIGs: 15 Co: IAHR, COST	Yes	Yes, 2000	Yes	Yes	Stockholm, 5.2008
W2008-11	4th Workshop on synthetic turbulence modelling	Nancy, France.	11/12/2008	11/06/2009	79	Angilella, J.R. Nicolleau, F.	jean-regis.angilella@ensem.inpl-nancy.fr f.nicolleau@sheffield.ac.uk	SIGs: 35, 42 PCs: France Henri Bénard	Yes	Yes*, 2000	Yes	Yes	Brussels, 11.2008
W2008-12	3rd. Workshop on synthetic turbulence models	Newcastle, UK.	03/07/2008	03/01/2009	79	Nicolleau, F. Reeks, F. Baggaley, C. Cambon, C.	f.nicolleau@sheffield.ac.uk mike.reeks@newcastle.ac.uk a.w.baggaley@newcastle.ac.uk claude.cambon@ec-lyon.fr	PCs: France Henri Bénard, UK. SIGs: 35, 42	Yes	Yes, 2000	Yes	Yes	Stockholm, 5.2008
W2009-01	Conference on turbulence and interactions	Martinique, France.	31/05/2009	01/12/2009	83	Deville, M.	michel.deville@epfl.ch	PCs: France Henri Bénard, Swiss SIGs: 4, 12, 14, 35, 39, 42 Co: EPFL, DGA, ONERA, UPMC	No	-	Yes	Yes	Stockholm, 5.2008
W2009-02	Immersed boundary methods	Amsterdam, Netherlands.	01/06/2009	01/12/2009	83	Pourquie, J. Breugem, W-P. Boersma, B.J. Turek, S.	m.j.b.m.pourquie@tudelft.nl	PCs: JM Burgers Centre Co: EUROMECH, Royal Dutch Academy of Sci.	Yes	No	Yes	Yes	Brussels, 11.2008
W2009-03	Quality & Reliability of LES II	Pisa, Italy.	09/09/2009	09/03/2010	81	Salvetti, M.	mv.salvetti@ing.unipi.it	SIGs: 1 Co: University of Pisa, COST Action P20 LES-AID	Yes	Yes*, 2000	Yes	Yes	Brussels, 11.2008
W2009-04	Fluxes and structures in fluids	Moscow, Russia.	24/06/2009	24/12/2009	X	Chashechkin, Y.D. Baydulov, V.G.	chakin@ipmnet.ru bayd@ipmnet.ru	Sigs: 14, 42 Co: RAS	Yes	Yes*, 2000	Yes	Yes	Brussels, 11.2008
W2009-05	Papermaking research symposium *Withdrawn*	-	-	-	81	-			-	-	-	-	-
W2009-07	LES of Turbulence, Acoustics and Combustion	Marseilles, France.	24/08/2009	24/02/2010	83	Comte, P. Serre, E.	pierre.comte@lea.univ-poitiers.fr eric.serre@L3m.univ-mrs.fr	PCs: France-West SIGs: 1	No	-	Yes	Yes	Brussels, 11.2008
W2009-08	Quality & Reliability in Aerospace CFD	Nottingham, UK.	04/03/2009	-	-	Parry, J.	john_parry@mentor.com	PCs: UK SIGs: 5, 101 Co: NAFEMS	No	-	Yes	No	Brussels, 11.2008
W2009-09	Turbulent Spray Combustion	Corsica, France.	07/06/2009	07/12/2009	81	Merci, B. Roekaerts, D.	bart.merci@ugent.be d.j.e.m.roekaerts@tudelft.nl	SIGs: 28	Yes	Yes, 2000	Yes	Yes	Brussels, 11.2008

Code	Title	Location	Start date	Report due	Bulletin	Organisers	Email addresses	Co-organisers	Funding Requested	Funding Decision	Logo Requested	Logo Decision	Reviewed
W2009-10	3rd Hybrid RANS-LES Symposium	Gdansk, Poland.	10/06/2009	10/12/2009	83	Doerffer, P. Haase, W. Peng, S-H.	doerffer@karol.imp.gda.pl office@haa.se peng@foi.se	Co: EADS, FOI, IMP-PAN	No	-	Yes	Yes	Brussels, 11.2008
W2009-11	Research in turbulence and transition	Lisbon, Portugal.	16/10/2009	16/04/2010	83	Theofilis, V. Castilla, R. da Silva, C.	vassilios.theofilis@upm.es castilla@mf.upc.edu carlos.silva@ist.utl.pt	PCs: Iberian West, Iberian East SIGs: 1, 4, 14, 15, 33 Co: IST, IDMEC	Yes	Yes, 2000	Yes	Yes	Lausanne, 10, 2009
W2009-12	Turbulent flows	Ecully, France.	04/12/2009	04/06/2010	83	Naso, A. Nicolleau, F. Godeferd, F. Cambon, C.	aurore.naso@ens-lyon.fr f.nicolleau@sheffield.ac.uk Claude.Cambon@ec-lyon.fr	PCs: France Henri Bénard SIGs: 35 Co: CNRS, CBP	Yes	Yes, 2000	Yes	Yes	Lausanne, 10, 2009
W2009-13	Synthetic turbulence and vortex flows	Warsaw, Poland.	01/07/2009	01/01/2010	81	Nowakowski, A.	a.f.nowakowski@sheffield.ac.uk	PCs: Polish SIGs: 42, 35	Yes	Yes, 2000	Yes	Yes	Budapest, 5.2009
W2009-14	14th Workshop on turbulence modelling	Rome, Italy.	18/09/2009	18/03/2010	85	Jakirlic, S. Rispoli, F. Borello, D.	s.jakirlic@sla.tu-darmstadt.de rispoli@dma.ing.uniroma1.it borello@dma.ing.uniroma1.it	PCs: Italy SIGs: 15 Co: IAHR, COST	Yes	Yes, 2000	Yes	Yes	Budapest, 5.2009
W2009-15	Global flow instability and control	Crete, Greece.	28/09/2009	28/03/2010	83	Theofilis, V.	vassilios.theofilis@upm.es	PCs: Iberian West SIGs: 33 Co: US AFOSR/EOARD, Caltech, Ecole Polytechnique Paris	Yes	Yes, 2000	Yes	Yes	Budapest, 5.2009
W2010-01	Workshop on fibre suspension flows	Stockholm, Sweden.	09/02/2010	09/08/2010	83	Lundell, F.	fredrik@mech.kth.se	SIGs: 43	No	-	Yes	Yes	Lausanne, 10, 2009
W2010-02	MUSAF colloquium	Toulouse, France.	27/09/2010	27/03/2011		Gicquel, L. Gourdain, N. Boussuge, J-F. Poinsot, T.	lgicquel@cerfacs.fr gourdain@cerfacs.fr boussuge@cerfacs.fr poinsot@cerfacs.fr	SIGs: 1, 5, 14, 15, 28, 36, 37, 41, 101 Co: Airbus, Safran, Onera, EU(FP7)	No	-	Yes	Yes	Lausanne, 10, 2009
W2010-03	European drag reduction and flow control meeting	Kiev, Ukraine.	06/09/2010	06/03/2011	85	Voropayev, G. Choi, K-S.	vortex@nbi.com.ua Kwing-so.Choi@nottingham.ac.uk	SIGs: 20 Co: Ukrainain Academy of Sciences	Yes	Yes, 2000	Yes	Yes	Lausanne, 10, 2009
W2010-04	Advances and applications of GiD	Ibiza, Spain.	25/05/2010	25/11/2010	-	Coll, A. Castilla, R.	abelcs@cimne.upc.edu castilla@mf.upc.edu	PCs: Iberian East Co: COMPASSIS, Technical University of Catalonia	Yes	No	Yes	No	Lausanne, 10, 2009
W2010-05	Two-phase flow predictions	Halle, Germany.	22/03/2010	22/09/2010	85	Sommerfeld, M.	martin.sommerfeld@iw.uni-halle.de	PCs: Germany North SIGs: 12	Yes	Yes, 2000	Yes	Yes	Lausanne, 10, 2009
W2010-06	Dynamics of non-spherical particles in fluid turbulence	Trondheim, Norway.	06/04/2011	06/10/2011		Andersson, H. Soldati, A.	helge.i.andersson@ntnu.no soldati@uniud.it	PCs: Nordic SIGS: 43, 12	Yes	Yes, 2000	Yes	Yes	Lausanne, 10, 2009
W2010-07	DLES 8	Eindhoven, Netherlands.	07/07/2010	07/01/2011	85	Kuerten, J.	j.g.m.kuerten@tue.nl	SIGs: 1	Yes	Yes, 2000	Yes	Yes	Budapest, 5.2009
W2010-08	Mixing and dispersion in flows dominated by rotation an	Limburg, Netherlands.	20/06/2010	20/12/2010	85	Clercx, H.	h.j.h.clercx@tue.nl	PCs: JM Burgers SIGs: 12, 14 Co: TU Einhoven, FOM, NOW	Yes	Yes, 2000	Yes	Yes	Delft, 5.2010
W2010-09	Global instabilities of open flows	Nice, France.	30/06/2010	30/12/2010	85	Chomaz, J-M. Gallaire, F. Hanifi, A.	jean-marc.chomaz@ladhyx.polytechnique.fr francois.gallaire@unice.fr ardeshir.hanifi@foi.se	SIGs: 33	Yes	Yes, 2000	Yes	Yes	Delft, 5.2010
W2010-10	Radiation of high temperature gases in atmospheric entr	Lausanne, Switzerland.	12/10/2010	12/04/2011	85	Leyland, P. Sobbia, R.	penelope.leyland@epfl.ch raffaello.sobbia@epfl.ch	PCs: LEC Switzerland Co: ESA, CNES	Yes	Yes, 2000	Yes	Yes	Delft, 5.2010
W2010-11	6th Workshop on synthetic turbulence models	Lyon, France.	05/07/2010	05/01/2011	85	Nicolleau, F. Godeferd, F.	F.Nicolleau@Sheffield.ac.uk Fabien.Godeferd@ec-lyon.fr	PCs: France Henri Bénard, UK SIGs: 14, 42	Yes	Yes, 2000	Yes	Yes	Delft, 5.2010
W2010-12	5th Workshop on research in turbulence and transition	Tarragona, Spain.	29/10/2010	29/04/2011	85	Vernet, A. Castilla, R.	anton.vernet@urv.cat castilla@mf.upc.edu	PCs: Iberian East, Iberian West Co: CIMNE	Yes	Yes, 2000	Yes	Yes	Delft, 5.2010
W2010-13	Instabilities turbulence and interactions in rotating shea	Luminy, France.	04/10/2010	04/04/2011	85	Cambon, C. Schneider, K.	Claude.Cambon@ec-lyon.fr kschneid@cmi.univ-mrs.fr	SIGs. 35 PCs: France Henri Bénard, France West	Yes	Yes, 2000	Yes	Yes	Delft, 5.2010
W2011-01	Cardiovascular fluid mechanics	Cagliari, Italy.	01/06/2011	01/12/2011	87	Querzoli, G. Pedrizzetti, G.	querzoli@unica.it giannip@dica.units.it	SIGs: 37 Co: EUORMECH	Yes	Yes, 2000	Yes	Yes	Delft, 5.2010
W2011-02	3rd Workshop on fibre suspension flows	Nancy, France.	06/04/2011	06/10/2011		Skali-Lami, S. Hamalainen, J.	Salaheddine.Skali-Lami@ensem.inpl-nancy.fr jari.hamalainen@uef.fi	SIGs: 43 Co: CTP-Grenoble	No	-	Yes	Yes	Delft, 5.2010
W2011-03	2nd Workshop on turbulent spray combustion	Italy?	01/07/2011	01/01/2012		Merci, B. Roekaerts, D. Sadiki, A. Tomboulides, A.	bart.merci@ugent.be d.j.e.m.roekaerts@tudelft.nl sadiki@ekt.tu-darmstadt.de ananiast@googlemail.com	SIGs: 28 Co: Belgian section of Combustion Institute	Yes	Yes, 2000	Yes	Yes	Delft, 5.2010
W2011-04	Diagnostics for turbulent combustion	Rouen, France.	25/05/2011	25/11/2011	87	Domingo, P. Moureau, V. Tomboulides, A.	domingo@coria.fr moureau@coria.fr ananiast@googlemail.com	SIGs: 28 Co: University and INSA Rouen	Yes	Yes, 2000	Yes	Yes	Delft, 5.2010
W2011-05	Workshop on Turbulence Modelling	Chatou, France.	01/10/2011	01/04/2012		Jakirlic, S. Benhamadouche, S. Manceau, R.	s.jakirlic@sla.tu-darmstadt.de sofiane.benhamadouche@edf.fr remi.manceau@lea.univ-poitiers.fr	SIGs: 15 PCs: France West Co: IAHR, COST	Yes	Yes, 2000	Yes	Yes	Lisbon, 10.2010

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W2011-06	Simulation of Multiphase Flows in Gasification and Comb	Dresden, Germany.	01/09/2011	01/03/2012		Tomboulides, A. Hasse, C. Thévenin, D. Vervisch, L.	ananiast@googlemail.com Christian.Hasse@iec.tu-freiberg.de thevenin@ovgu.de vervisch@coria.fr	SIGs: 28	Yes	Yes, 2000	Yes	Yes	Lisbon, 10.2010
W2011-07	Progress in Transition Modeling and Control	Toledo, Spain.	28/09/2011	28/03/2012		Theofilis, V. Hanifi, A.	vassilios.theofilis@upm.es ardeshir.hanifi@foi.se	SIGs: 33	Yes	Yes, 2000	Yes	Yes	Lisbon, 10.2010
W2011-08	Young ERCOFTAC workshop	Montestigliano, Italy.	27/03/2011	27/09/2011	Rec.	Schmid, P.	peter@ladhyx.polytechnique.fr	PCs: Germany South	Yes	Yes, 2000	Yes	Yes	Lisbon, 10.2010
W2011-09	Statistical mechanics in fluids and superfluids	Paris, France.	13/04/2011	13/10/2011	87	Cambon, C.	Claude.Cambon@ec-lyon.fr	PCs: France Henri-Bénard SIGs: 14, 35 Co: CNRS, CEA	Yes	Yes, 2000	Yes	Yes	Lisbon, 10.2010
W2011-10	6th International SPHERIC SPH Workshop	Hamburg, Germany.	08/06/2011	08/12/2011	87	Rung, T.	thomas.rung@tu-harburg.de	SIGs: 40 Co: TUHH	Yes	Yes, 2000	Yes	Yes	Gdansk, 5, 2011
W2011-11	4th Symposium on Hybrid RANS-LES methods	Beijing, China.	28/09/2011	28/03/2012		Hasse, W. Peng, S.H.	office@haa.se	Co: DLR, CSTAM, ATAAC, Tsinghua University	No	-	Yes	Yes	Gdansk, 5, 2011*
W2011-12	Instabilities and transition in 3-dimensional flows with ro	Lyon, France.	28/09/2011	28/03/2012	87	Godeferd, F. Benoit, P. Cambon, C.	Fabien.Godeferd@ec-lyon.fr Benoit.Pier@ec-lyon.fr Claude.Cambon@ec-lyon.fr	PCs: France Henri Bénard SIGs: 35 Co: Euromech	Yes	Yes, 2000	Yes	Yes	Gdansk, 5, 2011
W2011-13	7th Workshop on Synthetic Turbulence Models	London, UK.	22/09/2011	22/03/2012		Nowakowski, A. Laizet, S. Nicolleau, F.	A.F.Nowakowski@sheffield.ac.uk S.Laizet@Imperial.ac.uk f.nicolleau@sheffield.ac.uk	SIGs: 42 Co: Uni Sheffield, Imperial College	Yes	Yes, 2000	Yes	Yes	Gdansk, 5, 2011
W2011-14	Biomedical Flows at Low Reynolds Numbers	Zurich, Switzerland.	29/08/2011	29/02/2012		Kleiser, L.	kleiser@ifd.mavt.ethz.ch	PCs: LEC Co: EUROMECH, Colloquium 521	Yes	Yes, 2000	Yes	Yes	Gdansk, 5, 2011
W2011-15	VII International symposium on stratified flows	Rome, Italy.	21/08/2011	21/02/2012		Armenio, V.	vi.armenio@gmail.com	SIGs: 1 Co: IAHR	Yes	Yes, 2000	Yes	Yes	Gdansk, 5, 2011
W2011-16	Fundamental problems of turbulence	Marseille, France.	26/09/2011	26/03/2012		Schneider, K. Farge, M.	kschneid@cmi.univ-mrs.fr farge@lmd.ens.fr		Yes	Yes, 2000	Yes	Yes	Gdansk, 5, 2011
W2011-17	ASTROFLU II	Lyon, France.	12/12/2011	12/06/2012		Cambon, C. Everaers, R.	Claude.Cambon@ec-lyon.fr ralf.everaers@ens-lyon.fr	PCs: France Henri-Bénard SIGs: 4, 35	Yes	Yes, 2000	Yes	Yes	Gdansk, 5, 2011
W2011-18	Turbulence - The historical perspective	Warsaw, Poland.	16/09/2011	16/03/2012	Rec.	Bajer, K.	Konrad.Bajer@fuw.edu.pl	PCs: Poland SIGs: 1, 10, 14, 36, 42	Yes		Yes	Yes	Darmstadt, 10, 2011*
W2011-19	International workshop on turbulence, diffusion and mix	Barcelona, Spain.	02/11/2011	02/05/2012		Redondo, J.M.	redondo@fa.upc.edu	SIG: 14	Yes		Yes		Darmstadt, 10, 2011
W2012-01	Unsteady Separation in Fluid-Structure Interaction	Mykonos, Greece.	18/06/2012	18/12/2012		Braza, M. Bottaro, A.	marianna.braza@imft.fr alessandro.bottaro@unige.it	PCs: France South SIGs: 41	No	-	Yes	Yes	Lisbon, 10.2010
W2012-02	3rd. International workshop on measurement and comp	Heidelberg, Germany.	02/09/2012	02/03/2013		Merci, B. Tomboulides, A.	bart.merci@ugent.be ananiast@googlemail.com	SIGs: 28 Co: Belgian section of Combustion Institute	Yes		Yes		Darmstadt, 10, 2011
W2012-03	13th Workshop on two-phase flow predictions	Halle, Germany.	01/05/2012	01/11/2012		Sommerfeld, M.	martin.sommerfeld@iw.uni-halle.de	SIGs: 12	Yes		Yes		Darmstadt, 10, 2011
W2012-04	SIG 35 workshop on fundamental aspects of turbulence	Paris, France.	01/05/2012	01/11/2012		Cambon, C.	Claude.Cambon@ec-lyon.fr	SIGs: 14, 35 PCs: France Henri-Bénard	Yes		Yes		Darmstadt, 10, 2011
W2012-05	Workshop on multiscale fractal turbulence	London, UK.	26/03/2012	26/09/2012		Laizet, S. Vassilicos, J.C.	s.laizet@imperial.ac.uk j.c.vassilicos@imperial.ac.uk	SIGs: 44 Co: Imperial College, Nagoya Univeristy	Yes		Yes		Darmstadt, 10, 2011
W2012-06	8th. ECI International conference on boiling and condens	Lausanne, Switzerland.	03/06/2012	03/12/2012		Thome, R.	John.Thome@epfl.ch		Yes		Yes		Darmstadt, 10, 2011
W2012-07	20th Polish national fluid dynamics conference	Gliwice, Poland.	17/09/2012	17/03/2013		Drobniak, S.	drobniak@imc.pcz.czest.pl	PCs: Polish	Yes		Yes		Darmstadt, 10, 2011

ERCOFTAC Workshops and Summer Schools

1. Applications for ERCOFTAC event sponsorship

To be considered at the SPC meeting in Darmstadt on the 11th October 2011.

	Workshops and Summer Schools	**Scholarships**
S2012-02	Fundamentals of microscale heat transfer	X
W2011-18	Turbulence - The historical perspective	X
W2011-19	Workshop on turbulence, diffusion and mixing efficiency	X
W2012-02	Measurement and Computation of Turbulent Spray Combustion	X
W2012-03	13th Workshop on two-phase flow predictions	X
W2012-04	SIG 35 workshop on fundamental aspects of turbulence	X
W2012-05	Turbulent flows generated/designed in multiscale/fractal ways	X
W2012-06	International conference on boiling and condensation heat transfer	X
W2012-07	20th Polish national fluid dynamics conference	X

2. Funding status after the SPC meeting held in Gdansk on the 13th May 2011

2008	8WS + 6SS	= 34k Euros
2009	8WS + 2SS	= 22k Euros
2010	10WS + 4SS	= 32k Euros
2011	15WS + 2SS	= 36k Euros
2012	1WS + 1SS	= 5k Euros

Annual funding limit: 34k Euros

Funding limits

Workshop:	2k Euros
Summer School:	3k Euros

2. Overdue reports – plus 6 months from 11th October 2011

S2010-03	Turbulence and mixing in compressible flows
W2010-02	MUSAF colloquium

European Research Community On Flow, Turbulence And Combustion

WORKSHOP – CONFERENCE – SUMMER SCHOOL - COURSE
APPLICATION SHEET

Title	Fundamentals of microscale heat transfer: Boiling, condensation, single and two-phase flows. *Add a brief summary of the objectives of the activity (or the announcement) on a separate page*
	[ ] Workshop [X] Summer School [ ] Conference [ ] Course
Location and Date	EPFL, Lausanne, Switzerland. 11-15th June 2012
Organizer	**Name** Prof. John THOME
	Address EPFL-LTCM Station 9 CH-1015
	Country Switzerland
	Tel +44 21 693 5982 **Fax**
	Email john.thome@epfl.ch
Pilot Center(s) or SIGs involved	SIG 38
Co-organizing Associations	
Scholarships	**Scholarship request?** [X] Yes [ ] No
Rules	**I have read the document "Rules for holding ERCOFTAC events", which can be found on www.ercoftac.org** [X] Yes [ ] No

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Fax: +41 21 693 5960

To be completed by ERCOFTAC

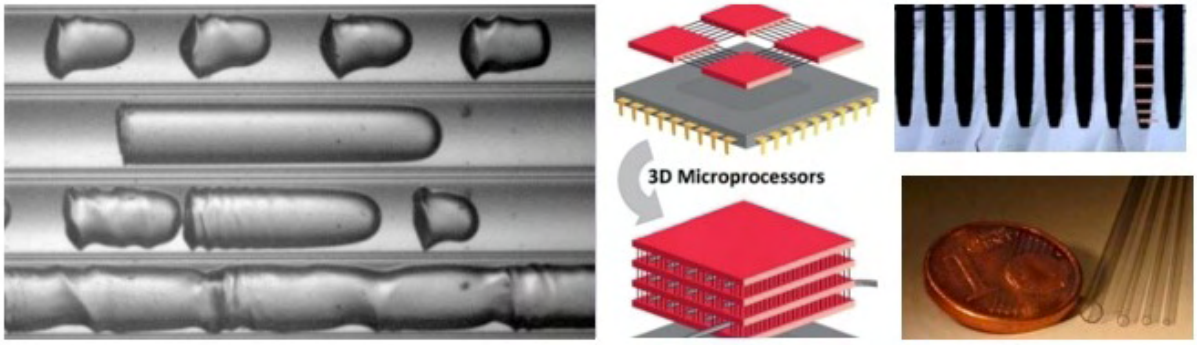
Number	S2012-02

Date Received	10.8.2011	
Approval	**SPC**	**MB**
Scholarships	[ ] Yes, Amount EURO	[ ] No
Announcement	Bulletin	
Report	Bulletin	

FUNDAMENTALS OF MICROSCALE HEAT TRANSFER: BOILING, CONDENSATION, SINGLE- AND TWO-PHASE FLOWS

5-Day Summer School, June 11-15, 2012, EPFL, Switzerland.

In response to the numerous evolving technologies and applications based on microscale flow and heat transfer, the present course has been developed to provide a broad but fundamental state-of-the-art review on this emerging topic. The course provides a comprehensive treatment of both single-phase flow and heat transfer and two-phase flow and heat transfer in microchannels. The course lecturers are internationally recognized experts in micro-scale (and macro-scale) research and applications. The course format is informal with significant interaction during and after the lectures, coffee breaks and lunches. This summerschool has the support of ERCOFTAC's SIG38 on 'Micro-Thermofluidics'.



Who should attend

The Microscale Heat Transfer Summer School organized and hosted at the EPFL each June and is directed to: heat transfer specialists in the computer and electronics cooling industries, the automotive and the air-conditioning industries, the aerospace industry, and the micro- and compact heat exchanger industries. The course is addressed to Ph.D. students, post-doctoral researchers and industry engineers involved in this area of research and development. Of course, no one can make a participant a specialist in one-week of summer school, so the idea is to present a very good overview and in depth presentation of microscale heat transfer together with the important technology issues for all participants. Notably, microscale cooling is also an important topic in the development of “lab-on-chip” and micro-reactors for their cooling and temperature control. A course certificate will be presented to all participants at the end of the summer school.

Location

The course will be held on the campus of the Swiss Federal Institute of Technology Lausanne (EPFL) located in Lausanne, Switzerland (see website at www.epfl.ch for information on the university, site maps, road maps, etc.).

Course Fees

These are currently being finalised. ERCOFTAC student scholarships will be used to partially or totally cover the registration fees of participating PhD students.

Program

Monday, June 11

12.30 – 12.45: Registration (for all others)
12.45 – 13.00: Introduction to Microscale Heat Transfer Course (Thome)
13.00 – 13.15: Overview of Microscale Heat Transfer and Its Applications (Thome)
14.45 – 15.00: Coffee Break (provided)
15.00 – 15.45: Single-Phase Fluid Flow: Differences in Macro- and Micro-Scale (Celata)
15.45 – 16.30: Single-Phase Fluid Flow: Experimental Techniques and Studies in Micro-Scale (Celata)
16.30 – 17.15: Single-Phase Heat Transfer: Differences in Macro- and Micro-Scale (Celata)
17.15 – 18.00: Single-Phase Heat Transfer: Experimental Techniques and Studies in Micro-Scale (Celata)

Tuesday, June 12

08.30 – 09.15: Principles of Air-Side Heat Transfer in Compact Heat Exchangers (Jacobi)
09.15 – 10.00: Boiling in Microchannels: Experimental Studies and Predictive Tools (Celata)
10.00 – 10.15: Coffee Break (provided)
10.15 – 11.00: Heat Transfer Enhancement and Performance Evaluation Criteria (Jacobi)
11:00 – 12:00: Simultaneous Heat and Mass Transfer: Frosted-Surfaces (Jacobi)
12.00 – 13.15: Lunch Break (Provided)
13.15 – 14.15: Macroscale Two-Phase Flows and Flow Pattern Maps (Thome)
14.15 – 15.00: Microscale Two-Phase Flows and Flow Pattern Maps (Thome)
15.00 – 15.45: Two-Phase Pressure Drop Models for Macro- and Microchannels (Thome)
15.45 – 18.00: Tour of LTCM Two-Phase Flow and Heat Transfer Lab and Aperative

Wednesday, June 13

08.30 – 09.15: Simultaneous Heat and Mass Transfer: Wet Surfaces (Jacobi)
09.15 – 10.00: Emerging Surface Designs and Air-Side Innovations (Jacobi)
10.00 – 10.15: Coffee Break (provided)
10.15 – 12:00: Void Fraction Measurements and Models for Macro- and Micro-channels (Thome)
12.00 – 13.15: Lunch Break (provided)
13.15 – 14.45: Microchannel Flow Boiling Heat Transfer Models (Thome)
14.45 – 15.15: Coffee Break (provided)
15.15 – 16.15: Numerical Modeling of Microscale Single-Phase Flows (Zun)
16.15 – 17.00: Transient Characteristics of Phase Interface in Microchannels (Zun)

Thursday, June 14

08.30 – 09.00: New Unified Model for Macro- and Microchannel Annular Flow (Thome)
10.00 – 10.15: Coffee Break (provided)
10.15 – 12.00: Numerical Modeling of Two-Phase Flows in Microchannels (Zun)
12.00 – 13.15: Lunch Break (provided)
13.15 – 14.45: CHF and Cooling of Hotspots with Flow Boiling in Microchannels (Thome)
14.45 – 15.15: Coffee Break (provided)
15.15 – 17.00: Principles of Multiscale Modeling of Two-Phase Flows (Zun)

Friday, June 15

08.30 – 09.15: Hierarchical Decomposition and Boundary Conditions in Two-Phase Flow (Zun)
09.15 – 10.00: Perspectives in Numerical Modeling of Two-Phase Flow in Micro-channels (Zun)
10.00 – 10.15: Coffee Break (provided)
12.00 – 12.15: Closing Remarks/Distribution of Course Certificates (Thome)

European Research Community On Flow, Turbulence And Combustion

WORKSHOP – CONFERENCE – SUMMER SCHOOL - COURSE APPLICATION SHEET

Title	Symposium on *Turbulence – the Historical Perspective* http://etc13.fuw.edu.pl/historical-turbulence *Add a brief summary of the objectives of the activity (or the announcement) on a separate page*
	[ ] Workshop [ ] Summer School [X] Conference [ ] Course
Location and Date	16-17 September, University of Warsaw, Warsaw, Poland
Organizer	**Name K. Bajer, P.A. Davidson, Y. Kaneda, H.K. Moffatt, K.R. Sreenivasan**
	Address **University of Warsaw** **Institute of Geophysics** ul. Pasteura 7 02-093 Warszawa
	Country POLAND
	Tel +48503633772 Fax +48225546882
	Email kbajer@fuw.edu.pl
Pilot Center(s) or SIGs involved	Polish Pilot Centre SIGS: 1, 10, 14, 36, 42
Co-organizing Associations	EUROMECH
Scholarships	**Scholarship request?** [X] Yes [ ] No
Rules	**I have read the document "Rules for holding ERCOFTAC events", which can be found on www.ercoftac.org** [X] Yes [ ] No

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Email: ercoftac@epfl.ch
Fax: +41 21 693 5960

To be completed by ERCOFTAC | **Number** | W2011-18 |

Date Received	27.6.2011
Approval	**SPC** **MB**
Scholarships	[ ] Yes, Amount EURO [ ] No
Announcement	Bulletin
Report	Bulletin

ETC13
European
Turbulence
Conference
Warsaw 2011

University of Warsaw
Faculty of Physics
Institute of Geophysics
ul. Pasteura 7, 02-093 Warszawa
tel. 22 55 46827, fax. 22 55 46882
www.igf.fuw.edu.pl

K. Bajer, PhD
tel: +48 22 55 46852
mobile: +48 503 633 772
email: kbajer@fuw.edu.pl

5 March 2011

Dear Sirs,

We are pleased to announce a major scientific event to take place in September at the University of Warsaw, Poland.

13th European Turbulence Conference (ETC13)

http://etc13.fuw.edu.pl

will be held in the beautiful building of the Old Library on the main University campus near the Old Town at the heart of Poland's capital city. European Turbulence Conference is a biennial European meeting organised since 1986 under the auspices of the *European Mechanics Society* (EUROMECH). Being European by name it is always organised by a major European research center in the field of engineering sciences, physics or applied mathematics. However, the scope and the outreach of the ETC extend far beyond the European scene and each edition of this conference brings together top scientists from all over the world. This is the first time the European Turbulence Conference is held in Central or Eastern Europe and we are especially keen to make the ETC13 a success in terms of both science and organisation.

EUROMECH is an international, *non-profit* scientific society. It was founded by late Professor George K. Batchelor who was one of the world leaders in the field of fluid mechanics and, for many years, the Head of the Department of Applied Mathematics and Theoretical Physics at the University of Cambridge. The founding idea, faithfully followed to day, is to promote the collaboration of applied mathematicians, physicists and engineers in the broadly understood field of mechanics from its pure-mathematical aspects to industrial applications.

The aim of the EUROMECH conferences is to provide an opportunity for scientists and engineers to meet and discuss their current research. We make great effort to keep the conference accessible to all those interested in the subject. We try to keep the conference fee as low as possible and to offer financial support to the youngest scientists, especially those who find the financial barrier hard to overcome.

We are inviting you to be part of the European Turbulence Conference by participating, as one of our sponsors, to the extent and in the form you wish. The principal topics of the conference will cover various aspects of turbulence research, that is theory, computational modelling and applied research in the field of turbulent flows of gases and liquids. As a sponsor you will have a unique opportunity to reach the potential users of laboratory equipment, computer software (both general purpose and specialist), or to reach the readers of scientific books and journals. The participants of ETC13 are a large group of people potentially interested in the offer of your company. Many of them are in a position to directly influence the policies of the most important research centres both in Europe and overseas. ETC13 is also a place to target a large group of talented young researchers potentially interested in moving from academic research to work on the most innovative technologies in an industrial or business environment.

We already have over 500 scientists from more than 40 countries registered for ETC13 with some 30% being doctoral students. Most of them will stay in Warsaw for the satellite Symposium on 'Turbulence - the Historical Perspective' that will immediately follow ETC13 (see http://etc13.fuw.edu.pl/historical-turbulence). This follow-up meeting, for which we also seek sponsorship, either in combination with ETC13 or separately, is a unique event marking the 70^{th} anniversary of the most influential theory of turbulence formulated by the world famous Russian mathematician Andrey Nikolaevich Kolmogorov.

To our sponsors we can offer many different forms of advertising and promotion like, for example, exhibition stands and booths of 6, 9 or 12 m^2 area. Please find attached our complete standard offer, but bear in mind that any form of your participation in ETC13 is welcome, and we will be happy to consider any new ideas or special requirements.

We are looking forward to your involvement in ETC13, which should have a big impact and mark the year 2011 as the Year of Marie Curie at the time of Polish presidency of the European Union. We hope ETC13 to become a memorable event on the map of European science as well as an important boost to the development of the knowledge-based industry in Poland.

On behalf of the European Turbulence Conference Committee and
Local Organising Committee

Yours sincerely,

Konrad Bajer

Dear Colleagues,

This is to remind you about the approaching major event,

13th European Turbulence Conference (ETC13)
12-15 September 2011, Warsaw, Poland
www.etc13.fuw.edu.pl

As you already know this biennial conference held under the auspices of the European Mechanics Society (EUROMECH) will take place next year at the University of Warsaw.

Since the First Announcement there have been a few important developments which you would be glad to know about. The up-to-date information is always available on the conference web site.

1) The deadline for registration and submitting an abstract has been changed and is now

16 January 2011

Please register as soon as possible. You can change the registration data and submit your abstract (or replace an already submitted abstract) until 16.01.2011. The fee depends on the date you make the payment (not the date of registration).

2) The ETC13 Proceedings will be published in the *Journal of Physics: Conference Series* (JPCS). This is an on line series from the Institute of Physics (IoP). Publishing there has several important advantages that the contributors to the Proceedings will no doubt appreciate:

- The volume will be available on the Internet to all interested readers, free of charge, under Open Access policy;
- The JPCS is indexed in all major science databases such as Scopus, Scirus, Inspec, ISI Proceedings, Chemical Abstracts, SPIRES, MathSciNet and many others. The papers have high visibility being indexed by Google and Google Scholar, making them easy to find through web searches. They are also fully citable with citations being tracked via IOP Publishing's Citing Articles facility;
- The Proceedings will be ready for on-line browsing at the time of the Conference or even earlier;
- The Publisher imposes no restrictions on the length of the papers and colour figures are welcome;
- Provided sufficient demand there will be an option to order a hard copy of the volume to be printed and dispatched after the Conference;
- The on line JPCS publishing has much shorter production cycle than traditional printing. This, in fact, enabled us to move forward the registration deadline.

3) ETC13 will be immediately followed by the Symposium

Turbulence – the Historical Perspective
16 September 2011
University of Warsaw, Poland
www.etc13.igf.fuw.edu.pl/historical-turbulence

The Symposium will mark the publication by Cambridge University Press of a collection of essays written by the leading contemporary scientists on the lives and works of their famous predecessors in the field of turbulence research. The Symposium will be composed of invited lectures by the Authors of several essays from the volume edited by Peter Davidson, Yukio Kaneda, Keith Moffatt and Katepalli Sreenivasan. The detailed programme and information on practical matters will be provided in the 'Historical Turbulence' tab of the ETC13 web page main menu. Separate registration for the Symposium will open soon. Meanwhile, please indicate your interest by logging in to your ETC13 account and ticking an appropriate box (go to Particiants -> Registration data -> Additional information). This will considerably help us plan the event.
We expect the Symposium to be a very special occasion of great interest to all adherents of fluid dynamics. As a complement to the collection of essays the Symposium will be an appropriate celebration of the seventy years of the Kolmogorov's theory of homogeneous isotropic turbulence.

On behalf of the European Turbulence Conference Committee and the Local Organising Committee

Konrad Bajer

University of Warsaw, Faculty of Physics

Historical Turbulence Speakers

Eberhard Bodenschatz

Max-Planck-Institut für Dynamik und Selbstorganisation
Göttingen, Germany
http://www.mpg.de/cgi-bin//person.cgi?nav=kontakt&persId=4292375&lang=de&inst=stroemungsforschung&from=

Lecture on

Ludwig Prandtl (1875-1953)

Gregory Falkovich

Weizmann Institute of Science
Rehovot, Israel
http://www.weizmann.ac.il/home/fnfal/

Gregory Falkovich got PhD from Nuclear Physics Inst. Novosibirsk in 1984, worked in Russian Ac. Sci. Since 1991 at the Weizmann Institute Science, from postdoc to professor and department head. Section Editor of J. Phys. A, Editorial boards of J. Stat. Mechanics, J. Stat. Physics. Got 4 awards of the Russian Acc. Sci., one in Israel. Elected Fellow of the Institute of Physics, London. Authored a textbook on Fluid Mechanics and a monograph on Turbulence.

Lecture on

Andrey Nikolaevich Kolmogorov (1903-1987) and the Russian school

Under one of the most oppressive regimes in the twentieth century, in the country, which lost most of its educated class to emigration, civil war and terror, and was often plagued by war, diseases, poverty and hunger, great mathematical and physical schools flourished. Kolmogorov and Landau each created a great school. In the lecture, I describe how the interaction of these two schools over the period of thirty years lead to several remarkable advances in the theory of turbulence.

Uriel Frisch

Observatoire de la Côte d'Azur (CNRS)
Nice, France
http://www.oca.eu/uriel/curri_uf_engl.html

Uriel Frisch works at the Observatoire de la Cote d'Azur and the University of Nice-Sophia Antipolis. He got his PhD in 1967 on the subject of wave propagation in random media and stochastic equations. Since 1964 he has been interacting with Robert Kraichnan and got increasingly involved in the theory and simulations of turbulence (fluid and MHD). With G. Parisi he developed the theory of multifractals. With B. Hasslacher and Y. Pomeau he developed the Boolean simulation method of lattice gas automata, which later morphed into Lattice Boltzmann methods. He also worked on the application of optimal transport to the reconstruction of the dynamical history of the Universe. He has a signaificant activity in history of science and is an editor of EPJ H (H for "history").

Lecture on

Robert Harry Kraichnan (1928-2008)

Robert Harry Kraichnan (1928-2008) was one of the leaders in the theory of turbulence for a span of about forty years (mid-fifties to mid-nineties). Among his many contributions, he is perhaps best known for his work on the inverse energy cascade (i.e. from small to large scales) for forced two-dimensional turbulence. This will be a review of Kraichnan's main scientific contributions.

The paper on Robert Kraichnan (see arXiv:1011.2383v1 [physics.hist-ph]) was written with G. Eyink (Johns Hopkins, Baltimore), a specialist of the application of statisitical physics and field theory to turbulence who also had considerable interaction with Kraichnan.

Brian Launder

University of Manchester
School of Mechanical, Aerospace and Civil Engineering
Manchester, UK
http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/?staffId=176

Brian Launder obtained his doctorate from the Gas Turbine Lab at MIT for experimental research on laminarization of turbulent boundary layers before joining Imperial College where he worked for twelve years helping to develop much of the early definitive work on turbulence modelling. After a 4-year spell at UC Davis he returned to the UK in 1980 to head the Thermo-Fluids Division at UMIST. His group in Manchester has developed an international reputation in the development and application of turbulence modelling strategies over a wide range of engineering phenomena and problems. His achievements have been recognized by his admission to the UK's Royal Academy of Engineering and The Royal Society and by the conferment of honorary doctorates by three European universities. In Summer 2011 CUP will publish the book Turbulence Modelling for Engineering and the Environment co-authored with his first PhD student and friend on more than forty years, Kemo Hanjalić.

Lecture on

Osborne Reynolds (1842-1912)

Much has already been written on Osborne Reynolds whose experimental and theoretical work on turbulent flows laid the foundation for a large proportion of turbulence research over the century following its publication. The lecture will therefore give most attention to the less known underlying infrastructure of his life with its associated personal triumphs and tragedies.

From his appointment in 1868 at the age of 25 as the first full-time professor of engineering in England to his enforced early retirement in 1903 with what today might be diagnosed as Alzheimer's disease, Reynolds' insight and intellectual tenacity shaped not just the evolution of turbulent flow analysis but also the theory of lubrication, the design of the steam turbine and the determination of the mechanical equivalent of heat to within 0.2% of today's accepted value. Yet, his remarkable 1895 'Reynolds averaging' paper (which provides not only the Reynolds equations but the first derivation of the turbulence energy equation and mass-weighted averaging) was published only after being harshly criticized by two eminent referees.

Ivan Marusic

University of Melbourne
Department of Mechanical Engineering
Melbourne, Australia
http://www.mech.unimelb.edu.au/people/staff/ivan_marusic.html

Ivan Marusic is a Professor and Federation Fellow at the University of Melbourne. He has a PhD from the University of Melbourne and prior to returning to Australia in 2007 was a faculty member at the University of Minnesota, where he was a recipient of an NSF Career Award and a Packard Fellowship in Science and Engineering. He is a Fellow of the American Physical Society, President of Australasian Fluid Mechanics Society, and is an Associate Editor of the Journal of Fluid Mechanics, and

Lecture on

Albert Alan Townsend (1917-2010)

Alan Townsend started his research career as a nuclear physicist, but made the transition to the study of turbulence upon encouragement from his friend and fellow Australian George K. Batchelor. Both were students of G.I. Taylor. Townsend's years at the Cavendish Laboratory were noted with the first experimental studies on the small-scales of turbulence, and insightful studies into organized eddy structures. These topics and Townsend's journey in the field will be reviewed in the lecture.

Keith Moffatt

University of Cambridge
DAMTP
http://moffatt.tc

Keith Moffatt is Emeritus Professor of Mathematical Physics at the University of Cambridge. His research speciality is Fluid Dynamics, and particularly Magnetohydrodynamics and the theory of the Geodynamo. He served as Director of the Isaac Newton Institute for Mathematical Sciences in Cambridge, UK from 1996-2001. He has had a long association with the International Union of Theoretical and Applied Mechanics (IUTAM), having served as President (2000-2004) and Vice-President (2004-2008). He is a Fellow of the Royal Society, a Foreign Associate of the National Academy of Sciences (USA) and a foreign member of several other national academies

Lecture on

George Keith Batchelor (1920-2000)

George Batchelor, graduate of Melbourne University, arrived in Cambridge, UK, in April 1945 during the final months of World War II, to undertake research in turbulence under the supervision of Sir Geoffrey (G.I.) Taylor, Royal Society Research Professor at the Cavendish Laboratory, University of Cambridge. Just seventeen months later, Batchelor presented a paper at the VIth Congress of Applied Mechanics in Paris that was to define the subsequent course of research in turbulence in the Western World. This was his exposition and interpretation of the Kolmogorov/Obukhov theory of turbulence which had been unknown outside the Soviet Union throughout the war years. Over the next fifteen years, Batchelor gained a reputation as a dynamic and visionary leader of research in turbulence. His 1953 monograph "The Theory of Homogeneous Turbulence" was a landmark publication; and his work on turbulent diffusion was of lasting significance. He left an indelible mark on the subject, and exerted enormous influence in three ways: through the creation in the 1950s of the renowned turbulence research school in Cambridge; through the foundation in 1956 of the Journal of Fluid Mechanics, which, under his scrupulous editorship over the next 40 years, was destined to attract the best papers in the subject worldwide; and through the foundation in 1965 of EUROMECH, and the great stimulus that this gave to research interaction at the European level.

Roddam Narasimha

Jawaharlal Nehru Centre for Advanced Scientific Research
Engineering Mechanics Unit
Jakkur, Bangalore, India
http://www.jncasr.ac.in/roddam

Lecture on

Satish Dhawan (1920-2002)

Norbert Peters

RWTH Aachen
Institute for Combustion Technology
Aachen, Germany
http://www.itv.rwth-aachen.de/index.php?id=70&L=5

Lecture on

Theodore von Karman (1881-1963)

Dale Pullin

California Institute of Technolgy (CALTECH)
Graduate Aeronautical Laboratories (GALCIT)
Pasadena CA, USA
http://www.galcit.caltech.edu/people/faculty/pullin.html

Dale Pullin is the von Karman professor of Aeronautics at the California Institute of Technology. His undergraduate major at the University of Sydney was aeronautical engineering and he received his PhD in Aeronautics from Imperial College London in 1974. His research interests are in the areas of theoretical and computational fluid mechanics; rarefied gas dynamics, vortex dynamics, compressible flow, shock-wave dynamics, hydrodynamic stability, turbulence and turbulent mixing, combustion, magnetohydrodynamics and numerical algorithms for computational fluid dynamics

Lecture on

Philip Geoffrey Saffman (1931-2008)

Philip G. Saffman was a leading theoretical fluid dynamicist of the second half of the twentieth century. He worked in many different sub-fields of fluid dynamics and, while his impact in other areas perhaps exceeded that in turbulence research, his contributions to the theory of turbulence were significant and remain relevant today. He was also an incisive and, some might conclude, a somewhat harsh critic of progress or what he perceived as the lack thereof, in solving ``the turbulence problem''. This extended to his own work; in a preface to lectures on homogeneous turbulence in 1968 he stated that `` .. the ideas ... are new and hopefully important, but are speculative and quite possibly in serious error..." This presentation will try to survey Saffman's thinking and contribution to turbulence research from the mid 1950's, when he began to mature as a scholar, until the late 1970's when he moved away from the study of turbulence to concentrate on the related but separate area of the dynamics of isolated and interacting vortices.

James J. Riley

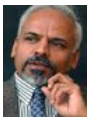
University of Washington
Department of Mechanical Engineering
Seattle WA, USA
http://an.me.washington.edu/stage.new/research/faculty/rileyj/

Jim Riley, the PACCAR Professor of Engineering, is a Professor of Mechanical Engineering and an Adjunct Professor of Applied Mathematics at the University of Washington. He received his PhD from the Johns Hopkins University in 1972, and was a post-doctoral fellow at the National Center for Atmospheric Research. His research interests include a broad range of problems in fluid mechanics, most recently being turbulent reacting flows and waves and turbulence in density-stratified fluids. Riley is a Fellow of the American Physical Society and of the American Society of Mechanical Engineers; he is an Associate Editor of the Journal of Fluid Mechanics, is a member of the Editorial Committee for the Annual Review of Fluid Mechanics, and is also an Associate Editor of the Applied Mechanics Reviews and of the Journal of Turbulence.

Lecture on

Stanley Corrsin (1920-1986)

Stan Corrsin, an immigrants' son from Philadelphia, Pennsylvania, received his PhD from Caltech in 1947, working at the Guggenheim Aeronautical Laboratory with Theodore von Karman, Clark Millikan, and his PhD advisor, Hans Liepmann. He joined the Johns Hopkins University in 1948, where he remained for the rest of his life. During his career he made major contributions in many areas of fluid mechanics and especially turbulence, including turbulence intermittency, turbulent heat transfer, the structure of turbulent scalar fields, the geometry of small-scale turbulence, homogeneous decaying and homogeneous shearing turbulence, and turbulent reacting flows. In addition to his research, Corrsin was also well-known as an educator and collaborator, attracting many graduate students, post-doctoral fellows, and visitors to his laboratory and to the University. In this lecture Corrsin's life, some of his major research accomplishments, and the research environment at the time at Hopkins will be related.



Katepalli R. Sreenivasan

New York University
Department of Physics
New York NY, USA
http://physics.as.nyu.edu/object/KatepalliRSreenivasan.html

Katepalli R. Sreenivasan taught at Yale for twenty-two years from 1979, and moved to the University of Maryland for a year and a half before being appointed the Director of the International Centre for Theoretical Physics in Trieste (ICTP), Italy, where he held a concurrent professorship. He is presently the University Professor in New York University, with joint appointments in Physics Department and Courant Institute of Mathematical Sciences; for half the time, he also serves as the Senior vice Provost at NYU. He has been a visiting professor at Caltech, Rockefeller University and Cambridge University, and a Member of the Institute for Advanced Study at Princeton, among others. He is the author of some 250 research papers on areas broadly related to fluid mechanics, has supervised more than 30 Ph.D. theses and mentored numerous students at Yale and elsewhere, especially at ICTP. Among the academies to which Sreenivasan has been elected are the US National Academy of Sciences and the US National Academy of Engineering, the American Academy of Arts and Sciences. He is the recipient of several prizes and honors and of three honorary doctorates.

Lecture on

Geoffrey Ingram Taylor (1886-1975)

Sir Geoffrey Ingram Taylor, who died at the age of 89, was one of the great scientists of his time. His research work between 1909 and 1973 left an indelible mark on every subject he touched. His complete lack of pomposity in written words (as apparently in person) made him a revered person to his many friends in Cambridge and elsewhere. He was regarded as very special by those who knew him well. To fluid dynamicists in the world at large, Taylor remains a giant. My talk will touch upon Taylor's turbulence work, his interactions with his peers, and his personality.

European Research Community On Flow, Turbulence And Combustion

WORKSHOP – CONFERENCE – SUMMER SCHOOL - COURSE APPLICATION SHEET

Title	International workshop on turbulence, diffusion and mixing efficiency *Add a brief summary of the objectives of the activity (or the announcement) on a separate page*
	[X] Workshop [ ] Summer School [ ] Conference [ ] Course
Location and Date	2.-4.11.2011, Barcelona, Spain.
Organizer	**Name** Redondo, J.M.
	Address
	Country
	Tel **Fax**
	Email redondo@fa.upc.edu
Pilot Center(s) or SIGs involved	14
Co-organizing Associations	
Scholarships	**Scholarship request?** [X] Yes [ ] No
Rules	**I have read the document "Rules for holding ERCOFTAC events", which can be found on www.ercoftac.org** [X] Yes [ ] No

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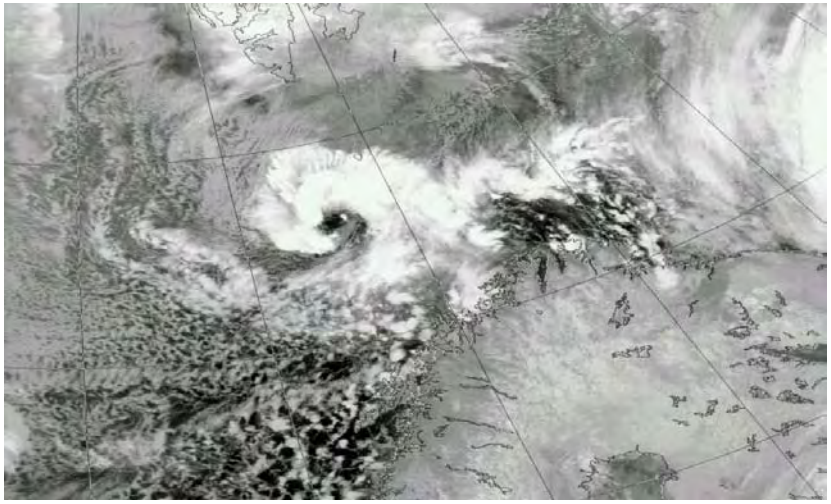
To be completed by ERCOFTAC

Number	W2011-19

Date Received	30.9.2011	
Approval	**SPC**	**MB**
Scholarships	[ ] Yes, Amount EURO	[ ] No
Announcement	Bulletin	
Report	Bulletin	

INTERNATIONAL WORKSHOP ON TURBULENCE, DIFFUSION AND MIXING EFFICIENCY: Climate and Pollution



2rd – 4th November 2011

Pan European Laboratory on Non-Homogeneous Turbulence,
ERCOFTAC, Campus Universitari de la Mediterrania -UPC,
Vilanova i la Geltrú, Barcelona, Spain.

First Announcement

UPC
UNIVERSITAT POLITÈCNICA DE CATALUNYA

E·R·C·O·F·T·A·C

AJUNTAMENT DE VILANOVA I LA GELTRÚ

CAMPUS UNIVERSITARI DE LA MEDITERRÀNIA

Organizing and Supporting Institutions:

ERCOFTAC, CAMPUS UNIVERSITARI DE LA MEDITERRANIA,
UNIVERSITE SUD TOULON-VAR, GENCAT.
E.P.S.E.V.G. UNIVERSITAT POLITÉCNICA DE CATALUNYA,
PAN EUROPEAN NON HOMOGENEOUS TURBULENCE LAB.

Further Information and Registration:

Prof. Jose M. Redondo/ Dr. Alejandro Carrillo
Fisica Aplicada UPC, Campus Nord B5. Barcelona 08034, Spain
Fax(+34) 93401 6090. redondo@fa.upc.edu/ alex@fa.upc.edu

http://prandtl.upc.es
http://www.campusmed.net

Location:

MOLI DE MAR, Po Ermita de St. Cristofor (Far)
Vilanova i la Geltrú, 08800 Barcelona, Spain

PRESENTATION AND OBJECTIVES

The Campus Universitari de la Mediterrania at the Vilanova i la Geltru Campus and UPC will host the CUM-ERCOFTAC international workshop and advanced training school on Turbulence, Diffusion and Mixing Efficiency, following last year's summer course on Transport in Complex Turbulence. This continues similar events organized in Vilanova, Prague, Volos and Barcelona since 1992. The main motivation for this 2011 Workshop is to study in depth the effects of Turbulent Transport and Diffusion in non-homogeneous, non-isotropic and non-stationary media, this is most relevant in climate studies, where vertical mixing efficiency and ocean-atmosphere transport is crucial to model the environment. Physical effects such as magnetic and thermo-electric fields, stratification and rotation are fundamental processes affecting turbulence and environmental flows, for example to predict heat transport and mixing, Fusion reactions and pollutant transport in Environmental fluid dynamics. Direct and inverse cascades in turbulence at different scales will be discussed with related topics such as climate change, mixing efficiency, diffusion, etc. The experimental part of the workshop will be done at the ERCOFTAC PAN-EUROPEAN LABORATORY ON NON-HOMOGENEOUS TURBULENCE at UPC.

MAIN TOPICS OF THE CONFERENCE

3D and 2D Turbulence, Environmental Astrophysical and Geophysical flows. Thermoelectric and Thermomagnetic transport, Mixing and Dispersion in complex flows. Pollution detection, control and prediction. Space control of Climate change. Oil Spill control. Propulsive and mixing efficiency. Multifase interfaces and turbulence. Laboratory and field experiments in Industrial and Environmental flows…

Invited Lecturers (Organizers *) of the conference are :

P. Fraunié* (U. Toulon, France), L. Sorriso-Valvo* (Univ. Calabria, Italy), A. Babiano*(ENS, Paris, France), A. Castilla (UPC. Terrasa), T. Bodnar (ITM, CTU Prague, Czech Rep.) J.M. Redondo* (UPC, Barcelona, Spain), A. Lopez (EPSEVG, Vilanova, Spain) (O.B. Mahjoub (Universia, Madrid, Spain), Y. Chashechkin (I.P.M, Moscow, Russia). J.M. Sanchez (BEROTZA, Pamplona, Spain), A. Tarquis (CEIGRAM, Madrid), S. Dalziel* (DAMTP, Cambridge).

Participants, as well as scientists affiliated to the PELNoHT, ERCOFTAC Special Interest Groups and to the XTDFTG international turbulence Network are invited to present their recent research in related topics.

REGISTRATION

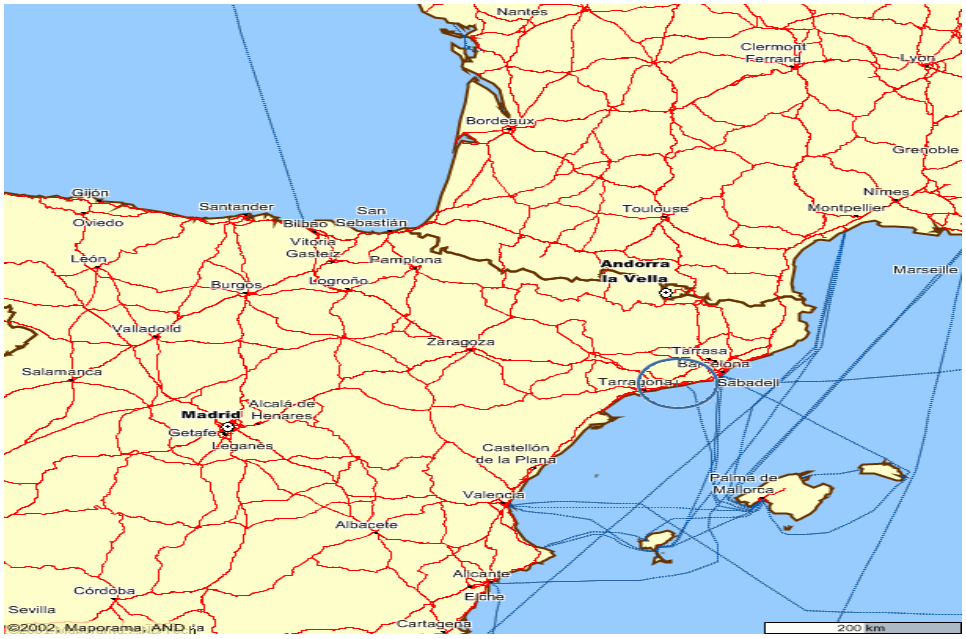
The cost for the conference is 150 Euros. A reduced fee of 100 Euro is available for students and ERCOFTAC members. This will cover accommodation and lunch during the conference, Lecture Materials, coffee breaks and the course reception. A selection of papers presented at the conference will be published at the Journal of Flow, Turbulence and Combustion (Kluwer). ERCOFTAC and local grants for young research students will be also available.

Please fill in the registration with arrival dates and send it back to (redondo@fa.upc.edu) before **September 30, 2011**.

To Barcelona

To Tarragona

How to arrive to Vilanova

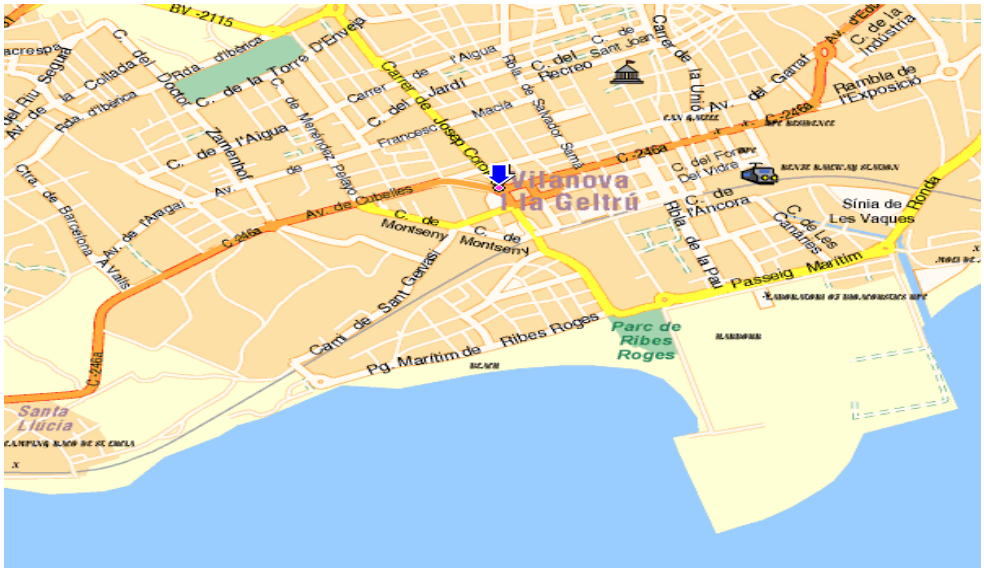


*From the Airport: Take the RENFE railway towards Barcelona SANTS, at EL PRAT change trains and take the southward train Line C2 towards Vilanova

*From Highway A7: Exit at Vilafranca del Penedes towards Vilanova i la Geltru- Sitges

*From Highway C-32 (or C-31) Exit at the first Vilanova I la Geltru Exit, follow the 1st roundabout towards the Beach (to go to Moli de Mar) o to the RENFE station (to go to the UPC Residence and to Can Gatell Hotel.

Accommodation and Information



The lectures and accommodation will take place at the MOLI DE MAR
Large House near the Lighthouse

There are also additional optional rooms available for participants at:

Hotel CAN GATELL *CAN GATELL INN **. 6-16, Puigcerdá street. Phone (+34) 938 930 117*

Residencia UPC: Rambla de l'Exposició 41 Tel: 93 811 59 00 ***http://www.qualitat.es/residencia/***

The conference will start the 2nd November at 10.00 and end Saturday at noon

There will be a "formal" reception at the Moli de Mar at 20.00 on Friday with a visit to the "Museo del Mar" at the Vilanova Lighthouse

Coffee breaks will be served in the Gardens between 18.00 – 18.30

Invited Lecturers of the Summer School on N.H. Turbulence

Armando Babiano	ENS, Paris, France	Babiamo@lmd.ens.fr
Roberto Castilla	LABSON, UPC, Terrasa, Spain	castilla@mf.upc.edu
Philippe Fraunié	Univ Sud.Toulon-Var, France	Philippe.Fraunie@lseet.univ-tln.fr
Stuart Dalziel	Univ. Cambridge, U.K.	s.dalziel@damtp.cam.ac.uk
Luca Sorriso-Valvo	Univ. Calabria, CNR Italy	luca.sorriso@gits.upc
Yuli Chashechkin	I. P. M. RAS, Moscow	chakin@ipm.ras.ru
Tomas Bodnar	CTU, Prague, Czech Rep.	Bodnar@marian.fsik.cvut.cz
AnaTarquis	UPM.CEIGRAM, Madrid	ana.maria.tarquis@ceigram.es

European Research Community On Flow, Turbulence And Combustion

WORKSHOPS/CONFERENCES/SUMMERSCHOOLS/COURSES SUMMARY SHEET

Title	"3rd International Workshop on Measurement and Computation of Turbulent Spray Combustion (TCS 3)" (Please see brief summary in the next page) *Add a brief summary of the objectives of the activity (or the announcement) on a separate page*
	■Workshop □ Summerschool □Conference □ Course
Location and Date	2/9/2012; Heidelberg
Organizer	**Name:** Prof. B. Merci (Ghent University, Belgium), Prof. D. Roekaerts (Delft University of Technology, The Netherlands) and Prof. Eva Gutheil (Heidelberg, Germany)
	Address: Department of Flow, Heat and Combustion Mechanics Sint-Pietersnieuwstraat 41 B-9000 Ghent
	Country: Belgium
	Tel +32 9 264 33 14 **Fax:** +32 9 264 35 75
	E-mail: Bart.Merci@UGent.be
Pilot Center(s) or SIGs involved	SIG28 Reacting Flows
Co-organizing Associations	Co-organized also with the Belgian Section of the Combustion Institute
Scholarships	**request scholarships ?** ■ Yes □ No
Rules	**I have read the document "Rules for holding ERCOFTAC event", which can be found on www.ercoftac.org, ERCOFTAC events:** ■ Yes □ No

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Switzerland

To be filled-in by ERCOFTAC

Number	W2012-02

Date Received	25.9.2011
Discussed SPC & MB	**SPC** **MB**
Scholarships	□ Yes, Amount EURO □ No
Announcement	Bulletin
Report	Bulletin

3rd International Workshop on Measurement and Computation of Turbulent Spray Combustion (TCS 3)

Heidelberg, 2012

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 in Heilberg, on September 2, 2012.

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.
In the first workshop, held in Ajaccio, 2009, two invited lectures, given by experts in the field of turbulent spray combustion (Prof. Eva Gutheil, Heidelberg, and Prof. Assaad Masri, Sydner), initiated discussions and participants presented their work in contributed poster presentations. Some possible target test cases have been identified for numerical simulations, for which experimental databases will be developed and on which modelling and numerical algorithm issues will be tested.
In the second workshop, held in Sardinia, 2011, the focus was on round-table discussions on the assessment of state-of-the-art and on future collaboration in experimental as well as computational techniques in spray combustion. The target test cases served as the guiding basis for the discussions. Poster presentations with recent results remained an important aspect of the workshop as well.

A small registration fee will be paid by participants. The ERCOFTAC contribution will be used for a reduction in 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)
Prof. E. Gutheil (Heidelberg, Germany)

Kurzlehrgang Verbrennungstechnik

Vom 13. bis 16. März 2012 findet bereits zum siebten Mal der Kurzlehrgang „Verbrennungstechnik“ an der **Universität Erlangen-Nürnberg** statt. Die Veranstaltung gibt einen Überblick zu den Themengebieten :

- Grundlagen und moderne Anwendungen der Verbrennungstechnik
- Messtechnische Entwicklungen
- Möglichkeiten der numerischen Simulation

Der Kurzlehrgang richtet sich insbesondere an wissenschaftliche und technische Mitarbeiter sowie Doktoranden, aber auch erfahrene Praktiker von Firmen aus der Energie- und Umweltwirtschaft sowie der Luftfahrt-, Automobil-, Chemie-, Verfahrenstechnik und Maschinenbauindustrie, die mehr über die Grundlagen und Methoden der Verbrennungstechnik lernen möchten bzw. ihr Wissen insbesondere in den Bereichen numerische Verbrennungstechnik und Laserdiagnostik vertiefen wollen. Wir laden Sie und Ihre Kolleginnen und Kollegen gerne zu diesem Lehrgang ein.

Lehrgangsleitung:
Prof. Dr.-Ing. A. Leipertz und **Dr.-Ing. L. Zigan**
Lehrstuhl für Technische Thermodynamik (LTT) & Erlangen Graduate School in Advanced Optical Technologies (SAOT), Universität Erlangen-Nürnberg

Prof. Dr. F. Dinkelacker
Institut für Technische Verbrennung (ITV), Leibniz Universität Hannover

Weitere Informationen unter:
www.ltt.uni-erlangen.de

European Research Community On Flow, Turbulence And Combustion

WORKSHOP – CONFERENCE – SUMMER SCHOOL - COURSE APPLICATION SHEET

Title	**13th Workshop on Two-Phase Flow Predictions** *Add a brief summary of the objectives of the activity (or the announcement) on a separate page*
	[X] Workshop [ ] Summer School [ ] Conference [ ] Course
Location and Date	Halle (Saale), Germany May 2012
Organizer	**Name: Prof. Dr.-Ing. Martin Sommerfeld**
	Address: **Zentrum für Ingenieurwissenschaften** **Martin-Luther-Universität Halle-Wittenberg** D-06099 Halle (Saale)
	Country: Germany
	Tel: 0049-3461-462879 **Fax: 0049-3461-462878**
	Email: martin.sommerfeld@iw.uni-halle.de
Pilot Center(s) or SIGs involved	**SIG 12**
Co-organizing Associations	None
Scholarships	**Scholarship request?** [X] Yes [ ] No
Rules	**I have read the document "Rules for holding ERCOFTAC events", which can be found on www.ercoftac.org** [X] Yes [ ] No

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To be completed by ERCOFTAC | **Number** | W2012-03 |

Date Received	27.9.2011	
Approval	**SPC**	**MB**
Scholarships	[ ] Yes, Amount EURO	[ ] No
Announcement	Bulletin	
Report	Bulletin	

13th WORKSHOP
ON TWO-PHASE FLOW PREDICTIONS

May 2012

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

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

During the 4-day Workshop 40 presentations, each 30 min including discussion can be accommodated. Additionally, about 15 posters may be accepted. The selection of oral presentations and posters will be based upon an abstract of one DIN A4-page.

An additional objective of the Workshop will be related to the validation of numerical predictions obtained by different model approaches and numerical codes. These validations will be based on pre-defined test cases for which experimental or numerical results (e.g. direct or large eddy simulations) exist. Several test cases will be selected and made available to the interested groups approximately four months prior to the Workshop. The test cases are generally blind test cases and only boundary and inlet conditions will be provided.
During the Workshop, the various numerical results for the test cases will be exhibited. The presentations are followed by a round table discussion to examine the performance of the various computer codes and models. The test case calculations can be regarded as a challenge to approach more complex problems in two-phase flow predictions and will hopefully stimulate further improvements and developments of numerical methods and models. After the Workshop the test case results will be also displayed at the homepage of the organiser.

European Research Community On Flow, Turbulence And Combustion

WORKSHOPS/CONFERENCES/SUMMERSCHOOLS/COURSES
SUMMARY SHEET

Title	SIG 35 workshop on fundamental aspects of turbulence. *Add a brief summary of the objectives of the activity (or the announcement) on a separate page*
	X Workshop Summerschool Conference Course
Location and Date	Paris, Institut Henri Poincaré, begin May 2012.
Organizer	**Name** B. Dubrulle, J. C. Vassilicos & C. Cambon
	Address CEA Saclay, SPEC, 91191 Gif sur Yvette, France
	Country France
	Tel +33 1 44 32 25 20 **Fax**
	E-mail berangere.dubrulle@cea.fr
Pilot Center(s) or SIGs involved	SIG 35, Henri Bénard PC, SIG 14
Co-organizing Associations	CNRS, CEA
Scholarships	**request scholarships ?** ✷ Yes No
Rules	**I have read the document "Rules for holding ERCOFTAC event", which can be found on www.ercoftac.org, ERCOFTAC events:** ✷Yes No

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Switzerland

To be filled-in by ERCOFTAC

Number	W2012-04

Date Received	30.9.2011
Discussed SPC & MB	**SPC** **MB**
Scholarships	Yes, Amount EURO No
Announcement	Bulletin
Report	Bulletin

ERCOFTAC/SIG 35 Workshop on fundamental aspects of turbulence

This workshop is partly motivated by the symposium who takes place in CIRM, Marseille, September 24-30 2011, on fundamental problems of turbulence. This symposium is an opportunity to commemorate the legendary turbulence colloquium held in Marseille 50 year before (1961) and to discuss progresses in the field from half a century, together with present and future challenges.

In the same time, we are just finalizing a theme issue dedicated to SIG 35 to be published in the next ERCOFTAC bulletin. This important work illustrated nice interactions between SIG 35 members, but also revealed that this interacting aspect is globally not sufficiently developed. Accordingly, and this gives a second, even stronger, motivation, we need to stick together and to close ranks. We hope to re-equilibrate the fundamental themes and the applied themes in our SIG, in order to reinforce and/or to confirm the most promising collaborative studies.

Three themes will be particularly addressed:

- Fundamental aspects of statistical descriptions, discussion of present and new scalings, with W. D. McComb and J. C. Vassilicos
- Rotating flows, with and without stratification, including unstable stratification, with H. J. H. Clercx.
- Statistical theory for predicting flow patterns from desktops experiments, and application to real flows, from engineering to astrophysics, with B. Dubrulle.
- Advanced structure-based modelling and linkage to theory, with S. Kassinos.

European Research Community On Flow, Turbulence And Combustion

WORKSHOP – CONFERENCE – SUMMER SCHOOL - COURSE
APPLICATION SHEET

Title	Workshop on "Turbulent flows generated/designed in multiscale/fractal ways: fundamentals and applications" *Add a brief summary of the objectives of the activity (or the announcement) on a separate page*
	[yes] Workshop [no] Summer School [no] Conference [no] Course
Location and Date	Imperial College, London, Department of Aeronautics United Kingdom 26-27 March 2012
Organizer	**Name S.Laizet, Yasuhiko Sakai and J.C. Vassilicos**
	Address **Dept. of Aeronautics, Imperial College London** **South Kensington Campus, London, SW7 2PG, United Kingdom**
	Country UK
	Tel (00 44)7 809 56 56 13 Fax(00 44)2 075 94 50 63
	Email S.Laizet@Imperial.ac.uk
Pilot Center(s) or SIGs involved	SIG on the topic of this workshop
Co-organizing Associations	Department of Aeronautics, Imperial College Department of Mechanical Science and Engineering, Nagoya University
Scholarships	**Scholarship request?** Yes
Rules	**I have read the document "Rules for holding ERCOFTAC events", which can be found on www.ercoftac.org Yes**

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To be completed by ERCOFTAC | **Number** | W2012-05 |

Date Received	28.9.2011	
Approval	**SPC**	**MB**
Scholarships	[ ] Yes, Amount EURO	[ ] No
Announcement	Bulletin	
Report	Bulletin	

ERCOFTAC WORKSHOP and 2nd JAPAN-UK MEETING
ON
TURBULENT FLOWS GENERATED/DESIGNED IN MULTISCALE/FRACTAL WAYS: FUNDAMENTALS AND APPLICATIONS

Organisers: S. Laizet (Imperial College London, UK), Y. Sakai (Nagoya University, Japan) and J.C. Vassilicos (Imperial College London, UK).

Potential Participants/Speakers from Europe:
Darmstadt (Germany): M. Oberlack
Duisburg-Essen (Germany): A.M. Kempf
Imperial College London (UK): F. Beyrau, W.K. George, Y. Hardalupas, R.P. Lindstedt, A.M.K.P. Taylor, J.C. Vassilicos
Oldenburg (Germany): J. Peinke
Poitiers (France): J.-P. Bonnet, J. Borée, L.E. Brizzi, V. Fortuné, E. Lamballais, B. Noack, A. Spohn
Sheffield (UK): C.J. Keylock, F.C.G.A. Nicolleau, A. Nowakowski
Southampton (UK): B. Ganapathisubramani
Twente (Holland): B. Geurts

Only permanent academic staff are listed as there are of course many PhD students and Post Docs working in this field too. Also, there will be participants from various Universities in Japan. This will give the opportunity for European researchers to interact with Japanese colleagues whom they do not have the opportunity to meet so often. Of course, interactions of European researchers between themselves will be central to the workshop.

SCIENTIFIC AND ENGINEERING FOCUS: After more than a century of exhaustive research on the aerodynamics and hydrodynamics of geometrically simple shapes, whether streamlined as in wings or bluff as in spheres and cylinders, it is blindingly natural to expect much of the future in fluid mechanics to lie in the aerodynamics and hydrodynamics of geometrically complex, and thereby multiscale, shapes. There has of course been work over the past decades on how to model and simulate complex turbulent flows, but the emphasis here is on working out the rules for the design of multiscale objects so as to obtain desired flow effects beneficial for particular applications.

The simplest cases of multiscale shapes are fractal shapes, which is why they have been a good start in this new research area. These are multiscale shapes with a complex appearance which can nevertheless be defined with only a small number of scaling parameters.

The study of turbulent flows generated/designed in multiscale/fractal ways started in the UK with an experimental publication in 2001. These multiscale/fractal ways include multiscale/broadband forcings as well as multiscale/fractal boundary and/or initial conditions. The first computational model of turbulence subjected to fractal/broadband forcing which was neither motivated by nor limited to intricacies of Renormalisation Group

theory appeared in 2002, also from the UK. A lot of the current activity in the field is in the EU, in particular the UK, Holland, Germany and France. This is a research area born in Europe and being developed in Europe with, however, parallel efforts which have already appeared in Japan (Nagoya and Okayama) and the USA (Johns Hopkins and Arizona). *The workshop will be genuinely European with, nevertheless, import of expertise from Japan.*

The primary idea is to interfere with the multiscale dynamics and inner geometry and topography of the turbulence itself and find out whether qualitatively different types of turbulence can be created. Multiscale/fractal generation/design is about using multiscale/fractal objects (such as grids, fences, profilers etc) to shape the nature of the resulting turbulent flow over a broad range of scales for a broad range of applications. Examples of applications already pursued include fractal mixers, fractal combustors, fractal spoilers and fractal wind breakers/fences.

The meeting will involve dissemination of recent research and comparisons of similar experiments in different laboratories as well as computer simulations of these experiments. There will also be discussions of new plans for collaborative research and improvement of codes as well as planning new experiments for comparison with computation.

Financial Support: It is planned to use ERCOFTAC support to invite young European researchers to the meeting. The presence of Japanese researchers to the meeting will be supported by a Japanese travel grant which covers the expenses of the Japanese participants.

European Research Community On Flow, Turbulence And Combustion

WORKSHOP – CONFERENCE – SUMMER SCHOOL - COURSE
APPLICATION SHEET

Title	8th. ECI International conference on boiling and condensation heat transfer *Add a brief summary of the objectives of the activity (or the announcement) on a separate page*
	[ ] Workshop [ ] Summer School [X] Conference [ ] Course
Location and Date	EPFL, Lausanne, Switzerland. 3-7th June 2012
Organizer	**Name** Prof. John THOME
	Address EPFL-LTCM Station 9 CH-1015
	Country Switzerland
	Tel +44 21 693 5982 **Fax**
	Email john.thome@epfl.ch
Pilot Center(s) or SIGs involved	
Co-organizing Associations	
Scholarships	**Scholarship request?** [X] Yes [ ] No
Rules	**I have read the document "Rules for holding ERCOFTAC events", which can be found on www.ercoftac.org** [X] Yes [ ] No

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ERCOFTAC Coordination Centre, EPFL, Switzerland.
Email: ercoftac@epfl.ch
Fax: +41 21 693 5960

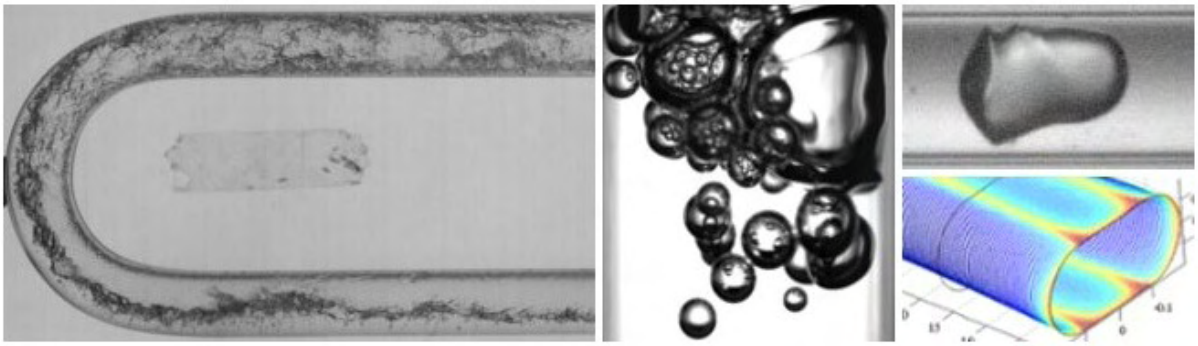
To be completed by ERCOFTAC | **Number** | W2012-06 |

Date Received	1.10.2011
Approval	**SPC** **MB**
Scholarships	[ ] Yes, Amount EURO [ ] No
Announcement	Bulletin
Report	Bulletin

8th ECI INTERNATIONAL CONFERENCE ON BOILING AND CONDENSATION HEAT TRANSFER

5-Day Conference, June 3-7 2012, EPFL, Switzerland.

Scope of the 8th ECI conference in this series is to discuss and disseminate fundamental and applied research on two-phase heat transfer at the micro- to macro-scale level. Papers related to pool boiling, flow boiling, convective condensation, enhanced boiling, enhanced condensation, flow visualization, physical modeling, numerical simulation and modeling, and various applications including novel micro and macro heat transfer devices are welcome in the conference.



Description

This series of ECI conferences (on Boiling) has been very successful over the years, with the present conference the 8th in the series. Because of the close relationship between flow boiling and convective condensation (with respect to flow patterns, some heat transfer mechanisms and physically-based models), the topic of Condensation has been added to the Boiling conference this time. In recent years, the numerous advances in microscale and macroscale two-phase heat transfer have been made. Especially, flow boiling and condensation in microchannels have received a lot of attention for fundamental research, primarily for applications to electronics cooling systems whilst enhanced boiling and condensation surfaces continue to be developed and applied to refrigeration systems, for example. There is significant similarity in the boiling and condensation processes but prediction methods in the literature often do not reflect this. This conference thus presents an auspicious opportunity for coordination of all two-phase heat transfer efforts (boiling and condensation) at an international level.

The conference objective will be focused on various phenomena and processes in boiling and condensation heat transfer, involving also its practical applications. All the following topics will be considered:

. Pool boiling and bubble dynamics.
. Flow boiling in micro- and macro-channels.
. Enhanced boiling bundle boiling.
. Critical heat flux
. Boiling in plate heat exchangers.
. Boiling in electronic cold plates.
. Convective condensation in micro- and macro-channels.
. Enhanced condensation.
. Condensation in plate heat exchangers.
. Falling film evaporation and condensation.
. Boiling and condensation of mixtures.
. Two-phase heat transfer devices.
. Novel two-phase measurement and visualization techniques.
. Numerical simulation and modeling of boiling and condensation phenomena.

Organisers

Conference Chair

John R. Thome, Laboratory of Heat and Mass Transfer, EPFL, Switzerland.

Conference Co-Chairs

Gian Piero Celata, ENEA Casaccia, Institute of Thermal Fluid Dynamics, Italy.
James F. Klausner, College of Engineering, University of Florida, USA.
Júlio César Passos, Federal University of Santa Catarina, Florianopolis, Brazil.
John Rose, Queen Mary College, University of London, UK.
Yasuyuki Takata, Department of Mechanical Engineering, Kyushu University, Japan.

ECI Conference Representative

John C. Chen, Dept. of Chemical Engineering, Lehigh University, USA.

Conference Secretary

Navid Borhani, Laboratory of Heat and Mass Transfer, EPFL, Switzerland.

Scientific Committee

Jacopo Buongiorno, MIT Department of Nuclear Science and Engineering, USA.
Catherine Colin, University of Toulouse, Institute of Fluid Mechanics, France.
Davide Del Col, University of Padova, Dipartimento di Fisica Technica, Italy.
Vijay K. Dhir, University of California Los Angeles, USA.
Paolo Di Marco, Energy and Systems Engineering (DESE), Università di Pisa, Italy.
Srinivas Garimella, Georgia Institute of Technology, USA.
Tassos G. Karayannis, School of Engineering and Design, Brunel University, UK.
Yuri Kuzma-Kichta, Department of Thermal Physics, Moscow Power Engineering Institute, Russia.
Deborah Pence, Department of Mechanical Engineering, Oregon State University, USA.
Gherhardt Ribatski, Universidade de São Paulo, Brazil.
Khellil Sefiane, School of Engineering and Electronics, University of Edinburgh, UK.
Naoki Shikazono, Department of Mechanical Engineering, The University of Tokyo, Japan.
Peter Stephan, Darmstadt University of Technology, Germany.
Somchai Wongwises, King Mongkut's University of Technology Thonburi, Thailand.
Xing Zhang, School of Aerospacemechanics, Tsinghua University, China.

Schedule

The schedule for submission of abstracts, papers and registration is as follows:

SEPTEMBER 30 - OCTOBER 31, 2011: Submission of abstracts
DECEMBER 2, 2011: Notice of acceptance (rejection) of abstract and provide template for accepted papers
JANUARY 31, 2012: Submission deadline for accepted papers (and keynote lectures)
JANUARY 31- MARCH 30, 2012: Registration and payment of conference fee
FEBRUARY 28, 2012: Accepted papers vetted for adherence to template
APRIL 4, 2012: Preliminary program available
MAY 4, 2012: Final program available
JUNE 3-7, 2012: Conference takes place

Course Fees

These are currently being finalised. ERCOFTAC student scholarships will be used to partially or totally cover the registration fees of participating PhD students.

European Research Community On Flow, Turbulence And Combustion

WORKSHOP – CONFERENCE – SUMMER SCHOOL - COURSE
APPLICATION SHEET

Title	**XX Polish National Fluid Dynamics Conference** *Add a brief summary of the objectives of the activity (or the announcement) on a separate page*
	[ ] Workshop [ ] Summer School [X] Conference [ ] Course
Location and Date	Gliwice, 17-20 September 2012
Organizer	**Name: Silesian University of Technology, Institute of Power Engineering and Turbomachinery**
	Address **Akademicka 2A** **44-100 Gliwice**
	Country: Poland
	Tel. +48 32 237 27 15 Fax +48 32 237 26 80
	Email: wlodzimierz.wroblewski@polsl.pl
Pilot Center(s) or SIGs involved	Polish Pilot Center
Co-organizing Associations	Committee of Mechanics of Polish Academy of Sciences (Fluid Mechanics Section)
Scholarships	**Scholarship request?** [X] Yes [ ] No
Rules	**I have read the document "Rules for holding ERCOFTAC events", which can be found on www.ercoftac.org** [X] Yes [ ] No

Please return this form, and its annexes, by email or fax to:

ERCOFTAC Coordination Centre, EPFL, Switzerland.
Email: ercoftac@epfl.ch
Fax: +41 21 693 5960

To be completed by ERCOFTAC

Number	W2012-07

Date Received	4.10.2011	
Approval	**SPC**	**MB**
Scholarships	[ ] Yes, Amount EURO	[ ] No
Announcement	Bulletin	
Report	Bulletin	

BRIEF SUMMARY OF THE OBJECTIVES OF THE ACTIVITY

Polish National Fluid Dynamics Conference takes part regularly since 1974. Those meetings are organized every two years by fluid dynamics leading centres in Poland. It is opportunity to summarize scientific activity in this range. They give possibility to young scientific workers to present their achievements and get acquainted with new trends in experimental, numerical and analytic researches of flow phenomena presented by invited guests. The Conference is also opportunity to promote fluid dynamics among young scientific researchers

The Chairman of Scientific Conference Committee is Prof. Tomasz Kowalewski and the Chairman of Organizing Conference Committee is Prof. Tadeusz Chmielniak. Members of Scientific Conference Committee are professors from AGH University of Science and Technology in Cracow, Institute of Fluid-Flow Machinery, Polish Academy of Science in Gdańsk, Universities of Technology in Częstochowa, Poznań, Rzeszów, Warsaw, Wrocław, Silesia and University of Warsaw. Silesian University of Technology was host of this conference in 1984, last Polish National Fluid Dynamics Conference took part in Poznań, from 5-9 of September in 2010. Present conference is 20th jubilee one.

Polish Pilot Centre of ERCOFTAC takes an active part in organizing this conference. Since 2006, official language of the Conference is English. Because of this the Conference is open to young scientists from other countries and their number increases with each consecutive Conference.

During the Conference we expect lectures given by following invited guests:

- Holger Babinsky - Cambridge University, UK
- Jean-Paul Dussauge - University of Marseille, France
- Jean Delery – ONERA, France
- Dietrich Schwaborn, DLR, Germany
- Marta Krasowska UniSA, Australia
- Alexander F. Chevagin, TsAGI, Russia
- Vaclav Uruba, Czech Republik Acedemy of Science
- Kemo Hanjalic, University of Rome "La Sapienza", Roma, Italy
- Roland G. Winkler, Institute for Advanced Simulation, Forschungszentrum Jülich, Germany
- Michel Stanislas, Ecole Centrale de Lille Lille-

The main conference topics are:

- Aerodynamics
- Computational Fluid Dynamics
- Experimental Fluid Mechanics
- Flow Phenomena in Flow Machinery
- Micro- and Bio-flows
- Atmospheric Science
- Hydromechanics
- General Fluid Dynamics
- Multi-phase Flows
- Turbulence

During the conference the competition for PhD students and young researchers for the best paper presented at sessions will be organized. Since 2006 this competition is organized with of ERCOFTAC label. Organizers expect about 200 participants from Poland and other countries.

Prof. W. Wroblewski
Silesian Technical University
Chairman of Local Organizing Committee

	2011	2010	2009
REVENUE	**228.757,47**	**329.755,88**	**201.195,14**
1.SUBSCRIPTION	**88.500,00**	**117.250,00**	**113.000,00**
Research Members	76.500,00	78.250,00	73.500,00
Industry Members	39.000,00	39.750,00	40.500,00
Large Entreprises	*37.000,00*	*38.000,00*	*39.000,00*
Small Entreprises	*2.000,00*	*1.750,00*	*1.500,00*
National Research Centers Members		1.500,00	500,00
Associated Members		500,00	500,00
Past Adjustments	-27.000,00	-2.750,00	-2.000,00
2. ETMM	**990,00**	**102.648,81**	**25.150,00**
ETMM8	990,00	102.648,81	25.150,00
3. GRANTS			**2.768,30**
European Project - Aerochina			2.768,30
4. INDUSTRIAL RELATED ACTIVITIES	**139.267,47**	**109.857,07**	**60.276,84**
4.1 BEST PRACTICE GUIDELINE	**5.491,00**	**7.942,15**	**6.817,55**
Single-Phase Flows	3.005,00	3.132,95	2.614,14
Dispersed Multi-Phase Flows	2.486,00	4.809,20	4.203,41
4.2 SEMINARS	**131.946,02**	**54.015,00**	**30.509,01**
Advances in Mixing and Combustion			1.790,00
Autumn Festival	-1.000,00		
Best Practice for Engineering CFD		31.635,00	
Design Optimisation	5.900,00		
Dispersed Multi-Phase Flows	25.715,00		4.050,00
Flame Stabilisation	30.470,00		
Flow Control Technologies			
Hybrid RANS-LES Methods For Industrial		22.380,00	22.179,01
Microfluidics and Microheat			2.490,00
Osborne Reynolds Day	1.641,81		
Transition Modelling	35.685,00		
Uncertainty Quantification in Design & Simulation	33.534,21		
4. 3 PROJECTS		**42.000,00**	**12.000,00**
European Project E-CAERO		42.000,00	12.000,00
5. FINANCIAL	**1.830,45**	**5.899,92**	**10.950,28**
Interest/ Exchange rate form Banks accounts	1.830,45	5.899,92	10.950,28

	2011	2010	2009
EXPENDITURE	**-199.616,75**	**-309.335,82**	**-231.730,18**
1. ADMINISTRATION	**-81.455,85**	**-93.777,32**	**-86.518,62**
Chairman	-2.618,58	-6.293,24	-3.147,26
Coordination Center	-37.500,00	-37.500,00	-37.500,00
Administration Office	-37.000,00	-37.000,00	-26.044,04
Office Supplies	-36,49	-1.273,25	-2.226,97
Legal Publications	-114,59		103,70
Website Maintenance	-1.213,02	-8.432,69	-15.531,79
Eccomas membership	-1.000,00	-1.000,00	-1.000,00
Travel expenses	-1.973,17	-2.278,14	-1.172,26
2. ETMM	**-12.099,90**	**-78.222,12**	**-9.011,50**
ETMM8	-599,90	-78.222,12	-9.011,50
ETMM9	-11.500,00		
3. WORKSHOPS	**-3.994,00**	**-17.567,96**	**-3.557,38**
4. SUMMERSCHOOL		**-9.000,00**	**-3.000,00**
5. SPECIAL INTEREST GROUPS	**-3.374,66**	**-9.593,20**	**-13.306,02**
6. INDUSTRIAL RELATED ACTIVITIES	**-98.692,34**	**-101.175,22**	**-116.336,66**
6.1 BEST PRACTICE GUIDE LINE	**-173,63**	**-168,82**	**-6.334,39**
Authors Fees			-6.000,00
Office Supplies			-144,72
Credit Card Payment	-173,63	-168,82	-189,67
Postage & Delivery			
6.2 KNOWLEDGE BASE	**-8.025,39**	**-21.660,59**	**-20.697,56**
Knowledge Base Consulting	-6.334,84	-21.228,75	-20.697,56
Wiki website hosting	-1.690,55	-431,84	
6.3 SEMINARS	**-39.507,93**	**-24.609,53**	**-34.598,83**
Advances in Mixing and Combustion			-2.670,44
Autumn Festival - DA VINCI		-5.436,17	-7.928,91
Osborne Reynolds Day	-1.327,40		
Best Pratice for Engineering CFD		-8.250,63	
Design Optimisation	-107,52		
Dispersed Multi-Phase Flows	-10.763,32		-3.231,73
Flame Stabilisation	-210,06		
Hybrid RANS- LES		-10.922,73	-18.997,07
Microfluidics and Microheat			-1.770,68
Transition Modelling	-14.158,43		
Uncertainty Quantification in Design & Simulation	-12.941,20		
6.4 PROJECTS	**-7.632,66**	**-389,41**	**-711,66**
European Project E-CAERO	-7.632,66	-389,41	-711,66
6.5 BUSINESS PLAN	**-1.535,97**	**-5.614,88**	**-5.381,42**
Consulting & Travel - Sarah Hutton		-500,00	-826,00
Consulting & Travel - Chris Lea		-2.299,34	-2.029,53
Travel and Office supplies IEO	-1.535,97	-2.815,54	-2.525,89
6.6 Payroll IEO	**-40.024,25**	**-45.565,74**	**-42.939,94**
Salaries Richard Seoud	-40.024,25	-45.427,28	-42.939,94
Payroll fees		-138,46	
7. FINANCIAL COSTS	**-1.792,51**	**-3.166,25**	**-5.672,86**

	2011	2010	2009
Financials Costs	-1.738,31	-3.166,25	-5.672,86
Credit card payment membership	-54,20		
NET INCOME (LOSS)	**29.140,72**	**20.420,06**	**-30.535,04**
NET INCOME (Revenue 1 to 3 - Expenditure 1 to 5)	*-11.434,41*	*11.738,21*	*25.524,78*
NET INCOME ACTIVITIES RELATED TO INDUSTRY	*40.575,13*	*8.681,85*	*-56.059,82*

Explanation about Income Statement 2011

I. Revenue

- Research members
  ERCOFTAC counts 168 members. We have booked 18 cancellations and we have 8 new members.
- Industry members
  ERCOFTAC counts 45 members. We have booked 3 cancellations and we have 4 new members.

- Past adjustments

N°	Name	Contact Name	Amount	Adjusted Year	Cancelled
R-F-02	L.E.G.I	Mr Lesieur / A. A. Cartellier / E. E. Hopfinger	500	2010	Yes
I-UK-01	Arup Research & Development	G.M.J. Davies	4.000	2007/2008/2009/2010	Yes
R-F-20	Institut Jean-Le-Rond d'Alembert	G.A. Gerolymos	2.000	2007/2008/2009/2010	Yes
NRC-F-01	Institut Français du Pétrole	Olivier Colin	500	2010	Yes
R-D-09	Karlsruhe Institute of Technology (KiT)	Thomas Schulenberg	500	2010	Yes
R-F-15	Université de la Rochelle	F. Allard / P. Joubert	1.000	2009/2010	Yes
R-F-17	CEA/SACLAY	Alain Bengaouer	500	2009	Yes
R-GR-03	Aristotle University of Thessaloniki	Kastrinakis	1.500	2007/2008/2009	Yes
R-P-01	Instituto Superior Tecnico	Carlos da Silva / J. Pereira	1.000	2008/2010	Yes
R-PL-02	University of Mining and Metallurgy	Janusz S. Szmyd	1.000	2009/2010	Yes
R-PL-03	Czestochowa University of Technology	Dariusz Asendrych / Stanislaw Drobniak	500	2010	Yes
R-PL-06	Silesian Technical University	Tadeusz Chmielniak	1.000	2008/2009	Yes
R-PL-07	Warsaw University of Technology	M.E. Poniewski	1.000	2008/2009	Yes
R-S-05	LTH	L. Fuchs	1.000	2008/2009	Yes
R-UK-16	UMIST Thermo Fluids Division	Tim J. Craft	1.500	2008/2009/2010	Yes
I-UK-15	QINETIQ Ltd	Malcolm Arthur / Richard Ashworth	2.000	2009/2010	Yes
I-UK-20	Alstom Power	Nadir Ince	1.000	2009	No
I-UK-09	W.S. Atkins Engineering Sciences	P. Gallagher	4.000	2007/2008/2009/2010	No
SME-UK-21	Renuda UK	Nicolas A. Tonello	1.000	2009/2010	Yes
R-CY-01	University of Cyprus	Stavros Kassinos	1.000	2010/2011	Yes
R-F-07	Université de Poitiers	Pierrette Auzanneau	500	2010	No
			27.000		

II. Expenditure

1. Administration

- Chairman 2.618,58€
  - IEO Meetings 530,23€
  - Lisbon 2010 885,08€
  - Gdansk 2011 816,32€
  - Future Operation Workshop Brussels 230,60€
  - Nafem Workshop UK 2010 156,35€
- Administration Office 37.000,00€
- Office Supplies 36,49€
- Legal Publications 114,59€
- Website Maintenance - Chris Lea 1.213,02€
- Eccomas Membership 1.000,00€
- Travel Expenses 1.973,17€
  - Future Operation Workshop , Brussels – Mr Geurts 273,80€
  - Future Operation Workshop , Brussels – Mr Tomboulides 545,81€
  - Spring Festival , Warsaw – Mr Geuzaine 665,72€
  - SPC , Gdansk – Mr Geurts 352,34€
  - CFM Colloquium , Cagliari – Mr Geurts 135,50€

6.2 Knowledge base

- Knowledge Base Consulting - David Ellacott 6.334,84€
- Wiki Website Hosting – Melbourne Server Hosting Ltd 1.690,55€

PAYROLL BREAKDOWN

FIGURES in £ STERLING

2011

Month	Gross	Tax	EmpleeNI	EmpyrNI	HMRC	Sal. Net
janv-11	2.947,80	481,60	271,90	316,39	1.069,89	2.194,30
févr-11	2.947,80	481,60	271,90	316,39	1.069,89	2.194,30
mars-11	2.947,80	481,60	271,90	316,39	1.069,89	2.194,30
avr-11	3.050,92	387,87	293,87	339,74	1.021,48	2.369,18
mai-11	3.050,92	387,87	293,87	339,74	1.021,48	2.369,18
juin-11	3.050,92	387,87	293,87	339,74	1.021,48	2.369,18
juil-11	3.050,92	387,87	293,87	339,74	1.021,48	2.369,18
Bonus 2010	4.400,00	1.759,18	105,98	607,20	2.472,36	2.534,84
août-11	3.050,92	387,87	293,87	339,74	1.021,48	2.369,18
sept-11	3.050,92	387,47	293,87	339,74	1.021,08	2.369,58

	2011	2010	2009
ASSETS	**444.484,97**	**451.521,45**	**350.154,75**
1. CASH/ BANK ACCOUNTS	**375.142,76**	**396.071,55**	**290.744,41**
Checking Account AIBS - BE	42.915,89	46.499,40	75.173,02
Checking Account AIBS- UK	14.646,88	16.031,06	
Checking Account ETMM	42.485,77	822,84	11.893,01
Checking Account ETMM - FR		43.191,44	
Checking Account Q&T-SIG	44.064,37	13.147,22	8.463,56
Cash	81,08	81,08	634,78
Term Account AIBS - BE	205.247,14	251.153,62	149.946,39
Term Account Q&T-SIG - BE	25.701,63	25.144,89	44.633,65
2. CURRENT ASSETS	**69.342,21**	**55.449,90**	**59.410,34**
2.1. ACCOUNTS RECEIVABLE	**69.342,21**	**50.828,60**	**43.814,00**
RESEARCH	16.500,00	23.500,00	15.750,00
Research 2011	16.500,00	500,00	
Research 2010		11.500,00	
Research 2009		6.000,00	9.750,00
Research 2008		4.000,00	4.500,00
Research 2007		1.500,00	1.500,00
INDUSTRY	8.360,00	16.000,00	12.500,00
Industry 2011	5.000,00		
Industry 2010	3.360,00	7.500,00	
Industry 2009		4.500,00	7.500,00
Industry 2008		2.000,00	3.000,00
Industry 2007		2.000,00	2.000,00
ETMM		8.212,60	14.050,00
ETMM7		50,00	50,00
ETMM8		8.162,60	14.000,00
AUTUMN FESTIVAL		1.000,00	1.000,00
SEMINAR	44.209,21	1.825,00	700,00
Advances in Mixing and Combustion	170,00	170,00	170,00
Best Practice for Engineering CFD	2.735,00	1.635,00	
Dispersed Multi-Phase Flows		270,00	270,00
Hybrid RANS-LES	640,00		
Microfluidics and Microheat	530,00	260,00	260,00
Transition modelling			
Uncertainty Management & quantification	16.344,21	-510,00	
Flame Stabilisation	20.875,00		
Design Optimisation	2.915,00		
BEST PRACTICE GUIDE LINE	273,00	291,00	-186,00
Single-Phase Flows	84,00	93,00	-15,00
Dispersed Multi-Phase Flows	189,00	198,00	-171,00
2.2. PROJECT RECEIVABLE			**12.000,00**
European Project E-CAERO			12.000,00
2.3. REVENUE RESERVE ACCOUNT		**4.621,30**	**3.596,34**
Interest Income AIBS		3.934,35	2.949,98
Interest Income Q&T		686,95	638,10
Interest Income ETMM8			8,26

	2011	2010	2009
LIABILITIES & CAPITAL	**444.484,97**	**451.521,45**	**350.154,75**
1. CURRENT LIABILITIES	**84.367,59**	**120.544,79**	**39.598,15**
1.1 REVENUE RESERVE ACCOUNT		**1.218,01**	**1.053,50**
Financial Charges AIBS		596,51	449,60
Financial Charges Q&T		121,50	96,31
Financial Charges ETMM			7,59
Sales		500,00	500,00
1.2. ACCOUNT PAYABLE	**-2.660,84**	**32.299,41**	**38.867,60**
Account payable	-2.660,84	32.299,41	38.867,60
1.3 DEFERRED CHARGES PAYABLE	**37.500,00**	**42.589,03**	
Deferred charges payable	37.500,00	42.589,03	
1.4. ADVANCE PAYMENT RECEIVED	**40.855,39**	**40.855,39**	
Advance payment received for E-ECAERO	40.855,39	40.855,39	
1.5.TAXES & NATIONAL INSURANCE	**8.673,04**	**3.582,95**	**-322,95**
Social Security Administration	6.183,61	3.742,31	0,06
Salaries	2.489,43	-159,36	-323,01
2. CAPITAL	**360.117,38**	**330.976,66**	**310.556,60**
NET RESULT ERCOFTAC	297.240,40	308.674,81	296.936,60
NET RESULT INDUSTRIAL RELATED ACTIVITIES	62.876,98	22.301,85	13.620,00

European Research Community On Flow Turbulence And Combustion

Unpaid Membership per Year

Statement date 15/09/2011

Research member	Institution	2011	2010	2009	2008	2007	
NRC-I-01	CNR-INSEAN, The Italian Ship Model Basin	500					
NRC-FIN-01	Finnish Meteorological Institute	500					
R-CH	Leonhard euler center	5500					
R-D-08	Technische Universitat Munchen	500					
R-D-44	Hochschule Ansbach	500					
R-DK-02	Aalborg University Esbjerg	500					
R-DK-03	Risoe National Laboratory	500					
R-E-05	Universidad Politecnica de Madrid	500					
R-F-16	Institut de mécanique de fluide de toulouse	500					
R-F-18	CNRS	500					
R-F-23	ONERA	500					
R-GR-02	Aristotle University of Thessalonik	500					
R-GR-09	University of Thesalonik	500					
R-HR-01	University of Zagreb	500					
R-I-02	Universita degli studi di Trieste	500					
R-I-03	Politecnico di Milano	500					
R-I-08	Universita di Genova	500					
R-N-01	Norwegian University of Science	500					
R-P-03	University of Coimbra	500					
R-S-11	Energy Technology Center	500					
R-UA-01	Institute of Hydromechanics	500					
R-UK-28	Cranfield university	500					
R-UK-29	University of Liverpool	500					
		33	0	0	0	0	
		€ 16.500	0 €	0 €	0 €	0 €	

European Research Community On Flow Turbulence And Combustion

Unpaid Membership per Year

Statement date 15/09/2011

Industry member	Institution	2011	2010	2009	2008	2007	
I-D-10	Volkswagen AG		1000				
I-F-03	EDF	1000					
I-F-06	Dassault	1000					
I-F-08	CEA		1000				
I-F-11	Alstom France	1000					
I-FIN-02	Metso paper	1000					
I-DK-03	Odegaard & Danneskiold-Samsoe		360				don't want to be members in 2011, may renew in 2012. Said they would pay the missing 360€ for 2010. keep bugging them (contact = Johann Gullman-Strand)
I-UK-09	W.S Atkins Engineering Sciences						paid 2011. Credit notes for 2007-2008-2009-2010. In 2012, cancel membership if they don't pay the 2012 membership within 30 days of invoice date.
I-UK-16	Ansys UK	1000	1000				sent them a reminder, no response so far
		5	4	0	0	0	
		€ 5.000,00	€ 3.360,00	0 €	0 €	0 €	
	TOTAL in EUROS	21.500 €	3.360 €	0 €	0 €	0 €	

	2011	2010	2009
Design Optimisation: Methods and Applications	**5.792,48**		
Manching, Germany, 15th - 16th November 2011			
Income	5.900		
Expenditure	-107,52		
Travel expenses			
Honorarium			
Seminar fees (Material, catering, printing)			
Credit card Fees	*-107,52*		
Flame Stabilisation For Industrial Burners	**28.269,94**		
GE, Munich, Germany, 26th - 27th September 2011			
Income	28.480		
Expenditure	-210,06		
Travel expenses			
Honorarium			
Seminar fees (Material, catering, printing)			
Credit card Fees	*-210,06*		
Uncertainty Quantification and Management in Indus.	**16.344,21**		
Hampton-Marina, Virginia, USA, 15th - 16th Sept. 2011			
Income	16.344,21		
Expenditure			
Travel expenses			
Honorarium			
Seminar fees (Material, catering, printing)			
Credit card fees			
Dispersed Multi-Phase Flows	**14.951,68**		
Innventia, Stockholm, Sweden, 7th - 8th June 2011			
Income	25.715		
Expenditure	-10.763,32		
Travel expenses	*-4.067*		
Honorarium	*-3.159*		
Seminar fees (Material, catering, printing)	*-3.343,45*		
Credit card Fees	*-193,87*		
Transition Modelling	**21.526,57**		
GE, Munich, Germany, 25th - 26th May 2011			
Income	35.685		
Expenditure	-14.158,43		
Travel expenses	*-2.382,90*		
Honorarium	*-2.400*		
Seminar fees (Material, catering, printing)	*-9.059,96*		
Credit card Fees	*-315,57*		

	2011	2010	2009
Uncertainty Management and Quantification	**4.248,80**		
GE, Munich, Germany, 3rd - 4th March 2011			
Income	17.190		
Expenditure	-12.941,20		
Travel expenses	*-3.310,56*		
Honorarium	*-3.300*		
Seminar fees (Material, catering, printing)	*-6.179,96*		
Credit card fees	*-150,68*		
Best Practice for Engineering CFD		**23.384,37**	
EDF - Châtou, France, 13-14 September 2010			
Income		31.635	
Expenditure		-8.250,63	
Travel expenses		*-3.776,68*	
Honorarium		*-2.121,13*	
Seminar fees (Material, catering, printing)		*-2.352,82*	
Hybrid RANS-LES Methods for Industrial CFD		**11.457,27**	
GE, Munich, Germany, 27-28 May 2010			
Income		22.380	
Expenditure		-10.922,73	
Travel expenses		*-2.906,61*	
Honorarium		*-2.862,54*	
Seminar fees (Material, catering, printing)		*-5.153,58*	
Hybrid RANS-LES Methods for Industrial CFD			**-284,41**
Stockholm, Sweden,16-17 November 2009			
Income			8.967
Expenditure			-9.251,41
Travel expenses			*-4.474,20*
Honorarium			*-3.300*
Seminar fees (Material, catering, printing)			*-1.477,21*
Microfluidics & Microheat			**719,32**
Philips, Eindhoven,The Netherlands, 11th Nov. 2009			
Income			2.490
Expenditure			-1.770,68
Travel expenses			*-1.491,68*
Honorarium			
Seminar fees (Material, catering, printing)			*-279*
Best Practice Guidance CFD Dispersed Multi-phase			**818,27**
Florence, Italy, 16th October 2009			
Income			4.050
Expenditure			-3.231,73

	2011	2010	2009
Travel expenses			*-3.171,97*
Honorarium			
Seminar fees (Material, catering, printing)			*-59,76*

Hybrid RANS-LES Methods for Industrial Methods	**3.584,34**
GE, Munich, Germany, 2-3 June 2009	
Income	13.085
Expenditure	-9.500,66
Travel expenses	*-2.932,94*
Honorarium	*-3.275*
Seminar fees (Material, catering, printing)	*-3.292,72*

Advances in Mixing Combustion	**-880,44**
GE, Munich, Germany, 8th April 2009	
Income	1.790
Expenditure	-2.670,44
Travel expenses	*-642,8*
Honorarium	*-753,1*
Seminar fees (Material, catering, printing)	*-1.274,54*

	Realised			Budget		
	2011	2010	2009	2011	2010	2009
SUMMERSCHOOLS		**9.000**	**3.000**		**12.000**	**6.000**
2011				**6.000**		
S2011 - 01 Morphology & dynamics of anisotropics flows				3.000		
S2011 - 02 fluid-structure interaction for Biomedical applications				3.000		
2010		**6.000**			**12.000**	
S2010 - 01 - PIV						
S2010 - 02 - non-normality and non-linearity in thermo-acoustics					3.000	
S2010 - 03 - Turbulence and mixing in compressible flows		3.000			3.000	
S2010 - 04 - New challenges in turbulence research		3.000			3.000	
S2010 - 05 - Fundamentals of microscale heat transfer					3.000	
2009		**3.000**	**3.000**			**6.000**
S2009 - 01 - Turbulent mixing and beyond						
S2009 - 02 - Summerschool in flow control and optimization		3.000				3.000
S2009 - 03 - Bio-fluid mechanics			3.000			3.000

	Realised			Budget		
	2011	2010	2009	2011	2010	2009
WORKSHOP	**3.994**	**17.567,96**	**8.000**	**22.000**	**20.000**	**16.000**
2012						
W2012 - 01 - Unsteady separation in fluid-structure interaction						
2011	**5.994**			**22.000**		
W2011 - 01 - Cardiovascular fluid mechanics	1.994			2.000		
W2011 - 02 - 3rd Workshop on fibre suspension flows						
W2011 - 03 - 2nd Workshop on turbulent spray combustion				2.000		
W2011 - 04 - Diagnostics for turbulent combustion				2.000		
W2011 - 05 - Workshop on turbulence modelling				2.000		
W2011 - 06 - Simulation of Multiphase flows in Gasification and combustion				2.000		
W2011 - 07 - Progress in transition modeling and control				2.000		
W2011 - 08 - Young ERCOFTAC workshop				2.000		
W2011 - 09 - Statistical mechanics in fluids and superfluids	2.000			2.000		
W2011 - 10 - 6th international spheric SPHWorkshop	2.000			2.000		
W2011 - 11 - 4th symposium on hybrid RANS-LEs methods						
W2011 - 12 - Instabilities and transition in 3- dimension flows				2.000		
W2011 - 13 - 7th workshop on synthetic turbulence models				2.000		
2010	**-2.000**	**13.831,46**			**20.000**	
W2010 - 01 - Workshop on fibre suspension flows						
W2010 - 02 - MUSAF colloquium						
W2010 - 03 - European drag reduction and flow control meeting		2.000			2.000	
W2010 - 04 - Advances and applications of GiD						
W2010 - 05 - Two-phase flow predictions		2.000			2.000	
W2010 - 06 - Dynamics of non-spherical particles in fluid turbulence					2.000	
W2010 - 07 - DLES 8	-2.000	4.000			2.000	
W2010 - 08 - Mixing and dispersion in flows dominated by rotation		2.000			2.000	
W2010 - 09 - Global instabilities of open flows					2.000	
W2010 - 10 - Radiation of high temperature gases in atmospheric		1.698,32			2.000	
W2010 - 11 - 6th Workshop on synthetic turbulence models		2.000			2.000	
W2010 - 12 - 5th Workshop on research in turbulence and transition		133,14			2.000	
W2010 - 13 - Instabilities turbulence and interactions in rotating shear flows					2.000	
2009		**3.736,50**	**6.000**			**16.000**
W2009 - 01 - Conference on Turbulence and interactions						
W2009 - 02 - Immersed boudary Methos						
W2009 - 03 - Quality & Reliability of LES II			2.000			2.000
W2009 - 04 - Fluxes and Structures in fluids						2.000
W2009 - 05 - Papermaking research symposium "Whithdrawn"						
W2009 - 07 - LES of Turbulence, Acoutis and Combustion						
W2009 - 08 - Quality & Relianility in Aerospace CFD						
W2009 - 09 - Turbulent Spray Combustion						2.000
W2009 - 10 - 3rd Hybrid RANS-LES Symposium						
W2009 - 11 - Research in turbulence and transition		1.736,50				2.000
W2009 - 12 - Trubulent flows			2.000			2.000
W2009 - 13 - Synthetic turbulence and vortex flows			2.000			2.000
W2009 - 14 - 14th Workshop on turbulence modelling						2.000
W2009 - 15 - Global flow instability and control		2.000				2.000

	Realised			Budget		
	2011	2010	2009	2011	2010	2009
SIG	**3.374,66**	**9.593,20**	**13.306,02**	**24.000**	**27.000**	**18.000**
SIG 12 - Dispersed Turbulent Two Phase Flow	729,67	1.202,44	1.805,13	3.000	3.000	3.000
SIG 15 - Turbulence Modelling		689,55	1.270,46	3.000	3.000	3.000
SIG 20 - Drag Reduction and Flow Control	579,31	545,82	1.907,39	3.000	3.000	3.000
SIG 28 - Reactive Flows	725,68	1.384,61	830,92	3.000	3.000	3.000
SIG 33 - Transition Mechanisms, Prediction and Control				3.000	3.000	
SIG 35 - Multipoint turbulence Strucutre and Modelling	1.340	1.788	2.974,90	3.000	3.000	3.000
SIG 40 - Smoothed Particle Hydrodynamics					3.000	
SIG 42 - Synthetic models in turbulence		2.500	3.000	3.000	3.000	3.000
SIG 43 - Fibre suspension flows		1.482,78	1.517,22	3.000	3.000	

2011 MEMBERS LIST

213 members : 45 industrial members & 168 Research members

12 new & 21 cancellations

	Member ID	Company Name	Contact ID	Name	Address	Zip Code	City	Country	E-mail	Phone	date of entry
1	I-AU-01	AVL LIST GMBH	I-AU-01-01	Reinhard TATSCHL	Hans List Platz 1	AT-8020	Graz	AT		+43 316 787 618	
2	I-CH-01	ALSTOM (Switzerland) Ltd	I-CH-01-01	P. FLOHR	Brown Boveri Strasse 7	CH-5401	BADEN	CH	peter.flohr@power.alstom.com	+41.56.205 1639	
3	I-CH-03	Sulzer Markets & Technology Ltd.	I-CH-03-01	Felix A. MUGLI	Sulzer Innotec 1554	CH-8404	WINTERTHUR	CH	felix.muggli@sulzer.com	+41-52/262 4252	
4	I-CH-04	ABB Turbosystems AG	I-CH-04-01	Kai LAZENBERGER	P.O Box 5401, ,Bruggerstr 71a	CH-95026	BADEN	CH		+4158 585 6158	
5	I-CH-05	Andritz Hydro AG	I-CH-05-01	Dr Mirjam SICK	Hardstrasse 319	CH-8023	ZURICH	CH	mirjam.sick@vatech-hydro.ch	+41-1/278.23.19	
6	I-CH-06	MAN Turbomaschinen AG Schweiz	I-CH-06-01	B. RIBI	Hardstrasse 319	CH-8005	ZURICH	CH	beat.ribi@ch.manturbo.com	tel. +41-1/278.31.24	
7	I-D-01	BASF SE	I-D-01-01	Martin Schilling	GCP/RS - L540	DE-67056	Ludwigshafen	DE	martin.schilling@basf.com	+49 621 605 6529	2010
8	I-D-02	Airbus Deutschland GmbH	I-D-02-01	Klaus BECKER	POSTFACH 286201	DE-28183	BREMEN	DE	klaus.becker@airbus.com	+49-421/538.33.61	
9	I-D-04	Viessmann GmbH & Co KG	I-D-04-01	B. AHMADI N	Viessmannstrasse 1	DE-35107	ALLENDORF (EDER)	DE		+49-6452/70 34 00	
	I-D-04	Viessmann GmbH & Co KG	I-D-04-02	V. PAWLIK	Viessmannstrasse 1	DE-35107	ALLENDORF (EDER)	DE	PwV@viessmann.com	+49-6452/70 34 00	
10	I-D-05	Rolls-Royce Deutschland GmbH	I-D-05-01	R. EGGELS	Eschenweg 11	DE-15827	DAHLEWITZ	DE	ruud.eggels@rolls-royce.com	+49-33/708 61 145	
11	I-D-08	Ansys Germany Gmbh Georg Scheuerer	I-D-08-01	F. MENTER	Staudenfeldweg 12	DE-83624	OTTERFING	DE	florian.menter@ansys.com	+49-8024/90.54.15	
	I-D-08	Ansys Germany Gmbh Georg Scheuerer	I-D-08-02	G. SCHEUERER	Staudenfeldweg 12	DE-83624	OTTERFING	DE	georg.scheuerer@ansys.com	+49-8024/90.54.15	
12	I-D-10	Volkswagen AG	I-D-10-01	Gerd Rapin	Letter Box 1697	DE-38436	WOLFSBURG	DE	gerd.rapin@volkswagen.de		
13	I-D-14	Voith Hydro Holding GmbH & Co.KG	I-D-14-01	Steffen Jahnke	Alexanderstrabe.11	DE-89522	HEIDENHEIM	DE			
	I-D-14	Voith Hydro Holding GmbH & Co.KG	I-D-14-02	Alexander Jung	Alexanderstrabe.11	DE-89522	HEIDENHEIM	DE	alexander.jung@voith.com		
14	I-D-17	GE Global Research	I-D-17-01	Emad GHARAIBAH	Freisinger Landstrasse 50	DE-85748	Garching bei Munchen	DE	emad.gharaibah@research.ge.com		
15	I-D-18	Robert Bosch GmbH -	I-D-18-01	Uwe Iben	CR/ARH	DE-70049	STUTTGART	DE	uwe.iben@bosch.com		
16	I-D-19	Festo AG & CoKg /Abteilung TR	I-D-19-01	Peter Post	Ruister Str82	DE-73734	Esslingen am Neckar	DE	DE		
17	I-DK-03	Odegaard & Danneskiold-Samsoe A/S	I-DK-03-01	Johan GULLMAN-STRAND	Titangade 15	DK-2200	Copenhagen N	DK	jgs@oedan.dk	+45 3531 1042	
	I-DK-03	Odegaard & Danneskiold-Samsoe A/S	I-DK-03-02	Kenny Krogh NIELSEN	Titangade 15	DK-2200	Copenhagen N	DK		+45 3531 1042	
18	I-F-01	American Express Voyages d'affaires	I-F-01-01	J.-P. SIMONEAU	10, rue juliette Recamier	FR-69006	Lyon Cedex 06	FR	jan-patrice.simoneau@areva.com	+33-4/72.74.73.75	
19	I-F-03	EDF- R&D	I-F-03-01	Etienne BRIERE	6, Quai Watier	FR-78401	CHATOU Cedex	FR	etienne.briere@edf.fr	+33-1/30.87.7334	
	I-F-03	EDF- R&D	I-F-03-02	Jean-Marc DOREY	R&D Department MFEE	FR-78401	CHATOU Cedex	FR	jean-marc.dorey@edf.fr	+33-1/30.87.7334	
20	I-F-05	SNPE Centre de Recherche du Bouchet	I-F-05-01	Stany GALLIER	Rue Lavoisier	FR-91710	VERT-LE-PETIT	FR	s.gallier@snpe.com	+33-1/64.99.11.93	
21	I-F-06	Dassault Aviation (New AMD-BA Entity)	I-F-06-01	B. REVELLIN-FALCOZ	78, Quai Marcel Dassault	FR-92214	SAINT-CLOUD	FR	Mr. B. REVELLIN-FALCOZ (bruno.revellin-	+33-1/46.02.50.50	
22	I-F-08	CEA – Commissariat a l'Energie Atomique	I-F-08-01	Antoine LLOR	CEA/DAM - Ile-de-France -DCSA/SSA	FR-91297	ARPAJON	FR	antoine.llor@cea.fr	+33-1-69265123	
	I-F-08	CEA – Commissariat a l'Energie Atomique	I-F-08-02	J. -F. HAAS	DSPG/SFBG/BFI	FR-91297	ARPAJON	FR	jean-francois.haas@cea.fr	+33-1-69265123	
23	I-F-10	AIR LIQUIDE	I-F-10-01	Frédéric CAMY-PEYRET	1 chemin de la Porte des Loges	FR-78354	Jouy-en-josas	FR	Frédéric CAMY-PEYRET (frederic.camy-pe	+33 (1) 39 07 64 91	
24	I-F-11	Alstom Power France	I-f-11-01	Pierre Leroy	Alstom Hydro France	FR-92309	Levallois-Perret	FR	pierre.leroy@power.alstom.com	+33 4 76392832	NEW 2011
25	I-FIN-02	Metso Paper, Inc.	I-FIN-02-01	Matti YLITALO	P.O Box 200	FI-00026	BASWARE	FI	Matti Ylitalo (matti.Ylitalo@metso.com)	+358 (20) 141 22 91	
	I-FIN-02	Metso Paper, Inc.	I-FIN-02-02	Raili Kangas	P.O Box 200	FI-00026	BASWARE	FI	raili.kangas@metso.com	+358 (20) 484 2333	
26	I-FIN-03	Fortum Power & Heat Technical Support	I-FIN-03-01	Tommi RAMA	PO Box 100	FI-00048	Fortum	FI	Tommi RAMA (tommi.rama@fortum.cor	+358 (40) 569 0820	
27	I-NL-05	Tata Steel Europe	I-NL-05-01	R.P.J. DUURSMA	P.O Box 10000	NL-1970 CA	YMUIDEN	NL	rene.duursma@corusgroup.com	+31251492363	
28	I-S-01	SAAB AB	I-S-01-01	M. SILLEN		SE-58188	LINKOPING	SE	mattias.sillen@saab.se	+46-13/18.00.00	
29	I-S-03	VATTENFALL Research & Development AB	I-S-03-01	Johan WESTIN	Foretagsenhet 2606	SE-962 80	Jokkmokk	SE	johan.westin@vattenfall.com	+46 - 70 5117466	
30	I-S-07	ABB AB	I-S-07-01	Ola WIDLUND	Fe 6610	SE-83984	Ostersund	SE	Ola Widlund (Ola.Widlund@se.abb.com)		
31	I-S-08	Tetra Pak	I-S-08-01	Fredrik INNINGS	Ruben Rausings Gata	SE-22186	Lund	SE	Fredrik Innings (fredrik.innings@tetrapak	+46 (46) 362014	
32	I-S-09	Scania CV AB	I-S-09-01	Mattias CHEVALIER		SE-151 87	Sodertalje	SE	mattias.chevalier@scania.com	+46 (08) 55353097	
	I-S-09	Scania CV AB	I-S-09-02	Stephen CONWAY		SE-151 87	Sodertalje	SE	Stephen Conway (stephen.conway@scar	+46 (08) 55350814	
33	I-S-10	Alstom ECT, Sweden	I-S-10-01	Niclas Lindqvist	R&D Execution Center	SE-35112	Växjö	SE	niclas.lindqvist@power.alstom.com	+46470766615	NEW 2011
	I-S-10	Alstom ECT, Sweden	I-S-10-02	Nabil Rafidi	R&D Execution Center	SE-35112	Växjö	SE	nabil.rafidi@power.alstom.com	+46470766615	
34	I-S-11	Westinghouse Electric Sweden AB	I-S-11	Tobias Strömgren	Fredholmsgatan 2	SE-721 63	Västeras	SE	stromgts@westinghouse.com	+46214401529	NEW 2011
35	I-UK-09	W.S. Atkins Engineering Sciences	I-UK-09-01	P. GALLAGHER	Woodcote Grove , Ashley Road	GB-KT18 5BW	SURREY	GB	paul.gallagher@atkinsglobal.com	+44 (1372) 72 61 40	
36	I-UK-14	Computational Dynamics Ltd.	I-UK-14-01	Fred MENDONCA	CD-adapco, London Office	GB-W6 7NL	LONDON	GB	fred@uk.cd-adapco.com	+44 (0)7768 876 877	
37	I-UK-15	QINETIQ Ltd	I-UK-15-01	Malcolm ARTHUR	c/o EDM - PO Box 5984	GB-MK10 1 JL	Milton Keynes	GB		+44-1252/39.55.68	
	I-UK-15	QINETIQ Ltd	I-UK-15-02	Richard ASHWORTH	c/o EDM - PO Box 5984	GB-MK10 1 JL	Milton Keynes	GB	Richard Ashworth (RMAshworth@qineti	+44-1252/39.55.68	
38	I-UK-16	Ansys UK Ltd.	I-UK-16-01	Chris CAREY	Sheffield Airport Business park	GB-S9 1XH	SHEFFIELD	GB	chris.carey@ansys.com	+44-114/281.88.88	
39	I-UK-18	BAE Systems - Advanced Technology Centre	I-UK-18-01	Iain BARTON	Sowerby Building, FPC 267	GB-BS34 7 QW	BRISTOL	GB	iain.barton@baesystems.com	+44 (117) 302 8251	
40	I-UK-20	Alstom Power	I-UK-20-01	Nadir INCE	Newbold Road	GB-CV21 2 NH	Rugby	GB	nadir.ince@power.alstom.com	+44 (1788) 531764	
41	SME-B-02	NUMECA International s.a.	SME-B-02-01	M. TOMBROFF	Chaussée de la Hulpe 189	BE-1170	BRUSSELS	BE	marc.tombroff@numeca.be	tel. +32-2/643.35.71	
42	SME-I-01	Esteco s.r.l.	SME-I-01-01	Carlo Poloni		IT-34149	Trieste	IT	poloni@esteco.com	+39 0403755548	NEW 2011
43	SME-NL-01	Dacolt -Combustion & CFD	SME-NL-01-01	Philipp SCHAPOTSCHNIKOV	Postbus 597	NL-6200 AN	MAASTRICHT	NL	info@dacolt.com	+31(0)43 3030 020	2010
	SME-NL-01	Dacolt -Combustion & CFD	SME-NL-01-02	Ferry TAP	Postbus 597	NL-6200 AN	MAASTRICHT	NL	ferry.tap@dacolt.com	+31 43 388 5834	
44	SME-UK-19	Lea CFD Associates Limited	SME-UK-19-01	Chris LEA	12 Sheraton Way	GB-SK 17 6FA	DERBYSHIRE	GB	chris@leacfd.com	+44 12 98 767552	
45	SME-UK-21	Renuda UK	SME-UK-21-01	Nicolas A. TONELLO	35 Charleville Road	GB-W14 9JJ	LONDON	GB	Nicolas A. Tonello (nicolas.tonello@renu	+44 (207) 385 0507	

2011 MEMBERS LIST

213 members : 45 industrial members & 168 Research members

12 new & 21 cancellations

	Member ID	Company Name	Contact ID	Name	Address	Zip Code	City	Country	E-mail	Phone	date of entry
46	A-C-01	Hydro-Québec Institut de Recherche	A-C-01-01	PAGE, M.	1800 Boul. Lionel-Boulet	QC J3X 1S1	VARENNES	CA	page.maryse@ireq.ca		
47	NRC-D-02	Institute of Technical Thermodynamics/Solar	NRC-D-02-01	Felipe VASQUEZ	German Aerospace Center	DE-70569	STUTTGART	DE	Juan.VasquezArango@dlr.de	+49 711 6862744	2010
48	NRC-F-01	Institut Français du Pétrole	NRC-F-01-01	Olivier COLIN	1 à 4 Avenue du Bois Préau	FR-92852	Rueil-Malmaison	FR		+33 (14752) 7420	
49	NRC-I-01	CNR-INSEAN, The Italian Ship Model Basin	NRC-I-01	Emilio F. Campana	Piazzale Aldo Moro, 7	IT-00185	Rome	IT	secretary@insean.it	+3906502991	NEW 2011
50	NRC-FIN-01	Finnish Meteorological Institute	NRC-FIN-01	Ari Karppinen	Erik Palmenin Aukio 1	FI-00101	HELSINKI	FI	ari.karppinen@fmi.fi	+358405346809	NEW 2011
51	R-AU-01	Vienna University of Technology	R-AU-01-01	H. KUHLMANN	Resselg 3/2	AT-1040	Vienna	AT	hk@fluid.tuwien.ac.at	tel. +43-1/58801 32212	
52	R-AU-02	AIT- ÖFPZ Arsenal GmbH	R-AU-02-01	C. REICHL		AT-1210	Vienna	AT	christoph.reichl@ait.ac.at	Tel . +43 (505) 506 605	2005
53	R-AU-03	University of Applied Sciences FH Joanneum	R-AU-03-01	Herwig GROGGER	Alte Poststrasse 149	AT-8020	Graz	AT	herwig.grogger@fh-joanneum.at	tel + 43 316 5453 8457	2006
54	R-AU-04	Graz University of Technology	R-AU-04-01	Günter BRENN	Inffeldgasse 25/F	AT-1040	Graz	AT	Günter Brenn (brenn@fluidmech.tu-graz	+43 (316) 873 73 41	2007
55	R-AU-05	Johannes Kepler University Linz	R-AU-05-01	Philipp GITTLER	69, Altenbergerstrasse	AT-4040	LINZ	AT	philipp.gittler@jku.at	+43 732 2468 6461	2010
56	R-AU-06	Vienna University of TEchnology	R-AU-06-01	Christian BAUER	Getreidemarkt 9/302	AU-1060	WIEN	AU	cbauer@mail.tuwien.ac.at	+431 58801 31311	2010
57	R-B-01	Vrije Universiteit Brussel	R-B-01-01	C. LACOR	Pleinlaan 2	BE-1050	BRUSSEL	BE	chris@stro.vub.ac.be	tel. +32-2/629.28.78, 28.79	
58	R-B-02	Katholieke Universiteit Leuven	R-B-02-01	E. VAN DEN BULCK	Celestijnenlaan 300A	BE-3001	HEVERLEE	BE	Eric.VandenBulck@mech.kuleuven.be	tel. +32-16/32.25.09	
59	R-B-03	Universiteit Gent	R-B-03-01	E. DICK	Sint Pietersnieuwstraat 41	BE-9000	GENT	BE	erik.dick@ugent.de	+32-9/264.33.01	
60	R-B-04	Universite Catholique de Louvain	R-B-04-01	G. WINCKELMANS	Institute of Mechanics, Materials and Ci	BE-1348	LOUVAIN-LA-NEUVE	BE	gregoire.winckelmans@uclouvain.be	tel. +32-10/47.22.14/22.00	
61	R-B-05	von Karman Institute for Fluid Dynamics	R-B-05-01	Herman DECONINCK	72, Chaussee de Waterloo	BE-1640	RHODE-ST-GENESE	BE	vdb@vki.ac.be	tel. +32-2/359.96.11	
62	R-B-06	CENAERO Asbl	R-B-06-01	Michel DELANAYE	29, Rue de Frères Wright	BE-6041	GOSSELIES	BE		+32 71 91 93 30	2006
	R-B-06	CENAERO Asbl	R-B-06-02	Michel MILECAN	29, Rue de Frères Wright	BE-6041	GOSSELIES	BE		+32 71 91 93 30	2006
63	R-CA-01	University of Ottawa	R-CA-01	Stavros Tavoularis	Fredholmsgatan 2	SE-721 63	Västeras	SE	stromgts@westinghouse.com	+46214401529	NEW 2011
64	R-CH-13	DGM/IMHEF EPFL	R-CH-13-01	BENVENUTO, F.	CSCS-SNSC, Manno	CH-1015	LAUSANNE	CH			
65	R-CH-19	CSCS-SNSC, Manno	R-CH-19-01	BOULOUCHOS, K.	ETH Zentrum, Inst. Energietechnik	CH-1015	LAUSANNE	CH			
66	R-CH-02	ETH Zentrum, Inst. Energietechnik	R-CH-02-01	Dr. P. JANSOHN	Paul Scherrer Institute	CH-1015	LAUSANNE	CH			
67	R-CH-17	Paul Scherrer Institute	R-CH-17-01	FAVRAT, D.	EPFL STI ISE LENI	CH-1015	LAUSANNE	CH			
68	R-CH-04	EPFL STI ISE LENI	R-CH-04-01	KINZELBACH, W.	ETHZ Honggerberg	CH-1015	LAUSANNE	CH			
69	R-CH-11	ETHZ Honggerberg	R-CH-11-01	LEHNING, M.	Eidg. Inst. Für Schnee und	CH-1015	LAUSANNE	CH			
70	R-CH-10	Eidg. Inst. Für Schnee und	R-CH-10-01	OTT, P.	EPFL STI ISE LTT	CH-1015	LAUSANNE	CH			
71	R-CH-05	EPFL STI ISE LTT	R-CH-05-01	RUDOLF VON ROHN, P.	ETH Zürich, INST. Process Eng.	CH-1015	LAUSANNE	CH			
72	R-CH-14	ETH Zürich, INST. Process Eng.	R-CH-14-01	SCHLEISS, A.	EPFL ENAC ICARE LCH	CH-1015	LAUSANNE	CH			
73	R-CH-16	EPFL ENAC ICARE LCH	R-CH-16-01	THOME, J.R.	EPFL STI ISE LTCM	CH-1015	LAUSANNE	CH			
74	R-CH-09	EPFL STI ISE LTCM	R-CH-09-01	Yvonne Reinhardt	ETH Zurich, Inst Fluid Dyn. - Sonneggstra	CH-8092	ZURICH	CH			
75	R-CY-01	University of Cyprus	R-CY-01-01	Stavros KASSINOS	Dptmt of Mechanical and Manaufacturi	CY-1678	Nicosia	CY	kassinos@ucy.ac.cy	+357 (22) 89 22 96	
76	R-CZ-01	ASCR - Academy of Sciences of the Czech Repu	R-CZ-01-01	Prokop SEDLAK	Dolesjkova 5	CZ-18200	PRAGUE 8	CZ	sedlak@it.cas.cz	+420 286 890 383	
	R-CZ-01	ASCR - Academy of Sciences of the Czech Repu	R-CZ-01-02	ZBYNEK JANOUR	Dolesjkova 5	CZ-18200	PRAGUE 8	CZ		+420 286 890 383	
77	R-CZ-02	Czech Technical University in Prague	R-CZ-02-01	J. MACEK	C~VUT Praze, FS	CZ-16607	PRAHA 6	CZ	macek@fsid.cvut.cz	+420-224/352 504	
78	R-CZ-04	Brno University of Technology	R-CZ-04-01	P. RUDOLF	Faculty of Mechanical Engineering	CZ-62700	BRNO	CZ		+420-541/14 23 36	
79	R-D-01	Virtuhcon	R-D-01-01	Christian HASSE	Engineering and Chemical Engineering	DE-09596	Freiberg	DE	Christian.Hasse@iec.tu-freiberg.de	+49 (0)3731 39 4820	2010
80	R-D-02	RWTH Aachen	R-D-02-01	N. PETERS	Templergraben 64	DE-52056	AACHEN	DE	office@itv.rwth-aachen.de	+49-241/80.46.16	
81	R-D-03	RWTH Aachen	R-D-03-01	W. SCHRODER	Wullnerstrasse zw5 und 7	DE-52056	AACHEN	DE	ek@aia.rwth-Aachen.de	+49-241/80.54.10	
82	R-D-04	RWTH Aachen	R-D-04-01	R. KNEER	Eilfschornsteinstrabe 18	DE-52056	AACHEN	DE	info@wsa.rwth-aachen.de	+49-241/80.954.00	
83	R-D-05	Karlsruhe Institute of Technologie (KIT)	R-D-05-01	W. RODI	Campus South, Institute for Hydromech	DE-76131	Karlsruhe	DE	Rodi@uka.de	+49-721/608.35.35	
	R-D-05	Karlsruhe Institute of Technologie (KIT)	R-D-05-02	LANG, Cornelia	Campus South, Institute for Hydromech	DE-76131	Karlsruhe	DE	lang@ifh.uka.de	+49-721/608.35.35	
84	R-D-06	Goethe-Universitat Frankfurt	R-D-06-01	Gabriel WITTUM		DE-60325	Frankfurt am Main	DE	Prof. G. WITTUM (Eva-maria.ortinau@gc	+49-69 798 25258	
85	R-D-07	DLR	R-D-07-01	C. WAGNER		DE-37073	GOETTINGEN	DE		+49-551/709 22 61	
86	R-D-08	Technische Universitat Munchen	R-D-08-01	W. POLIFKE	Deptarment of Mechanical Engineering	DE-85747	GARCHING	DE	polifke@td.mw.tum.de	+49-89/289 16216	
87	R-D-09	Karlsruhe Institute of Technology (KiT)	R-D-09-01	Thomas SCHULENBERG	Campus Nord, IKET	DE-76128	KARLSRUHE	DE	suzanne.speek@hf.fzk.de	+49-7247/82.34.50	
88	R-D-10	Universitat der Bundeswehr Munchen	R-D-10-01	M. PFITZNER	Werner Heisenberg Weg 39	DE-85577	NEUBIBERG	DE	michael.pfitzner@unibw-muenchen.de	+49-89/60.04.21.03	
89	R-D-12	Hochschule Niederrhein	R-D-12-01	P. FARBER	Reinarzstr. 49	DE-47805	KREFELD	DE	peter.farber@hs-niederrhein.de	+49-2151/56.45.27	
90	R-D-13	University of Erlangen-Nuremberg	R-D-13-01	A. LEIPERTZ	Am Weichselgarten 8	DE-91058	ERLANGEN	DE	sek@uni-erlangen.de	+49-9131/852 99 00	
	R-D-13	University of Erlangen-Nuremberg	R-D-13-02	Lars Zigan	Am Weichselgarten 8	DE-91058	ERLANGEN	DE	lars.zigan@cbi.uni-erlangen.de		
91	R-D-15	University of Stuttgart	R-D-15-01	E. KRAMER	Pfaffenwaldring 21	DE-70550	STUTTGART	DE	kraemer@iag.uni-stuttgart.de	+49-711/685.34.01	
92	R-D-18	Technische Universitat Darmstadt	R-D-18-01	J. JANICKA	Petersenstrasse 30	DE-64287	DARMSTADT	DE	janicka@ekt.tu-darmstadt.de	+49-6151/16.21.57 /16.53.34	
	R-D-18	Technische Universitat Darmstadt	R-D-18-02	LANDENFELD, T	Petersenstrasse 30	DE-64287	DARMSTADT	DE		+49-6151/16.21.57 /16.53.34	

2011 MEMBERS LIST

213 members : 45 industrial members & 168 Research members

12 new & 21 cancellations

	Member ID	Company Name	Contact ID	Name	Address	Zip Code	City	Country	E-mail	Phone	date of entry
93	R-D-19	University of Stuttgart	R-D-19-01	E. LAURIEN	& Energy Systems (IKE)	DE-70550	STUTTGART	DE	laurien@ike.uni-Stuttgart.de	+49-711/685.24.15	
94	R-D-21	Martin -Luther-University Halle-Wittenberg	R-D-21-01	M. SOMMERFELD	Fachbereich Ingenieurwissenschaften,Ir	DE-06099	Halle/Saale	DE	martin.sommerfeld@iw.uni-halle.de	+49-3461/46 28 79	
95	R-D-22	Technische Universitat Berlin	R-D-22-01	F. THIELE	fur Stromungsmechanik CFD-Group	DE-10623	BERLIN	DE	hfi@pi.tu-berlin.de	+49-30/31 42 33 59	
96	R-D-23	Darmstadt University of Technology	R-D-23-01	M. SCHAEFER	Petersenstrasse 30	DE-64287	DARMSTADT	DE		+49-6151/28 77	
97	R-D-24	German Aerospace Center DLR	R-D-24-01	B. NOLL	Pfaffenwaldring 38-40	DE-70569	STUTTGART	DE		+49-711/68 62 413	
98	R-D-25	Darmstadt University of Technology	R-D-25-01	Cameron TROPEA	Petersenstrasse 30	DE-64287	DARMSTADT	DE		+49-6151/16.28.54	
	R-D-25	Darmstadt University of Technology	R-D-25-02	Suad JAKIRLIC	Petersenstrasse 30	DE-64287	DARMSTADT	DE			
99	R-D-26	GRS mbH	R-D-26-01	Martina SCHEUERER	Forschungsinstitute	DE-85748	GARCHING	DE	Martina.Scheuerer@grs.de	+49-89/320.04-401	
100	R-D-29	Karlsruhe Institute of Technology (KIT)	R-D-29-01	H. BOCKHORN	1, Engler-Bunte-Ring	DE-76131	Karlsruhe	DE		+49-721/608 21 20	
	R-D-29	Karlsruhe Institute of Technology (KIT)	R-D-29-02	Jordan Denev	1, Engler-Bunte-Ring	DE-76131	Karlsruhe	DE	jordan.denev@kit.edu		
101	R-D-30	University of Stuttgart	R-D-30-01	J.F. MAYER	Pfaffenwaldring 6	DE-70550	STUTTGART	DE	mayer@itsm.uni-stuttgart.de	+49 (711) 685 3544	2005
102	R-D-31	Karlsruhe Institute of Technology (KIT)	R-D-31-01	Franco MAGAGNATO	Kaiserstr. 12	DE-76131	Karlsruhe	DE	magagnato@mach.uni-karlsruhe.de	+497216083813	2005
	R-D-31	Karlsruhe Institute of Technology (KIT)	R-D-31-02	GABI, Martin	Kaiserstr. 12	DE-76131	Karlsruhe	DE	gabi@ism.uka.de	+497216083813	2005
103	R-D-32	University of Magdeburg "Otto von Guerick"	R-D-32-01	Dominque THEVENIN	& Technical Flows (LSS)	DE-39106	Magdeburg	DE	lss@vst.uni-magdeburg.de	.+49 (391) 67 18 570	
104	R-D-33	Technische Universitat Munchen	R-D-33-01	Nikolaus ADAMS	Boltzmannstr. 15	DE-85747	Garching	DE		+49 (89) 289 16138	2006
105	R-D-34	Friedrich-Alexander-Universitat Erlangen-Nurr	R-D-34-01	Antonio DELGADO	Cauerstr. 4	DE-91058	Erlangen	DE	adelgado@lstm.uni-erlangen.de	+49 (9131) 859501	2006
106	R-D-35	RFD-Leibniz University of Hannover	R-D-35-01	Joerg SEUME	Appelstrasse 9	DE-30167	Hannover	DE	seume@tfd.uni-hannover.de	+49 511 762 2732	2007
107	R-D-36	Karlsruhe Institute of Technology (KIT)	R-D-36-03	Hans-Jorg BAUER		DE-76131	Karlsruhe	DE		+49 (721) 608 3736	2008
108	R-D-37	Technische Universität München	R-D-37-01	Michael MANHART	Arcisstrabe 21	DE-80333	MUNICH	DE	Manhart@bv.tum.de	+49 (89) 289 22433	2008
109	R-D-38	TU Dresden	R-D-38-01	Jochen FROHLICH	Helmholtzstrasse 10	DE-01069	Dresden	DE	Jochen Fröhlich (sekretariat@ism.mw.tu	+49 (351) 463 34736	2009
110	R-D-39	Karlsruher Institut für Technologie (KIT)	R-D-39-01	Torsten SCHENKEL	12, Kaiserstrasse	DE-76131	Karlsruhe	DE	Torsten.schenkel@kit.edu	+49 (721) 608 3031	
111	R-D-40	Helmut- Schmidt - University Hamburg	R-D-40-01	Michael BREUER	Holstenhofweg 85	DE-22043	HAMBURG	DE	breuer@hsu-hh.de	+49 40 6541 2724	2010
112	R-D-41	Universität Erlangen-Nürnberg	R-D-41-01	Stefan BECKER	Cauerstr.4	DE-91058	ERLANGEN	DE	sb@ipat.uni-erlangen.de	+49 9131 8529455	
113	R-D-42	Universität der Bundeswehr München	R-D-42-01	Christian Kaehler	Institute of Fluid Mechanics & Aerodyna	DE-85577	NEUBIBERG	DE	christian.kaelher@unibw.de	+498960042145	NEW 2011
114	R-D-43	Karlsruhe Institute for Technology	R-D-43-02	HUBER, Rainer	Campus Nord-Institute for Neutron Phy	DE-76021	Kkarlsruhe	DE	rainer.huber@kit.edu	+49 (7247) 82 5443	
	R-D-43	Karlsruhe Institute for Technology	R-D-43-01	Robert STIEGLITZ	Campus Nord-Institute for Neutron Phy	DE-76021	Kkarlsruhe	DE	Robert.Stieglitz@inr.fzk.de ; Robert.Stieglitz@kit.edu		
115	R-D-44	Hochschule Ansbach	R-D-44	Wolfgang Schlueter	Residenzstrasse 8	DE-91522	Ansbach	DE	wolfgang.schlueter@hs-ansbach.de	+499814877317	NEW 2011
116	R-DK-01	Technical University of Denmark	R-DK-01-01	Knud Erik MEYER	Department of Mechanical Engineering	DK-2800	Lyngby	DK	kem@mek.dtu.dk	+45 (4525) 43 37	
117	R-DK-02	Aalborg University Esbjerg	R-DK-02-01	B.H. HJERTAGER	Chemical Fluid Flow Processes (CHEFF)	DK-6700	ESBJERG	DK	bhh@aaue.dk	+45-79/12.76.156	
118	R-DK-03	Risoe National Laboratory	R-DK-03-01	J. MANN	attn: Anette Werner	DK-4000	ROSKILDE	DK	jakob.mann@risoe.dk	+45-46/77.50.19	
119	R-DK-04	Aalborg University	R-DK-04-01	L. ROSENDAHL	Pontoppidanstraede 101	DK-9220	AALBORG	DK	lar@iet.aau.dk	+45-96/35 92 63	
120	R-E-01	Universidad Politenica de Catalunya	R-E-01-01	E. ONATE	Director of C.I.M.N.E	ES-08034	BARCELONA	ES	onate@cimne.upc.es	+ 34-3/205.70.16	
121	R-E-04	Universidad Rovira I Virgili	R-E-04-01	J. A. FERRE	Campus Sescelades	ES-43707	Tarragona	ES	jaferre@etseq.urv.es	+34 (977) 559 637	
122	R-E-05	Universidad Politécnica de Madrid	R-E-05-01	Vassilis THEOFILIS	Avda. Ramiro de Maeztu 7	ES-28040	MADRID	ES	vassilios.theofilis@upm.es	+34 (91) 336 3298	
123	R-F-01	Centrale Lyon Innovation	R-F-01-01	D. JEANDEL	Centre Scientifique Auguste Moiroux	FR-69134	ECULLY cedex	FR	denis.jeandel@ec-lyon.fr	+33-4/72 18 61 72	
124	R-F-07	Universite de POITIERS	R-F-07-01	J.P. BONNET	Service Financiers	FR-86022	POITIERS Cedex	FR	jean-paul.bonnet@lea.univ-poitiers.fr	+33-5-49.45.30.63	
125	R-F-11	CNRS	R-F-11-01	P. LE QUERE	LIMSI - UPR 3251 - 0449	FR-91403	ORSAY	FR	plq@limsi.fr	+33-1/69.85.80.76	
126	R-F-12	Ecole Centrale de Nantes	R-F-12-01	M. VISIONNEAU	1, rue de la Noe, BP 92101	FR-44321	NANTES	FR		+33-16.78.40.37	
127	R-F-13	ONERA	R-F-13-01	Laurent JACQUIN	8, rue des Vertugadins	FR-92190	MEUDON	FR	Laurent Jacquin (jacquin@onera.fr)	+33-1/46 23.51.61	
128	R-F-15	Universite de la Rochelle	R-F-15-01	F. ALLARD	Av. Marillac	FR-17026	LA ROCHELLE	FR		+33-5/46.45.86.24	
	R-F-15	Universite de la Rochelle	R-F-15-02	P. JOUBERT	Av. Marillac	FR-17026	LA ROCHELLE	FR	patrice.joubert@univ-lr.fr	+33-5/46.45.86.24	
129	R-F-16	Institut de Mécanique des Fluides de Toulouse	R-F-16-01	Marianna BRAZA	Ercoftac correspondent for IMFT	FR-31400	TOULOUSE	FR	marianna.braza@imft.fr	+33-5/61.28.58.39	
130	R-F-17	CEA/SACLAY	R-F-17-01	Alain BENGAOUER	DM2S/SFME/LTMF	FR-91191	GIF-SUR-YVETTE Cedex	FR	alain.bengaouer@cea.fr	+33-1/69.08.84.09	
131	R-F-18	CNRS	R-F-18-01	Jean-Paul DUSSAUGE	Technopole de Chateau Gombert	FR-13453	MARSEILLE CEDEX 13	FR	dussauge@marius.univ-mrs.fr	+33-4 91 10 69 07	
132	R-F-21	IMFS	R-F-21-01	Yannick HOARAU	UDS	FR-67000	STRASBOURG	FR	hoarau@imfs.u-strasbg.fr	+33 (3) 90 24 28 94	2005
133	R-F-22	CNRS	R-F-22-01	Luminita DANAILA	UMR 6614 CORIA - 0974	FR-76801	Saint Etienne du Rouvray	FR	luminita.danaila@coria.fr	+33 2 32 95 37 02	2006
134	R-F-23	ONERA	R-F-23-01	Jean-Marie LE GOUEZ	29 Avenue de la division Leclerc	FR-92322	CHATILLON Cedex	FR	Jean-Marie.Le_Gouez@onera.fr	+33 1 43 73 42 62	2007
135	R-F-24	European Centre of Research and Advanced	R-F-24-01	Laurent GICQUEL	CFD Team	FR-31057	TOULOUSE	FR	lgicquel@cerfacs.fr	+33 (561) 19 31 31	
136	R-FIN-01	Helsinki University of Technology	R-FIN-01-01	Mizanur RAHMAN	Department of Applied Mechanics	FI-02015	ESPOO	FI	Mizanur Rahman (Rahman@tkk.fi)	+358-9/451.3994	
137	R-FIN-02	Tampere University of Technology - TUT	R-FIN-02-01	Accounting	Department	FI-33101	TAMPERE	FI	ostolaskut@tut.fi	+358-31/316.20.22	
	R-FIN-02	Tampere University of Technology - TUT	R-FIN-02-02	Antti OKSANEN	TTY-säätiö	FI-33101	TAMPERE	FI	antti.oksanen@cc.tut.fi	+358-31/316.20.22	
138	R-FIN-03	Technical Research Centre of Finland	R-FIN-03-01	Risto HUHTANEN	Process Simulation	FI-02044	VTT	FI	risto.huhtanen@vtt.fi	+358-9/456.50.51	
139	R-FIN-04	University of Kuopio	R-FIN-04-02	Heidi Niskanen	P.O Box 1627	FI-70211	KUOPIO	FI	jari.hamalainen@uku.fi	+358-17/16 22 79	
140	R-FIN-05	University of Jyväskylä	R-FIN-05-01	Markku KATAJA	Department of Physics	FI-01051	Jyväskylä	FI	'markku.kataja@jyu.fi	+358 14 260 23 52	
141	R-FIN-06	Lappeenranta University of Technology	R-FIN-06-01	Prof. Jari Hämäläinen	PO Box 20	FI-53851	Lappeenranta	FI	jari.hamalainen@lut.fi	+358-40-5961999	NEW 2011
142	R-GR-01	National Technical University of Athens	R-GR-01-01	K.C. GIANNAKOGLOU	Parallel CFD & Optimization Unit	GR-15710	ATHENS	GR	Kgianna@central.ntua.gr	+30-210 772 1636	
143	R-GR-02	Aristotle University of Thessaloniki	R-GR-02-01	A. GOULAS	Dept. of Mechanical Engineering	GR-54006	THESSALONIKI	GR	goulas@vergina.eng.auth.gr	+302310996001	
144	R-GR-03	Aristotle University of Thessaloniki	R-GR-03-01	KASTRINAKIS	Department of Chemical Engineering	GR-54006	THESSALONIKI	GR	Kastrinakis (kastr@auth.gr)	+302310996231	
145	R-GR-06	University of West Macedonia	R-GR-06-01	J. BARTZIS	and Management of Energy Resources	GR-50100	Kozani	GR	Prof. J. BARTZIS (bartzis@ipta.demokrito	+30-1/652 50 04	
146	R-GR-07	University of Patras	R-GR-07-01	Thrassos PANIDIS	Dpt. of Mechanical Engineering and Aer	GR-26504	Patras -Rion	GR	panidis@mech.upatras.gr	+30 (261) 0997242	2006

2011 MEMBERS LIST

213 members : 45 industrial members & 168 Research members

12 new & 21 cancellations

	Member ID	Company Name	Contact ID	Name	Address	Zip Code	City	Country	E-mail	Phone	date of entry
147	R-GR-09	University of Thessaly	R-GR-09-01	Nicholas S. VLACHOS	Department of Mechanical Engineering	GR-383 34	VOLOS	GR	vlachos@mie.uth.gr	+30 24210 74094	2005
148	R-GR-10	University of Western Macedonia	R-GR-10-01	Ananias TOMBOULIDES	Research Committee UOWM	GR-50100	Kozani	GR	Ananias Tomboulides (atompoulidis@uo	+302461056630	2007
149	R-H-01	Technical University of Budapest	R-H-01-01	T. LAJOS		HU-1111	BUDAPEST	HU	lajos@simba.ara.bme.hu	+36-1/463.40.72	
150	R-HR-01	University of Zagreb	R-HR-01-01	Neven DUIC	Faculty of Mechanical Eng. & Naval Arcl	HR-10000	ZAGREB	HR	Neven Duic (neven.duic@fsb.hr)	+385 (1) 6168126	2009
151	R-I-01	University Of Florence	R-I-01-01	Francesco MARTELLI	Via S. Marta 3	IT-50139	FIRENZE	IT	martelli@ing.unifi.it	+39 (-055) /479.19.25	
152	R-I-02	Universita Degli Studi di Trieste	R-I-02-01	C. POLONI	Via A.Valerio 10	IT-34127	TRIESTE	IT	poloni@univ.trieste.it	+39-040/676.38.08	
153	R-I-03	Politecnico di Milano	R-I-03-01	Ennio MACCHI	Head of Departement	IT-20156	MILAN	IT	ennio.macchi@polimi.it	+39 02 2399 3883	2010
154	R-I-04	Universita di Roma "La Sapienza"	R-I-04-01	Franco Rispoli	Via Eudossiana 18	IT-00184	ROMA	IT	franco.rispoli@uniroma1.it	+39.06 44585 225	
155	R-I-08	Universita di Genova	R-I-08-01	F. PITTALUGA	Via Montallegro 1	IT-16145	GENOVA	IT		+390103532460	
156	R-I-11	Instituto Ricerche sulla Combustione - IRC -CN	R-I-11-01	Valeria DI SARLI	Via Diocleziano 328	IT-80124	Napoly	IT	Gennaro Russo (Grusso@irc.cnr.it)	+39 0817 622 673	2008
	R-I-11	Instituto Ricerche sulla Combustione - IRC -CN	R-I-11-02	Gennaro Russo	Via Diocleziano 328	IT-80124	Napoly	IT	Grusso@irc.cnr.it	+39 (0817) 622 673	2008
	R-I-11	Instituto Ricerche sulla Combustione - IRC -CN	R-I-11-03	Almerinda di Benedetto	Via Diocleziano 328	IT-80124	Napoly	IT	dibenede@irc.cnr.it	+39 0817 622 673	2008
157	R-I-12	University of Pisa	R-I-12-01	Attilio SALVETTI	Via G. Caruso 8	IT-56122	PISA	IT	Prof. Maria Vittoria Salvetti (mv.salvetti@	+39 (050) 2217211	
	R-I-12	University of Pisa	R-I-12-02	Maria Vittoria SALVETTI	Via G. Caruso 8	IT-56122	PISA	IT	Prof. Maria Vittoria Salvetti (mv.salvetti@	+39 (050) 2217211	
158	R-I-13	Università degli Studi dell'Aquila	R-I-13	Ing. Valerio Gaioni	Via G. Gronchi, 18 – zona industriale di I	IT-67100	Växjö	IT	valerio.gaioni@univaq.it	+390862434319	NEW 2011
159	R-L-01	Université du Luxembourg	R-L-01-01	Bernhard PETERS	et de la Communication - Comptabilité	LU-1511	Luxembourg	LU	Prof.Dr.-Ing Bernhard Peters(bernhard.p	+352 (46) 66 44 510	
160	R-N-01	Norwegian University of Science and Technol	R-N-01-01	H.I. ANDERSSON	Kolbjorn Hejes vei 2	NO-7491	TRONDHEIM	NO	helge.i.andersson@mtf.ntnu.no	+47.73.593.556	
161	R-N-03	Norwegian Defence Research Establishment	R-N-03-01	B.A. PETTERSON REIF	P.O Box 25	NO-2027	KJELLER	NO	bre@ffi.no	+47-63/80 75 48	
162	R-N-04	Institute for Energy Technology	R-N-04-01	Olaf SKJAERAASEN	P.O Box 40	NO-2027	KJELLER	NO	Olaf Skjæraasen (Olaf.Skjaeraasen@ife.n	+47-63/80 62 20	
163	R-NL-01	Deltares	R-NL-01-01	Geert KEETELS	Rotterdamseweg 185	NL-2600 MH	DELFT	NL	geert.keetels@deltares.nl	+31 88 335 7937	
164	R-NL-02	TNO Science and Industry	R-NL-02-01	A. TWERDA	P.O Box 155	NL-2600 AD	DELFT	NL	aris.twerda@tno.nl	+31-15 2692391	
165	R-NL-03	Delft University of Technology	R-NL-03-01	J. WESTERWEEL	SSC - F&C - Accounts Payable	NL-2628 GA	DELFT	NL	J.Westerweel@wbmt.tudelft.nl	+31-15-278 6887	
166	R-NL-04	Delft University of Technology	R-NL-04-01	H.E.A. VAN DEN AKKER	SSC - F&C - Accounts Payable	NL-2628 GA	DELFT	NL	H.E.A.vandenAkker@tudelft.nl	+31-(0)15-2785000	
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167	R-NL-05	Maritime Research Institute Netherlands	R-NL-05-01	Martin HOEKSTRA	MARIN	NL-6700 AA	WAGENINGEN	NL	m.hoekstra@marin.nl	+31-317/49 39 11	
168	R-NL-06	NRG Energy Engineering	R-NL-06-01	E.M.J KOMEN	P.O Box 25 - Westerduinweg 3	NL-1755 ZG	PETTEN	NL	komen@nrg.eu	+31224564335	
169	R-NL-07	Delft University of Technology	R-NL-07-01	G. OOMS	SSC - F&C - Accounts Payable	NL-2628 GA	DELFT	NL	g.ooms@wbmt.tudelft.nl	+31.15.278.1176	
170	R-NL-09	Delft University of Technology	R-NL-09-01	P. G. BAKKER	SSC - F&C - Accounts Payable	NL-2628 AL	DELFT	NL	p.g.bakker@lr.tudelft.nl	+31-15-278.59.07	
171	R-NL-10	Delft University of Technology	R-NL-10-01	D. J. E. M ROEKAERTS	MSP/ReactFlows & Explosions	NL-2628 GA	DELFT	NL	D.J.E.M.Roekaerts@tudelft.nl	+31 (0)15 27 82470	
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173	R-NL-12	TU Eindhoven	R-NL-12-01	G.J.F. VAN HEIJST	Department of Physics	NL-5600 MB	EINDHOVEN	NL	G.J.F.v.Heijst@tue.nl	+31-40/247.27.22	
174	R-NL-13	University of Twente	R-NL-13-01	J. J. W. VAN DER VEGT		NL-7500 AE	ENSCHEDE	NL	j.j.w.vandervegt@math.utwente.nl	+31-53/489.56.28	
175	R-NL-14	RU Groningen	R-NL-14-01	A.E.P. VELDMAN	P.O Box 800	NL-9747 AC	GRONINGEN	NL	A.E.P.Veldman@math.rug.nl	+31-50/363.39.88	
176	R-NL-15	TU Eindhoven	R-NL-15-01	A.A. VAN STEENHOVEN	Department of Mechanical Engineering	NL-5600	EINDHOVEN	NL	a.a.v.steenhoven@tue.nl	+31-40/247.21.32	
177	R-NL-16	TU Eindhoven	R-NL-16-01	J.G. M (Hans) KUERTEN	Department of Mechanical Engineering	NL-5600	EINDHOVEN	NL	j.g.m.kuerten@tue.nl	+31 (40) 247 35 17	2009
178	R-P-01	Instituto Superior Tecnico	R-P-01-01	J. PEREIRA	Av. Rovisco Pais	PT-1049-001	LISBOA	PT	Jose@navier.ist.utl.pt	+351-21/841.73.68	
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179	R-P-03	University of Coimbra - FCTUC	R-P-03-01	Maria DA GRACA RASTEIRO	Department of Chemical Engineering	PT-3030-790	Coimbra	PT	Maria da Graça Rasteiro (mgr@eq.uc.pt)	+351239798700	2009
180	R-P-04	Universidade do Porto	R-P-04-01	Fernando TAVARES DE PINI	Faculdade de Engenharia	PT-4200-465	PORTO	PT	Fernando Tavares de Pinho	+351 (22) 508 1597	
181	R-PL-01	Technical University of Lodz	R-PL-01-01	Antoni SMOLNY	Wolczanska 219/223	PL-90924	LODZ	PL	smolny@p.lodz.pl	+ 48.42.631.2364	
182	R-PL-02	University of Mining and Metallurgy	R-PL-02-01	Janusz S. SZMYD	& Metallurgical Engineering	PL-30059	KRAKOW	PL	janusz@uci.agh.edu.pl	+48-12/617.26.94	
183	R-PL-03	Czestochowa University of Technology	R-PL-03-01	Dariusz ASENDRYCH	Al. Armii Krajowej 21	PL-42-200	CZESTOCHOWA	PL	darek@imc.pcz.czest.pl	+48-34/325.05.42	
	R-PL-03	Czestochowa University of Technology	R-PL-03-02	Stanislaw DROBNIAK	Al. Armii Krajowej 21	PL-42-200	CZESTOCHOWA	PL		+48-34/325.05.42	
184	R-PL-04	Institute of Fluid-Flow Machinery PAS	R-PL-04-01	P. DOERFFER	ulFiszera 14	PL-80952	GDANSK	PL	P. DOERFFER (doerffer@imp.gda.pl)		
185	R-PL-05	Warsaw University of Technology	R-PL-05-01	K. KEDZIOR	pl. Politechnik 1	PL-00665	WARSZAWA	PL	itlims@meil.pw.edu.pl	+48-22/660.74.44	
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186	R-PL-06	Silesian Technical University	R-PL-06-01	Tadeusz CHMIELNIAK	ul. Konarskiego 18	PL-44-100	GLIWICE	PL	Prof. T. CHMIELNIAK (tadeusz.chmielniak	+48.32.237.21.96	
187	R-PL-07	Warsaw University of Technology	R-PL-07-01	M.E. PONIEWSKI	Institute of Mechanical Engineering	PL-09-400	PLOCK	PL	meponiewski@pw.plock.pl		
188	R-PL-08	Technical University Poznan	R-PL-08-01	Antoni SMOLNY	Accountind Department - attn: Jolanta I	PL-60965	POZNAN PL M SKTODOWSI	PL	smolny@p.lodz.pl	+48-61/665 21 11	
	R-PL-08	Technical University Poznan	R-PL-08-02	E. TULISZKA-SZNITKO	Accountind Department - attn: Jolanta I	PL-60965	POZNAN PL M SKTODOWSI	PL	ewa.tuliszka-sznitko@put.poznan.pl	+48-61/665 21 11	
189	R-PL-09	Polish Academy of Sciences	R-PL-09-01	Tomasz A. KOWALEWSKI	IPPT PAN	PL-02-106	Warsaw	PL	Polish Academy of Sciences (tkowalewsk	+4822 8269803	2008
190	R-R-01	Nuclear Safety Institute	R-R-01-01	Ivan KOROTKIN	52 Bolshaya Tulskaya	RU-111116	MOSCOW	RU	korotkin@ibrae.ac.ru	+7 495 955 66 58	2010
191	R-S-02	The Royal Institute of Technology	R-S-02-01	A. JOHANSSON		SE-114 32	STOCKHOLM	SE	johansson@mech.kth.se	+46-8/790.71.51	
192	R-S-05	LTH	R-S-05-01	L. FUCHS	P.O.Box 118	SE-22 100	LUND	SE	laszlo.Fuchs@vok.lth.se	+46.46.222.4300	
193	R-S-07	FOI , Swedish Defence Research	R-S-07-01	S. WALLIN	Division of Systems Technology	SE-16490	STOCKHOLM	SE	stefan.wallin@foi.se	+46 - 8 - 5550 3184	
194	R-S-08	Lulea University of Technology	R-S-08-01	Staffan LUNDSTROM	Department of Mechanical Engineering	SE-971 87	LULEA	SE	staffan.lundstrom@ltu.se	+46 920 49 23 92	
195	R-S-09	Chalmers University of Technology	R-S-09-01	Lars DAVIDSON	Department of Applied Mechanics	SE-412 96	Gotheburg	SE	Lars Davidson (lars.davidson@chalmers.s	+46-31-772.14.04	
196	R-S-10	KTH	R-S-10-01	Gunilla EFRAIMSSON	Teknikringen 8	SE-10044	STOCKHOLM	SE	gef@kth.se	+46 8790 64 31	2010
197	R-S-11	Energy Technology Center	R-S-11	Rikard Gebart	Box 726	SE-94128	Pitea	SE	rikard.gebart@etcpitea.se	+46911232380	NEW 2011
198	R-SL-01	University of Ljubljana	R-SL-01-01	I. ZUN	Faculty of Mechanical Engineering	SI-1000	LJUBLJANA	SI	iztok.zun@fs.uni-lj.si	+386-61/17.71.403	

2011 MEMBERS LIST

213 members : 45 industrial members & 168 Research members

12 new & 21 cancellations

	Member ID	Company Name	Contact ID	Name	Address	Zip Code	City	Country	E-mail	Phone	date of entry
199	R-SL-02	University of Maribor - Institute of Power	R-SL-02-01	Skerget LEOPOLD	Faculty of Mechanical Engineering	SI-2000	Maribor	SI	leo@uni-mb.si	+386-2/220 7770	
200	R-SL-03	University of Ljubljana	R-SL-03-01	Brane SIROK	Askerceva 6	SI-1000	LJUBLJANA	SI	brane.sirok@fs.uni-lj.si	+ 386 1 4771 410	2005
	R-SL-03	University of Ljubljana	R-SL-03-02	Janez NOSE	Askerceva 6	SI-1000	LJUBLJANA	SI		+ 386 1 4771 410	2005
201	R-UA-01	Institute of Hydromechanics	R-UA-01-01	Viktor GRINCHENKO	8/4 zheljabov str.	UA-03680	Kiev	UA	grinchenko@hydromech.com.ua	+38 (095) 53 16627	
202	R-UK-02	Imperial College London	R-UK-02-01	Professor W P Jones	Department of Mechanical Engineering	GB-SW7 2AZ	LONDON	GB	w.jones@imperial.ac.uk	+44 (0)20 7594 7037/7033	
203	R-UK-04	University of Southampton	R-UK-04-01	John SHRIMPTON	Highfield	GB-SO17 1BJ	SOUTHAMPTON	GB	john.shrimpton@soton.ac.uk	+44-23/80 59 33 94	
204	R-UK-09	Health & Safety Laboratory	R-UK-09-01	Matthew IVINGS	Harpur Hill	GB-SK17 9JN	DERBYSHIRE	GB	matthew.ivings@hsl.gov.uk	+44-1298/218133	
205	R-UK-16	UMIST Thermo Fluids Division	R-UK-16-01	Tim J. CRAFT	& Manufacturing Engineering	GB-M60 1QD	MANCHESTER	GB	tim.craft@manchester.ac.uk	+44-161/200 87 28	
206	R-UK-20	Cranfield University	R-UK-20-01	K. KNOWLES	Defence Academy of the UK	GB-SN6 8LA	SWINDON, WILTSHIRE	GB	k.knowles@cranfield.ac.uk	+44-1793/785 354	
207	R-UK-21	Nottingham University	R-UK-21-01	Kwing-So CHOI	University Park - Attn: Julie Wells	GB-NG7 2RD	NOTTINGHAM	GB	Kwing-so.Choi@nottingham.ac.uk	+44-011/59.51.37.92	
208	R-UK-23	Imperial College	R-UK-23-01	J.F. MORRISON		GB-SW7 2AZ	LONDON	GB	j.morrison@imperial.ac.uk	+44 (0)20 7594 5067	
209	R-UK-26	University of Cambridge	R-UK-26-01	W.N. DAWES	Trumpington Street	GB-CB2 1PZ	CAMBRIDGE	GB	wnd@eng.cam.ac.uk	+44 1223 3 37590	
210	R-UK-28	Cranfield University	R-UK-28-01	D. DRIKAKIS		GB-MK43 OAL	Cranfield Bedfordshire	GB	d.drikakis@cranfield.ac.uk	+44 1234 754796	2005
211	R-UK-29	University of Liverpool	R-UK-29-01	George N. BARAKOS	Brown Hill	GB-L69 3GH	LIVERPOOL	GB	g.barakos@liverpool.ac.uk	+44 0151 7944849	2006
212	R-UK-30	University of Sheffield	R-UK-30-01	Franck NICOLLEAU	Mappin Street	GB-S1 3JD	Sheffield	GB	Franck Nicolleau (F.Nicolleau@sheffield.a	+44 (114) 222 7867	2009
213	R-US-01	Texas A&M University	R-US-01-01	HASSAN, Yassin	College Station	US-77843	Texas	US	y-hassan@tamu.edu	+1 979 845 7090	2010

2011 CANCELLATION LIST

21 Cancellations

	Member ID	Company Name	Contact ID	Address	Zip Code	City	Country	Phone
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3	NRC-I-01	Institute of Thermal Fluid Dynamics	Gian Piero CELATA	Energy and Sustainable Economic Development	IT- 001936	ROME	IT	+39 06 3048 3905
4	R-CY-01	University of Cyprus	Stavros KASSINOS	Dptmt of Mechanical and Manufacturing Engineering	CY-1678	Nicosia	CY	+357 (22) 89 22 96
5	R-D-09	Karlsruhe Institute of Technology (KiT)	Thomas SCHULENBERG		DE-76128	KARLSRUHE	DE	+49-7247/82.34.50
6	R-D-27	University of Rostock	E. HASSEL	Albert EinsteinStrasse 2	DE-18059	ROSTOCK	DE	+49-381/498.32.27
7	R-F-02	L.E.G.I	LESIEUR	INPG	FR-38041	Grenoble Cedex	FR	+33 -4 /76 82 50 48
8	R-F-15	Université de la Rochelle	F. ALLARD	Av. Marillac	FR-17026	LA ROCHELLE	FR	+33-5/46.45.86.24
9	R-F-17	CEA/SACLAY	Alain BENGAOUER	DM2S/SFME/LTMF	FR-91191	GIF-SUR-YVETTE Cedex	FR	+33-1/69.08.84.09
10	R-F-20	Institut Jean-Le-Rond d'Alembert	G.A. GEROLYMOS	Cases 161-162, Barre 55/65	FR-75252	PARIS	FR	+33-1/44 27 87 02
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12	R-P-01	Instituto Superior Tecnico	J. PEREIRA	Av. Rovisco Pais 1	PT-1049-001	LISBOA	PT	+351-21/841.73.68
13	R-PL-02	University of Mining and Metallurgy	Janusz S. SZMYD	& Metallurgical Engineering	PL-30059	KRAKOW	PL	+48-12/617.26.94
14	R-PL-03	Czestochowa University of Technology	Dariusz ASENDRYCH	Al. Armii Krajowej 21	PL-42-200	CZESTOCHOWA	PL	+48-34/325.05.42
15	R-PL-06	Silesian Technical University	Tadeusz CHMIELNIAK	ulKonarskiego 18	PL-44-100	GLIWICE	PL	+48.32.237.21.96
16	R-PL-07	Warsaw University of Technology	M.E. PONIEWSKI	Institute of Mechanical Engineering	PL-09-400	PLOCK	PL	
17	R-S-05	LTH	L. FUCHS	P.O.Box 118	SE-22 100	LUND	SE	+46.46.222.4300
18	R-UK-06	University of Cambridge		DAMTP	GB-CB 3 9EW	CAMBRIDGE	GB	+44 (-1223) /33.79.00
19	R-UK-16	UMIST Thermo Fluids Division	Tim J. CRAFT	& Manufacturing Engineering	GB-M60 1QD	MANCHESTER	GB	+44-161/200 87 28
20	R-UK-26	University of Cambridge	W.N. DAWES	Trumpington Street	GB-CB2 1PZ	CAMBRIDGE	GB	+44 1223 3 37590
21	SME-UK-21	Renuda UK	Nicolas A. TONELLO	35 Charleville Road	GB-W14 9JJ	LONDON	GB	+44 (207) 385 0507

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6	Massmann Internationale Buchhandlung GmbH	Kay Massmann	1	150			NO	INDUSTRY
7	Physikalisch-Technische Bundesanstalt - Bibliothek	Verena Gundlach			1	90	NO	ACADEMIC
8	J. Eberspächer GmbH & Co	Marie-Hieber			1	180	NO	INDUSTRY
9	TU Dresden	Christian Korn	1	75	1	90	NO	ACADEMIC
10	ATB Leibniz-Institut für Agrartechnik	Dr. Uta Tietz	1	75			NO	ACADEMIC
11	Khalid Abdellaoui		1	75	1	90	NO	ACADEMIC
12	Ganghofer GmbH	Wilhelmine Füzér	1	150			NO	INDUSTRY
13	Hochschule Bremerhaven	Malte Wiedmann	1	75			NO	ACADEMIC
14	DONG Energy Power	Soren Hvid			1	180	NO	INDUSTRY
15	San Piero a Grado Nuclear Research Group	Fabio Moretti			1	90	NO	ACADEMIC
16	MTU India Pvt Ltd - EARC	Yogesh Kajale	1	150			NO	INDUSTRY
17	CAE Solutions Co	Masato Otsuki	1	150			NO	INDUSTRY
18	Ismail Idris		1	75	1	90	NO	ACADEMIC
19	Toyo Engineering Corporation	Dr Yuichiro Wakashima			1	180	NO	INDUSTRY
20	JungUk Yoon				1	90	NO	ACADEMIC
21	Hwan Young Jan		1	150			NO	INDUSTRY
22	Building Physics and Systems	Prof. dr. ir. B. Blocken			1	90	NO	ACADEMIC
23	Anton Gryzlov				1	180	NO	INDUSTRY

Best Practice Guidelines Statement 2011

BPG Version 2000: 26 Books sold for an amount of 2717€ (excluding shipcosts: 288€)
BPG Version 2008: 21 Books sold for an amount of 2432€ (excluding shipcosts: 219€)

			BPG Version 2000		BPG Version 2008			
N°	Institution / Company	Contact Name	Quantity	Price	Quantity	Price	Member	Type
24	Muhammad Adnan Qureshi		1	150			NO	INDUSTRY
25	Julio Lograd de Figueiredo		1	75			NO	ACADEMIC
26	Alan Craig		1	150	1	180	NO	INDUSTRY
27	Cranfield University	Sue Bennett			1	90	NO	ACADEMIC
28	Zenetex	Katherine Workman	1	150	1	180	NO	INDUSTRY
29	Parker Hannifin Corporation	Kristi Anderson	1	150	1	180	NO	INDUSTRY
30	Philips-Respironics	Richard Alfieri	1	150			NO	INDUSTRY
31	VATTENFALL Research & Development AB	Johan WESTIN			1	1	I-S-03	INDUSTRY
32	Katholieke Universiteit Leuven	E. VAN DEN BULCK	1	75	1	90	R-B-02	ACADEMIC
33	Istituto di Ricerche sulla Combustione - IRC -CNR	Valeria DI SARLI			1	1	R-I-11	ACADEMIC
34	Polish Academy of Sciences	Prof. Tomasz A. Kowalewski	1	1			R-PL-09	ACADEMIC
35	Lulea University of Technology	Staffan LUNDSTROM	3	91			R-S-08	ACADEMIC
36	BP International	James Carnell	1	150	1	180	NO	INDUSTRY
37	Panagiota Karava				1	90	NO	ACADEMIC
		Total	26	2717	21	2432		

	Past adjustment	
Customer	Reason	Amount
Karlsruhe Institute for Technology	Adjustment sale 2010	54
Office of Naval Research Global	Adjustment sale 2009	-87
University of Castilla La Mancha	Adjustment sale 2010	99
ZHAW	Adjustment sale 2010	99

	BUDGET 2012
REVENUE	**265.293,00**
1.SUBSCRIPTION	**129.500,00**
Research Members	77.000,00
Industry Members - 11k € income from new membership I	50.000,00
National Research Centers Members	2.000,00
Associated Members	500,00
4. INDUSTRIAL RELATED ACTIVITIES	**135.793,00**
4.1 BEST PRACTICE GUIDELINE	**5.600,00**
Single-Phase Flows	2.300,00
Dispersed Multi-Phase Flows	3.300,00
4.2 SEMINARS	**54.693,00**
Best Practice for Engineering CFD	19.250,00
Dispersed Multi-Phase Flows	9.481,00
Hybrid RANS-LES Methods For Industrial	5.400,00
Uncertainty Quantification in Design & Simulation	9.981,00
Fluid Mechanics for Medics	10.581,00
4. 3 PROJECTS	**72.500,00**
European Project E-CAERO	72.500,00
5. FINANCIAL	**3.000,00**
Interest/ Exchange rate form Banks accounts	3.000,00

	BUDGET 2012
EXPENDITURE	**-272.300,00**
1. ADMINISTRATION	**-96.500,00**
ERCOFTAC Chairman expenses	-2.000,00
SPC Chairman expenses	-2.000,00
ERCOFTAC Administration Office UK	-86.500,00
Website Maintenance	-5.000,00
Eccomas membership	-1.000,00
3. WORKSHOPS	**-24.000,00**
4. SUMMERSCHOOL	**-3.000,00**
5. SPECIAL INTEREST GROUPS	**-24.000,00**
6. INDUSTRIAL RELATED ACTIVITIES	**-124.800,00**
6.1 BEST PRACTICE GUIDELINE	**-5.500,00**
Authors Fees	-5.000,00
Credit Card Payment	-500,00
6.2 KNOWLEDGE BASE	**-17.000,00**
Knowledge Base Consulting	-15.000,00
Wiki website hosting	-2.000,00
6.3 SEMINARS	**-6.000,00**
Autumn Festival - DA VINCI	-6.000,00
6.4 PROJECTS	**-71.500,00**
European Project E-CAERO (6 manmonths + seminars)	-71.500,00
6.5 BUSINESS PLAN	**-2.000,00**
Consulting & travel IEO	-2.000,00
6.6 Payroll IEO	**-22.800,00**
Salaries Richard Seoud (6 manmonths)	-22.800,00
7. FINANCIAL COSTS	
Financials Costs	
NET INCOME (LOSS)	**-7.007,00**
NET INCOME (Revenue 1 to 3 - Expenditure 1 to 5)	*-18.000,00*
NET INCOME ACTIVITIES RELATED TO INDUSTRY	*10.993,00*

Budget for Administration Of Ercoftac ADO

	Budget 2012 in Euros
1-1 Personnel Costs	
Cost/day with social charges	221,28
Annual cost based on 2 days per month	5310,64
Overheads Numeca 90%	4689,36
Total personnel Costs	10000,00
1-2 Travel Costs	2000,00
Total Budget/year	12000,00

This amount will cover all the costs related to the transfer from the administration of ERCOFTAC ADO in Brussels to the offices in U.K.

Project E-CAERO
01/09/2009 to 30/08/2012

Budget period 01/09/2009 - 30/08/2012

Employee cost	**€ 72.000**
*6 manmonths * 12.000€*	
Other direct cost	**€ 46.200**
Open industrial days	*€ 10.000*
Summer school	*€ 10.000*
Thematic conference (2)	*€ 14.200*
Large conference	*€ 12.000*
Indirect cost	**€ 8.274**
Total	**€ 126.474**

First cost statement period 01/09/2009-28/02/2011

Employee cost	**€ 26.500**
*6 manmonths * 3.800€*	*€ 22.800*
Overhead Numeca 20%	*€ 3.700*
Other direct cost	**€ 9.100**
1 conference thematic	*€ 8.000*
Travel	*€ 1.100*
Indirect cost	**€ 2.492**
Total	**€ 38.092**

Programme of Events, 2012

Costs, Revenues
&
Forecasted Net Income (Euros)

October 2011
DRAFT

Dr. Richard E. Seoud
Industry Engagement Officer
ERCOFTAC

Content

A) Course: Uncertainty Management and Quantification in Industrial Analysis and Design

B) Course: CFD for Dispersed Multi-Phase Flows

C) Course: Hybrid RANS-LES - USA

D) Course: Fluid Mechanics for Medics (title to be confirmed)

E) Course: Best Practice for Eng CFD

F) Course: Aero-acoustics

A) Course: Uncertainty Management and Quantification in Industrial Analysis and Design - EU
Location: EDF, Paris, France
Date: 15-16 May 2012
CC: Prof. Charles Hirsch, Numeca International, Belgium
Course fees: Members, 640 Euros, Non-members, 995 Euros.

ITEM	Euro
Two Day Cost	
Refreshments + lunch	3000
Conference fees (Hall+IT)	0
Course dinner	800
Printing	1144
(Exch. Rate, ER, GBP/Euro 1.15)	
Speakers (9)+ IEO Costs	
700*8 +700 (1 spkr is local to event)	6300
Honorarium @ 300 Euro/lecture (11 lectures)	3300
Total Costs	**14544**
Total Revenues (15 members + 15 non-members) Members 640 Euros, Non-Members 995 Euros	**24525**
Forecasted Net income (Revenues – Costs)	**9,981**

Please note that the net income could be higher as we have yet to negotiate as before with EDF issue of printing and lunch.

B) Course: CFD for Dispersed Multi-Phase Flows
Location: France/Italy/Germany
Date: May/June/July 2012
CC : Prof. M Sommerfeld
Course fees: members, 640 Euros, Non-members, 995 Euros.

ITEM	Euro
Two Day Cost	
Refreshments + lunch	4000
Conference fees (Hall+IT)	1800
Course dinner	2000
Printing (Exch. Rate, ER, GBP/Euro 1.15)	1144
Speakers (3)+ IEO Costs	
700*3+700	2800
Honorarium @ 300 Euro/lecture (11 lectures)	3300
Total Costs	**15044**
Total Revenues (15 members + 15 non-members) Members 550 Euros, Non-Members 995 Euros	**24525**
Forecasted Net income (Revenues – Costs)	**9,481**

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

Venue: Crowne Plaza Hotel, Hampton Marina, Virginia, USA.
Date: 26-27 Sept 2011
CC: Dr. Charles Mockett, TU Berlin, Germany
Course fees: flat fee 800 Euros (1200 USD, to be confirmed in negotiations with NIA).

ITEM	Euro
Two Day Cost	
Refreshments + lunch	2500
Conference fees (Hall+IT)	2000
Course dinner	800
Printing	1200
Speakers (5)+ IEO Costs	
800*5 +800	4800
Honorarium @ 300 Euro/lecture (11 lectures)	3300
Total Costs	**14600**
Total Revenues **We informed the NIA that we need a min of 25 for B.E. This will mean a net income of 20000 Euros.**	**20,000**
Forecasted Net income (Revenues – Costs)	**5,400**

Please note that revenues could go to 5500 Euros on the downside, if we only get 25 delegates.The delegate size quoted is based on negotiations with NIA where we declared that a min of 25 delegates is required in order for us to B.E. However, if NIA picks up some of the main costs then we will be reaching higher revenues.

D) Course: Fluid Mechanics for Medics
Venue: NHS, Chelsea and Kensington
Date: May-July 2012.
CC: Dr. Philip Kilner, Royal Brompton Hospital
Course fees: EROCFTAC members, 640 Euros, Non-members, 995 Euros.

ITEM	Euro
Two Day Cost	
Refreshments + lunch	2500
Conference fees (Hall+IT)	2000
Course dinner	1200
Printing	1144
(Exch. Rate, ER, GBP/Euro 1.15)	
Speakers (6)+ IEO Costs	
700*3+1500 +100+100 (1 spkr is local to event)	3800
Honorarium @ 300 Euro/lecture (11 lectures)	3300
Total Costs	**13944**
Total Revenues (15 members + 15 non-members) Members 640 Euros, Non-Members 995 Euros	**24,525**
Forecasted Net income (Revenues – Costs)	**10581**

E&F) Course: Aero-acoustics + Best Practice for Eng CFD
Venue: GE, Munich, Germany
Date: 29 October - 2 Nov 2012
CC: Profs. Christophe Bailly and Prof. Anthony Hutton
Course fees: 640 Euros members and 995 Euros non-members

ITEM	Euro
Four Day Cost	
Refreshments + lunch	8000
Conference fees (Hall+IT)	0
Course dinner	1700
Printing	4000
(Exch. Rate, ER, GBP/Euro 1.15, Euro/US 1.3)	
Speakers (12)+ IEO Costs	
700*12+1100	9500
Honorarium @ 300 Euro/lecture (22 lectures)	6600
Total Costs	**29800**
Total Revenues : (15 members + 15 non-members) Members 640 Euros, Non-Members 995 Euros X2	**49050**
Forecasted Net income (Revenues – Costs)	**19250**

Forecasted Total Net Income (Euros)

From the above events, the **forecasted net income from all the above events is 54k Euros**, excluding income from membership which is currently 11k Euros. Hence, **total forecasted net income would therefore be 65k Euros.**

However, please note that we are introducing more risk in our programmes than previous, hence, the Fluid Mechanics for Medics course, the one on Aero-acoustics and last but not least venturing in to the USA. Regarding the latter, we aim and have asked our collaborative partner, NIA, to eliminate the financial risk.

Hence, and as always, from a risk management perspective we should consider a scenario whereby only 40% of the net income would be attained from the above set of net forecasted income, which would imply **a lower bound of some 27k Euros**. This scenario could represent, a) continued malaise in EU policy towards debt restructuring, b) thereafter a genuine recession in the EU and a global run on the euro. Also, the IEO has to find and establish the new market for the course on Medics in time for delivery. Therefore, the lower bound is justified.