

# European Research Community On Flow, Turbulence And Combustion

## MINUTES

### INDUSTRIAL PROGRAMME COMMITTEE (IPC)

EPFL, Lausanne, October 2<sup>nd</sup> 2009

#### Attendance

|                |                        |
|----------------|------------------------|
| Charles Hirsch | NUMECA International   |
| Anthony Hutton | Airbus UK              |
| Rene Oliemans  | Multiphase Flow B.v.   |
| Chris Lea      | Lea CFD Associates Ltd |
| Wolfgang Rodi  | KIT                    |
| Richard Seoud  | ERCOFTAC               |
| Sedat Tardu    | LEGI                   |

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

The main actions are underlined below.

#### 1. Apologies for absence

None received.

#### 2. Approval of the agenda

Approved without comment.

#### 3. Minutes of IPC meeting held in Budapest on 5<sup>th</sup> May 2009

The minutes of the IPC meeting in Budapest on 5<sup>th</sup> May 2009 were circulated and agreed without comment.

#### 4. ERCOFTAC Industrial strategy

##### *i. Recap on the aims and objectives of the strategy*

Chris Lea reiterated the objectives of the original business plan. This being a four year plan to enhance engagement with industry and, in particular, aiming to grow the industrial membership. This was to be achieved by offering products/services, such as courses/seminar/BPG, on preferential terms to members, whilst also offering these products/services to non-members. The plan is being delivered by Dr Richard Seoud, ERCOFTAC's Industry Engagement Officer, and is still in its early stages as Richard was only recruited in April 2008. A key objective is the generation of sufficient surplus to cover employment costs, leading to cost recovery in the fourth year.

##### *ii. Development and agreement of the forward programme of events*

Richard Seoud had prepared a presentation on his efforts to implement ERCOFTAC's business plan. Unfortunately a projector was not available at short notice to display the presentation and neither were any hardcopies available.

The ensuing discussion focused on Richard's progress in developing the forward programme of events for 2010. The following decisions and actions were agreed:

(PTO)

- It was agreed that it was unrealistic to expect Richard to develop the detailed scope and content of courses and seminars. Instead, Scientific Coordinators were identified and assigned to lead development of the scope and content of five key events for 2010:
  - Hybrid RANS-LES Methods for Industrial CFD course: **Dr Charles Mockett**
  - Best Practice for Engineering CFD course: **Dr Chris Lea**
  - Flow control – technical awareness seminar: **Prof Jim Morrison**
  - Error analysis and Uncertainty in CFD: **Prof Charles Hirsch**
  - Course based on Multi-Phase Flow BPG\*: **Prof Bernard Geurts**

All of the above activities are to be two-day events.

\*This course to be developed in collaboration with SIAMUF.

- It was agreed that **Richard** should construct and implement a plan to ensure the effective delivery of these events. **Richard** should submit the plan to the Executive Committee (EC) for approval, prior to implementation.
- Prof Hirsch proposed that, in future, **Richard** must bring a draft of the plan of events for the following year, to the Spring Festival - for discussion and refinement by the IPC & EC, such that by the Autumn Festival the plans can be finalised. **Richard** should develop this plan by seeking ideas and input from SIGs.
- It was agreed, in principle, that events could be held outside of the EU, for example in the United States. The Hybrid RANS-LES course was seen as being a suitable candidate.
- It was agreed that **Richard** must, as a matter of urgency, seek to significantly increase the size of the e-mail list he uses to advertise events, from 'several hundreds' to 'several thousands'.
- Prof Hirsch offered to provide Richard with an introduction to the VKI Director for assistance in advertising ERCOFTAC events, asking that **Richard** write to Charles with a formal letter requesting such assistance.
- Prof Rodi proposed that the phrase 'world leader' be dropped from advertising material for ERCOFTAC industrial events, as this was perceived as being a rather arrogant claim. This proposal was approved.

### **iii. IEO support assistant (IEOSA)**

Chris Lea presented a written case for engagement of a part-time assistant to support Richard Seoud. This case is appended to these minutes.

The level of support is to be equivalent to one week per month at a cost of €500 per month from January 2010 and at half this rate in the preceding quarter year. The IEOSA will report directly to the IEO who will manage their day-to-day activities. The IEO is to submit a report to the ERCOFTAC Executive Committee every three months on the work carried out and the value derived. This report will be validated by the chair of the IPC before submission to the Executive Committee.

This proposal was agreed. Furthermore, it was agreed that Sarah Hutton, who has much previous experience of ERCOFTAC due to her work on the QNET-CFD Wiki, would be very suitable for this post. These decisions were put forward for approval by the Managing Board later the same day.

- **Chris Lea** to draft a formal contract for Sarah Hutton's engagement by ERCOFTAC, based on that which exists for David Ellacott.

## 5. QNET-CFD Wiki

The current status of the Wiki was presented by Prof Rodi.

The following actions were agreed:

- **Prof Rodi** offered to explore with Springer the possibility of placing an advertisement for the Wiki in “Flow, Turbulence and Combustion”.
- **Prof Hutton** agreed to explore the possibility of a ‘banner-ad’ on CFD On-line for the Wiki, as well as other means of enhancing the profile of the Wiki on this web-site.

## 6. Best Practice Guidelines (BPG)

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

- It was agreed that this BPG should be provided free to new and existing members of ERCOFTAC.
- It was agreed that **Sarah Hutton** should develop a marketing plan for these BPG.

### (ii) *Industrial CFD BPG, 2<sup>nd</sup> edition*

This extract is from the minutes of the IPC meeting at the Spring Festival in 2009.

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

Chris Lea has been unable to dedicate the time which is required to this activity. However, he has confirmed with each of the above contributors that they would be willing to continue. Prof Hutton kindly agreed to take on this responsibility.

- **Chris Lea** to pass to Prof Hutton all draft material for the 2<sup>nd</sup> edition of these BPG.

### (iii) *Other BPG*

- It was agreed that **Richard Seoud** would seek a formal proposal for a BPG on combustion, from Ananias Tomboulides.
- **Prof Hutton** agreed to send a copy of the single-phase flow BPG to Ananias Tomboulides, for guidance.
- It was again agreed that discussions on the possibility of a BPG on heat transfer should continue by 'phone during forthcoming EC meetings.

## 7. Next IPC meeting

The next IPC meeting will be at TU-Delft, Tuesday 18<sup>th</sup> May 2010.

## **8. Any Other Business**

Chris Lea circulated notes of a brainstorming meeting hosted by BAE Systems on 25<sup>th</sup> September 2009 whose aim was 'Enhancing ERCOFTAC engagement with industry'. The notes are appended to these minutes. These notes consist of ideas for discussion, rather than firm proposals for action. Two actions were agreed following a brief review of these notes:

- It was agreed, in principle, to develop and host a twice-yearly webinar on cutting-edge topics in fluid dynamics, with high-profile speakers, so as to raise awareness of ERCOFTAC.
- To stimulate industrial\* membership of ERCOFTAC, it was agreed that new industrial\* members would be able to offset the cost of one attendance at an industrial event against fees for the first year of their membership.

\*Subsequently, at the Managing Board meeting later that day, this proposal was amended and agreed as follows:

"To stimulate membership of ERCOFTAC, it was agreed that all new members will be able to offset the cost of one attendance at an industrial event against fees for the first year of their membership."

Meeting closed at 12-00.

Chris Lea  
April 2010



## **IEO Support Assistant (IEOSA)**

ERCOFTAC's Industrial Engagement Strategy and Business Plan made provision for part-time secretarial support for the IEO. The activities of the IEO have gradually expanded and the work-load has increased to a point where support is now necessary for the continued implementation of the business plan. In particular, the IEO needs support in the early planning and subsequent promotion of events, services and products. In line with the IEO's end-of-year review (agreed up to ¼-time secretarial support), it is proposed that a modest level of support be provided so that the IEO can concentrate on outreach and delivery of events/services/products. The role of the proposed Support Assistant will, however, stretch beyond just secretarial support.

### **Roles and responsibilities**

#### **a) Market Research**

The IEOSA will support the IEO in carrying out market research to identify those specific events/services/products which are likely to be well received and to test reaction to those that are planned before significant investment is committed. This role will extend to the preparation and distribution of questionnaires and surveys, telephone interviews with prospective customers, processing of responses, and other initiatives as requested by the IEO.

#### **b) Event/Services/Product Publicity**

The IEOSA will prepare and distribute letters, e-mails, and assist in the preparation of other communications such as news and awareness articles for publication on the website, in the Bulletin and other platforms, as requested by the IEO. This role will extend to the preparation of announcement flyers and calls to participate in forthcoming events.

#### **c) General marketing support**

The IEOSA will assist in the preparation of more general publicity material designed to raise awareness of ERCOFTAC and its industrial activities.

#### **d) QNET-CFD Wiki**

It is envisaged that the Wiki activity and interaction with the world community may grow rapidly. Experience to date indicates that this will generate operational issues and problems which will place an undesirable burden on the editor and technical support officer. The IEOSA will coordinate the response to these issues and their practical solution (e.g, contributor enquiries/operational difficulties, evolution of the Wiki operational model in the light of experience etc.) working through the editor, the technical support officer and as advised by the IEO.

(PTO)

## **Management of IEOSA**

The IEOSA will report directly to the IEO who will manage their day-to-day activities.

The IEO will submit a report to the ERCOFTAC Executive Committee every three months on the work carried out and the value derived. This report will be validated by the chair of the IPC before submission to the Executive Committee.

## **Remuneration**

The original business plan made provision for up to half-time secretarial support, although it was believed that this could probably be significantly reduced. Nevertheless, the financial modelling was undertaken on this basis and at an estimated annual cost of up to €11k plus up to 35% social costs.

To keep costs under control and financial risks low, it is proposed that the support be provided at a lower cost, broadly equivalent to half-a-week per month for the first quarter, rising to about one week per month thereafter - subject to the further agreement of the Executive Committee. This would be delivered under contract to ERCOFTAC with remuneration of €250 per month over the first quarter, rising to €500 per month in subsequent quarters, payable monthly in arrears.



## Brainstorming meeting

### “Enhancing ERCOFTAC engagement with industry”

25<sup>th</sup> September 2009, BAE Systems

#### Attendees:

Tony Hutton, Chair ERCOFTAC.  
Chris Carey, ANSYS & previous UK PC Coordinator  
David Standingford, BAE Systems & UK PC host  
Richard Seoud, IEO  
Chris Lea, Chair IPC  
Iain Barton, BAE Systems & UK PC Coordinator

#### Main outcomes – to be further developed (in no particular order)

##### a) E-learning packages

- E-learning packaging of Best Practice Courses, etc.
- Potential for world-wide engagement.
- Medium-term prospect, i.e. 3 years to be fully up and running.
- Must be professionally hosted.
- CFMS have offered to host this service.
- NAFEMS report success in this area.

##### b) Technology Awareness seminar

- Expand out over two days.
- “Uncertainty in CFD: Identification, Quantification and Management”. Significant potential for such an event.
- “Meshless Methods”, “Complex Heat Transfer”, “Turbulence Simulation”. Potential topics for further events, but need to be market-tested before further commitment.
- Possibility of joint two-day events spanning two topic areas.
- Need to ensure that marketing material is very clear as to what delegates will obtain from these seminar.

##### c) Best Practice Guidance courses/lecture series

- “Aero-acoustics”, “Flow control”, “Basic LES”. Potential topics for further events, but need to be market-tested before further commitment.
- ?SIG coordinators to act as course directors?

##### d) Event delivery beyond current locations

- Firstly, confirmation that Germany and Scandinavia should continue as locations for events, and not the UK.
- France should be a fertile location. ANSYS see good attendance at events in France. However, the exact location needs to be tailored to the likely audience, i.e. Toulouse for aerospace, etc.

- To test the water in the USA, with the Hybrid RANS-LES course, linked to the new membership from Boeing and their interest in setting-up a US PC. Must ensure some home-based speakers are involved, ?Spalart?.

#### **e) Advertising**

- Planning period and advertising for events depends on target audience. Low-level employees require far-greater notice than more senior staff.
- Strong steer to avoid paid-for advertising in traditional journals, e.g. Professional Engineering. Expensive and with a very poor record of response.
- Targeted e-mail, hardcopy flyers and telephone follow-ups should be the main outlets for advertising efforts so as to obtain the best returns.
- ?Try e-mails with “Meeting invite” as the subject, rather than the actual title?
- Take-up banner ad on CFD-Online, at £200-£300/yr.

#### **f) Industrial membership**

- To stimulate take-up of new industrial memberships, offset 1<sup>st</sup> year membership fees against event fees.
- Direct debit option for memberships – to help ensure that memberships are renewed?

#### **g) Webex and webinar**

- Develop webinar versions of event lectures, offered at modest fee for non-members, free to members.
- Develop Webex-based versions of events and courses, to allow interaction and feedback for non-travelling participants.

#### **h) Profile-raising**

- Series of high-profile webinars, free to members, modest fee to non-members, held bi-yearly.
- “Climate change: Geo-engineering challenges for fluid mechanics”, ?Brian Launder?
- ITER, Richard Seoud contact.
- “Meeting the CO<sub>2</sub> reduction challenge: Paradigms shifts in the aerospace industry”, ?Ian Poll?
- “Alternative energy sources and fluid mechanics challenges” ?John Loughhead?.

#### **i) Other considerations**

- ERCOFTAC’s industrial strategy should focus on ‘the new stuff’, rather than disseminating existing low-level guidance and advice - for which the market-place is quite crowded.