

Newsletter - March 2003

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To the members of the IOC of the ECTP.

Dear Colleagues,

welcome to the first issue of the ECTP Newsletter. As indicated in the London meeting, this tool should help in improving communication among us in the period between conferences. Initially I plan to issue the Newsletter about once per year, with additional issues if necessary.

What is the empty square appearing on the left hand side at the top of the first column? It is the space for a logo of the ECTP, that I think is long overdue. We should have a logo that identifies permanently our conferences, with some appropriate symbolism related to thermophysical properties. The ECTP logo might be completed by a line below it, associating it with the specific conference, with the award, with the Newsletter, etc... My personal drawing capabilities are very limited, but I am sure that either you or some close colleague might know somebody with artistic abilities capable of providing the ECTPs with an appropriate logo. The competition is open and all your suggestions are welcome.

The Newsletter starts with a summary about ECTP 2002, including details about attendance and continues with an article about the work in progress toward ECTP 2005.

Prof. Fortov has written a letter with various proposals open to discussion. I have added some personal considerations about the present status of the rules regarding ECTP Awards. Two files containing the present version of the statutes for both Awards are mailed along with this Newsletter.

The section on IOC News presents different items of interest and brings you up to date with the developments that occurred in recent months. A file with updated communication data for IOC members is also attached.

This Newsletter was originally prepared using Microsoft Word. Unfortunately doc files are reproduced differently on various printers with consequent problems. To improve portability the Newsletter is distributed as a pdf file. If you do not already have the program to read this type of files, you may download Acrobat Reader from www.adobe.com (it is free).

Comments, suggestions and contributions to improve this Newsletter are welcome.

Francesco Righini

About ECTP 2002

The 16th ECTP conference was held at Imperial College (London, UK) during 1-4 September 2002. The conference included 159 oral and 133 poster papers, specially arranged technical meetings, and discussion workshops.

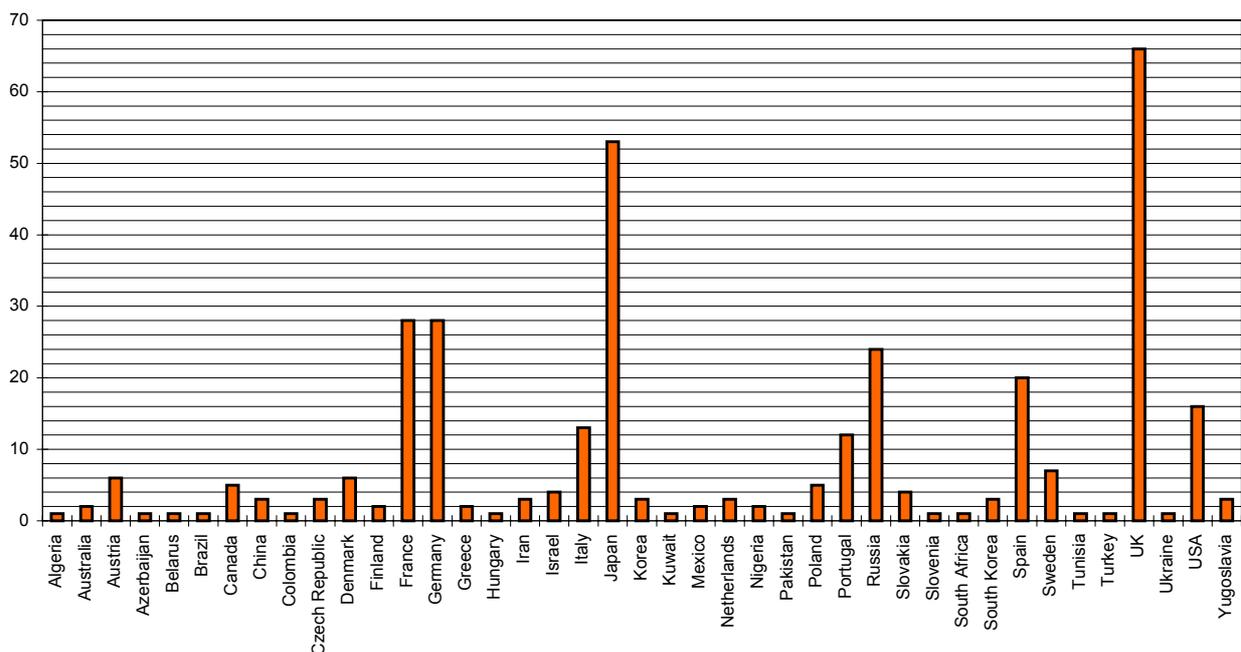
The conference began on the Monday morning with three plenary lectures by *Professor Dominic Tildesley* (Unilever Research plc), *Dr Steve Garwood* (Rolls Royce plc), and *Professor Geoff Maitland* (Schlumberger Cambridge Research), all leading figures from industries in which thermophysical properties play a major role. *Professor Tildesley* described the way in which mesoscopic simulation of fluids was playing a role in the design of new products in the personal care and food industries, *Dr. Garwood* set out the areas of materials science at high temperatures that were vital to the jet-engine designs of the future and *Professor Maitland* described the ways in which molecular sciences were helping to design fluids for the enhanced recovery of oil from geological formations. These talks set the context of applications for the field of thermophysics and illustrated how fundamental science in the area was vital.

From Monday afternoon until Wednesday

afternoon the conference comprised three parallel sessions of oral scientific presentations or other technical events. The sessions were well attended and the quality of the presentations and the scientific content high. Poster sessions were held on the Monday and Tuesday evenings and an exhibition, co-located with the two poster sessions, ran throughout the conference. These poster sessions were very effective in bringing people into contact and engendered considerable discussion. The workshop on *Development of a standard for Contact Transient Methods* stimulated lively debate and, in the afternoon, a discussion forum on *Coordination of thermophysics in Europe*, contained overviews from key members of European thermophysics clubs and societies, followed by a presentation on a new idea for a European Virtual Institute for Thermal Metrology (EVITherM).

During the conference the Netsch Young Scientist Award was made to *Dr Brian Monaghan* of Wollongong University, Australia (and formerly of NPL) and the ECTP Award made to *Dr Kosta Maglic* of the Vinca Institute of Nuclear Science, Yugoslavia who was honored for his outstanding contributions to research on the thermophysical properties of matter and dissemination of its results.

Attendance by Country



All papers submitted, oral and poster, were presented on a CD-ROM. The papers are to be published in one of three journals, *Fluid Phase Equilibria*, *High Temperatures - High Pressures* or *International Journal of Thermophysics*, depending upon the authors' choice and a satisfactory review.

ECTP 2002 was attended by over 340 delegates from 42 countries. The chart in the previous page shows a breakdown of attendance by country, UK being greatest and Japan a strong second, with France, Germany, Russia and Spain close behind. The overall aim that we had of securing high quality scientific papers was broadly achieved and there was a real sense of community generated at the event. Nevertheless it is perhaps helpful to record some comments from the surveys conducted among participants so as to guide future conferences. On the positive side there was general appreciation of the use of electronic means of communication of material. In addition, the poster sessions that combined a social function with viewing of the posters seemed a great success. There was also support for the use of a venue in which everything was close by. On the negative side it was felt that the time allowed for oral presentations was too brief. It was felt this inhibited formal discussion and clear exposition.

*W.A. Wakeham
J. Regdove
J.P.M. Trusler
V. Vesovic*

Toward ECTP 2005

The ECTP conferences will continue in 2005. The seventeenth ECTP will be held in Bratislava, the capital of Slovak Republic. The objective of the conference is to bring together people interested in thermophysics and related sciences working in the field of research and technology. The conference will be organized by two different groups; the first one - the Institute of Physics, Slovak Academy of Sciences in Bratislava together with the

Constantine the Philosopher University in Nitra will have overall control of the conference and responsibility for the solid part of the scientific program. The second group - the University of Pau in France will be responsible for the fluids part of the scientific program. Based on previous experiences and following consultations with the International Organizing Committee, the ECTP 2005 will consist of several invited lectures covering target areas of thermophysics and its application and of oral and poster presentations. The conference will be completed with an exhibition where companies and laboratories can present their products and services. Workshops in several areas (possibly in Transient Techniques, Solidification Phenomena, Petroleum Fluids,...) will be organized. Two Awards - the *European Thermophysical Properties Conference Award* for lifetime achievements in thermophysics and the *Netzsch Thermophysical Properties Award for Young Scientist* - will be presented during the conference.

The conference will cover traditional areas of thermophysics, i.e. measurement, theory, modeling and applications in technology, heat transport and thermodynamics of solids and fluids. Technological processes and engineering application will be a target of the conference. Modern materials based on nanotechnology where transport properties and thermodynamics play a dominant role will have a significant space for presentations. Advanced surface treatments of materials using a broad range of technologies to produce high performance and/or innovative multicomponent, nanoscale and functionally graded surface coatings and thin films should present a vital interest to people from both research and industry. Presentations dealing with thermodynamic, heat transport and radiation/absorption properties of such layers will be included in the program. We expect biomedical and food application, refrigerants and petroleum fluids to represent a vital area of rapidly growing research and applications.

The Organizers will try to create a warm and productive atmosphere for discussions between academia and industry. Special attention will be paid to the participation of young researchers to support the continuity of the activities. The conference will be held at

the beginning of September when stable and convenient weather usually occurs in Central Europe. Bratislava is situated in a marvelous countryside on the Danube and at the foot of the Carpathian Mountains close to the Slovakia – Austria border. It is easily reachable by various means of transport: airplanes, trains, coaches and cars. Two airports are situated at distances of 20 km (Bratislava airport) and 60 km (Vienna airport). Regular buses from both airports bring participants to the center of the city. Rent car agencies can be found at each airport. There are regular train connections to Vienna, Prague, Warszawa and Budapest and good highways to Vienna, Budapest, and Prague support regular bus and car travel. Public transport and taxi services are well developed in Bratislava, thus every point of the city can be easily reached. Accommodation of various levels can be arranged from reasonably priced hostels up to 5 stars hotels.

We look forward to meet again all of you in Bratislava in September 2005.

*L. Kubicar
J. L. Daridon
L. Vozar*

A letter from Prof. Fortov

The following letter was received from Prof. V. Fortov in November 2002. Since it raises topics of general interest, it is reproduced here with the approval of the sender...

Doctor Francesco Righini
IOC Secretary

Thank you very much for your E-mail on 14 October, 2002 and big work on preparation of the Minutes of the IOC meeting. Although unfortunately I was not able to attend at the meeting, Dr. Petrov told me about it and I approve in full its decisions expounded in the Minutes.

I would like to make some comments on the future ECTP that may be a subject for discussion.

1. Due to development of communication facilities, we can change both the procedure of submitting and presentation. I suppose that the abstracts must be available on the Web site before the Conference. In addition to the oral and poster presentations the session of electronic presentation (with the voice of speaker) may be discussed. The author of the electronic presentation can answer question in real time via INTERNET.
2. I think the papers, submitted electronically, can be available before the Conference. In this case the presentation at the Conference may be short, and it will be more time for questions and discussion.
3. The most if not all of recipient of ECTP Award were the members of IOC. I suppose that it is not very good. I think that the nomination procedure must be changed and the rules must be more flexible. The list of nominees must involve the broader quantity of active working and well known thermophysicists. We can take into account the experience of ASME on Yeram Touloukian Award and some other nominations.

Kindest regards,

V. Fortov.

Rules for ECTP Awards

In relation to item 3 of the letter of Prof. Fortov (printed above), you will find along with this issue of the Newsletter two files that contain the rules that were established years ago for

- a) the ECTP Award
- b) the Netzsch Award (for younger scientists)

Some considerations are necessary regarding items related to the Awards:

- some of the rules are obsolete and need to be changed (ECTPs have changed to once every three years)
- sometimes in the past we have not followed some of the rules (to my knowledge the

mandatory Awards Committee is no longer existing)

In relation to these topics, I suggest that the IOC reconsiders the statutes and the rules we have established, with the aim to update them and make appropriate changes, if necessary. A general discussion on the topic is certainly possible and necessary, but practical considerations indicate that a small committee would probably be the best solution to consider the different aims and indicate solutions to be formally approved by the IOC. I suggest that three goodwill persons should be chosen to perform this task. Your comments, considerations, and possible availability to be a member of this committee are welcome.

Francesco Righini

P.S. The file with data about IOC members contains an Appendix with updated and preferred email addresses of all members

IOC News

Future ECTPs. As indicated in the minutes of the London meeting, Prof. Wakeham corresponded with the organizers of ECTP17 (Bratislava, 2005) and ECTP18 (Pau, 2008), to define some specific points. Dr. Kubicar (Institute of Physics, Slovak Academy of Sciences, Bratislava) and Prof. Daridon (University of Pau) have agreed to chair the conferences in 2005 and 2008, respectively. Each organizer will have control of the conference held in his location, but there will be reciprocal collaboration (by Prof. Daridon for the fluids part at the ECTP in Bratislava and by Dr. Kubicar for the solids part at the ECTP in Pau). The Director of the Institute of Physics provided guarantees to underwrite the

financial aspects of the conference in Bratislava.

The Organizers of future ECTPs have been included among IOC members in order that they can share insights from other members.

Chairmanship transfer. Following the successful conclusion of the items indicated previously, the ECTP Chairmanship was officially transferred by letter from Prof. Wakeham to Dr. Kubicar in February 2003 following the tradition of IOC.

IOC membership from Scandinavian countries. After the resignation of Prof. Backstrom in 1996, the IOC indicated at the meeting in 1999 the name of Prof. Gustafsson as a possible new member to represent Scandinavian countries. He was present at the ECTP in London but did not attend any of the IOC meetings. After the event, Prof. Wakeham made an indirect inquiry but the response indicated that Prof. Gustafsson has no specific interest in being involved in the ECTPs. If there is no objection, Prof. Wakeham will consider potential candidates among his acquaintances in Scandinavian countries and propose a possible new member at the next IOC meeting. Of course, suggestions from others to Prof. Wakeham are welcome.

Newsletter distribution. The present version of the Newsletter is for IOC members. If there are no written contrary opinions (by email to the IOC Secretary within two weeks of receipt date), I plan to circulate it also to former IOC members to keep them informed about ECTP activities.

Comments. As indicated in the Editorial, comments and suggestions to all the items of the Newsletter are welcome. Please send all material via email to f.righini@imgc.cnr.it