



# NEWSLETTER

## IMEKO Technical Committee 12

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### TO THE MEMBERS OF IMEKO TC12

Dear Colleagues,

welcome to the semi-annual TC12 Newsletter with details of recent activities.

The main topic of this issue is a report on the main event sponsored by TC12, the Symposium TEMPMEKO 2004 that took place in Dubrovnik-Cavtat, Croatia in late June. The event was a big success, with a large number of participants and interesting scientific presentations. The entire temperature and thermal measurements community thanks Davor Zvizdic and his young and enthusiastic team of collaborators for their fine organizational work that resulted in an excellent edition of the Symposium. We were blessed by several days of fine weather in a splendid tourist location. The Croatian hospitality was exceptional and even the boat trip for the cultural visit to Dubrovnik took place under calm sea conditions. Complete technical details are available in the following article. Those of you who missed the opportunity may take a virtual tour of the event by looking at the large number of photographs available at [www.tempmeko2004.fsb.hr](http://www.tempmeko2004.fsb.hr)

Thanks are also due to all the TEMPMEKO 2004 attendees. Their support and good scientific contributions were much appreciated. Different organizations took the opportunity to hold meetings during the event, as detailed in the following article. The continuing support of the Consultative Committee for Thermometry of the BIPM, that organized some satellite meetings, was also much appreciated.

The section on TC12 News contains information on recent changes in the TC12 membership.

I am taking the occasion to send to you and your families the best wishes for the forthcoming Holiday Season.

*Francesco Righini*



9<sup>th</sup> International Symposium on Temperature and Thermal Measurements in Industry and Science

[www.tempmeko2004.fsb.hr](http://www.tempmeko2004.fsb.hr)

The Symposium was held on June 22-25 2004 in Dubrovnik-Cavtat, Croatia. The organizer of the 9<sup>th</sup> TEMPMEKO Symposium was the Laboratory for Process Measurement of the Faculty of Mechanical Engineering and Naval Architecture, Zagreb, Croatia.

The Symposium program included all aspects of temperature, humidity and thermal measurements.

The final scientific program consisted in 231 contributions distributed as follows:

- **6 Plenary lectures** with topics including:
  - History of the thermometric scales.
  - New ways to define the Kelvin.
  - Humidity generation.
  - Temperature amplification via heat pipes.
  - Thermal conductivity of molten materials.
  - Realization of detector-based Kelvin.
- **3 Round table plenary lectures featuring personal visions for the future** of cryogenic, contact and radiation thermometry.
- **110 oral and 112 poster presentations** with topics including: radiation thermometry, temperature scales and fixed points, thermodynamic temperature determinations, inter-laboratory comparisons, calibration procedures and facilities, uncertainty estimation, thermometry applications, resistance thermometry, thermocouple thermometry, humidity and thermal properties.

The full papers of the contributions were submitted by the time of the Symposium. The organizers provided to attendees a CD ROM with the available not-refereed manuscripts at the time of the conference. The manuscripts of the full papers are presently undergoing the review process involving a large pool of referees. The editorial work will be finished at the beginning of 2005 and the Proceedings Volumes with the fully refereed papers are expected to be available in the first quarter of next year.

TEMPMEKO 2004 had 241 attendees with a wide geographical distribution as reported in the following Table:

Table 1. Geographical distribution of participants:

<b>Western Europe: 122</b>			
Austria	3	Netherlands	10
Denmark	9	Norway	4
Finland	6	Portugal	3
France	14	Spain	4
Germany	29	Switzerland	4
Ireland	1	Sweden	1
Italy	18	UK	16
<b>Central and Eastern Europe: 54</b>			
Bulgaria	1	Lithuania	1
Bosnia and Herzegovina	1	Poland	7
Czech Republic	2	Russia	10
Croatia	13	Slovak Republic	4
Estonia	1	Slovenia	8
Hungary	1	Turkey	5
<b>Asia and Australia: 33</b>			
Australia	1	Malaysia	1
China	3	New Zealand	3
Israel	2	Singapore	1
Japan	17	Taiwan	1
South Korea	4		
<b>America: 28</b>			
USA	18	Canada	6
Brazil	2	Mexico	2
<b>Africa: 4</b>			
Egypt	1	South Africa	3

The large attendance to TEMPMEKO 2004 created the opportunity for additional interactions among attendees. Various institutions organized **3 workshops and 11 collateral meetings** as listed in the following tables:

Table 2. Workshops at TEMPMEKO 2004:

	Day	Workshop Title / Organizer
1	Monday 21.06.2004.	"Uncertainty in Humidity Measurements" / EUROMET, Martti Heinonen, MIKES, Finland
2	Friday afternoon 25.06.2004.	"Common problems in Radiometry and Thermometry" / CCPR and CCT, CCT-WG-5, Joachim Fischer, PTB, Germany
3	Saturday 26.06.2004.	"Uncertainty of Temperature Fixed Points" CCT, Huseyn Ugur, Georges Bonnier, Richard Rusby,

Table 3. Collateral meetings at TEMPMEKO 2004:

	Meeting	Convenor
1	IEC SC65B WG5	Erich Tegeler, PTB
2	CCT WG9	John Redgrove, NPL
3	EUROMET Project 732	Georges Bonnier, INM
4	EVITHERM WP8	Jean Remy Filtz, BNM-LNE
5	CCT WG6	Stephanie Bell, NPL
6	EU FP 5 HIMERT Project	Graham Machin, NPL
7	CCT WG1	Dean Ripple, NIST
8	OIML TC 18 SC2	Juergen Hartmann, PTB
9	CCT WG3	Rod White, MSL
10	CCT WG7	Alan Steele, NRC
11	IMEKO TC12	Francesco Righini, IMGC

In the exhibition area 11 companies presented the latest instrumentation for temperature and humidity measurements.

The main Symposium social events were a welcome party, the cultural visit to the city of Dubrovnik and the Conference dinner. More information as well as many photographs from the Symposium technical and social events can be found at: [www.tempmeko2004.fsb.hr](http://www.tempmeko2004.fsb.hr)

We send to our colleagues of the National Research Council of Canada our best wishes for the organization of TEMPMEKO 2007 in Lake Louise, Alberta.

*Davor Zvizdic*

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### ***Changes in TC12.***

Some changes in the membership of TC12 occurred since the last Newsletter.

- Dr. Benjamin Tsai, National Institute of Standards and Technology (NIST), USA, has joined the Committee, replacing Prof. David De Witt from the same laboratory.

Prof. De Witt has been an active member of TC12 for many years, greatly contributing to the work of the Committee with his extensive experience and scientific connections. We are thankful for his time and efforts on behalf of TC12.

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***TC 12 NEWS***