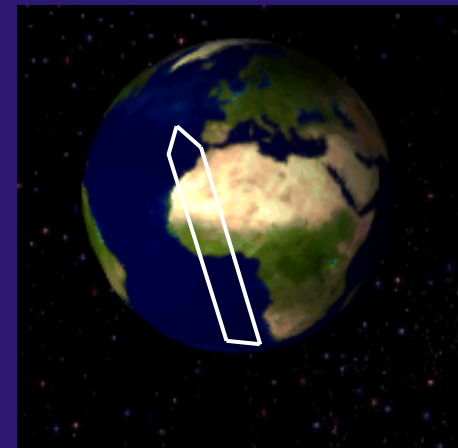


IMEKO



International Measurement Confederation

XVIII World Congress

Plenary lecture 11

Contribution of **IMEKO** :

FUTURE DEVELOPMENTS OF IMEKO

IN

NON-GOVERNMENTAL COOPERATION IN MEASUREMENT AND INSTRUMENTATION

Prof. Dr. ir. Leo Van Biesen,

President of IMEKO (2003-2006)

Assoc. Prof. Dr. Tamás Kemény,

Secretary General of IMEKO (1985-2006)

Dr. Dirk Röske,

Information Officer of IMEKO (2003-2009)

FUTURE DEVELOPMENT OF IMEKO CONCERNING NON-GOVERNMENTAL COOPERATION IN MEASUREMENT AND INSTRUMENTATION

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Abstract: IMEKO is a non-governmental federation of 35 national Member Organisations, individually concerned with the advancement of measurement technology and instrument engineering. The Member Organisations are scientific/technical societies or committees. The membership consists of the representatives of metrological institutions, higher education, industry and the users of instruments. The paper deals with the objectives of the Confederation, informs on the structure and financial background, on IMEKO publications and on the activities of 21 active Technical Committees. Finally, the future World Congress, different scientific services, membership development, events and co-sponsorships are discussed.

Keywords: Measurement, Metrology, Instrumentation

1. DEFINITION

The year 2006 marks the 48th anniversary of the birth of IMEKO. Founded in 1958, IMEKO is a non-governmental federation of 35 Member Organisations individually concerned with the advancement of measurement technology. Its fundamental objectives are the promotion of international interchange of scientific and technical information in the field of measurement and instrumentation and the enhancement of international co-operation among scientists and engineers from research and industry. The logo of IMEKO is depicted in Fig. 1.

With a different approach, IMEKO is a global network, a forum where instrument makers, users, research and development experts, legal metrology scientists and university professors meet and exchange ideas.

IMEKO's responsibility is to consider the challenges of measurement science and technology coming from important application areas and to form visions for the future development of human society.



Fig. 1. The official logo of IMEKO

2. STRUCTURE

2.1. Member Organisations (MO-s)

Though the participation in IMEKO activities is available to anybody without restriction, the work is based on using the human resources and knowledge base of the MO-s, in favour of the improvement of the MO-s.

Albania	Greece	Russia
Austria	Hungary	Slovakia
Belgium	Israel	Slovenia
Bulgaria	Italy	South Africa
Brazil	Japan	Spain
China	Kenya	Sweden
Croatia	Korea	Switzerland
Czech Republic	Nigeria	Thailand
Egypt	Mexico	The Netherlands
Finland	Poland	Turkey
France	Portugal	United Kingdom
Germany	Romania	

Table 1. Nations of the Member Organisations

Paper in the Proceedings:

Non Scientific Paper !!!

No equations!

Purpose = to promote:

- **IMEKO Technical Committee activities;**
- **IMEKO membership for Member Organisations**
- **IMEKO World Congresses**

Addresses:

General Contact and Secretariat

IMEKO Secretariat

P.O. Box 457

H-1371 Budapest, Hungary

e-mail: imeko@t-online.hu
imeko.ime@mtesz.hu



home page: <http://www.imeko.org>

Addresses (cont):

President up to this afternoon...

Leo van Biesen

Vrije Universiteit Brussel

Department of Fundamental Electricity and Instrumentation

ELEC

Pleinlaan 2

B-1050 BRUSSELS

Belgium



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lvbiesen@vub.ac.be

web info:

<http://wwwtw.vub.ac.be/elec/lvbiesen.htm>

<http://www.imeko.org>



OUTLINES

1. INTRODUCTION



2. AIMS, OBJECTIVES AND HISTORY

3. STRUCTURE

4. TECHNICAL COMMITTEES

5. WORLD CONGRESSES

6. PUBLICATIONS

7. INTERNET

8. QUALITY POLICY

9. INTERNATIONAL CONTACTS

1. INTRODUCTION

- **IMEKO** is a non-governmental federation of **36** national **M**ember **O**rganisations
- The **MO**s are individually concerned with the advancement of **measurement technology** and **instrument engineering**
- The **M**ember **O**rganisations are scientific/technical societies or committees, NMIs, NRIs, accreditation bodies
- The membership consists of the representatives of metrological institutions, higher education, industry and the users of instruments

This presentation will:

- deal very shortly with the **objectives** of the Confederation (aim = to inform newcomers or to refresh for regular attendants about the Confederation)
- inform briefly on the **structure** and **financial** background of IMEKO (idem + refreshment ∇)
- highlight on IMEKO **technical events** and on the **publications**

This presentation will:

- present an overview of the **22**

Technical **C**ommittees

- address views on **new announced**

TCs

- address the current **XVIII IMEKO**

World Congress 2006 and future

World Congresses and different

scientific services

OUTLINES

1. INTRODUCTION
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6. PUBLICATIONS
7. INTERNET
8. QUALITY POLICY
9. INTERNATIONAL CONTACTS



2. AIMS, OBJECTIVES AND HISTORY

IMEKO was founded in **1958**, in Budapest, Hungary



The year 2006 marks the **48th** anniversary of the birth of **IMEKO**

36 Member Organizations of IMEKO

Albania

Austria

Belgium

Bulgaria

Brazil

Canada

China

Croatia

Czech Republic

Egypt

Finland

France

Germany

Greece

Hungary

Israel

Italy

Japan

Kenya

Korea

Nigeria

Mexico

Poland

Portugal

Romania

Russia

Slovenia

Slovakia

South Africa

Spain

Sweden

Switzerland

Thailand

The Netherlands

Turkey

United Kingdom



As stated, IMEKO is a non-governmental organisation with **non-governmental MOs (23 = 64%)**

Albania

Austria

Belgium

Brazil

Bulgaria

Canada

China

Croatia

Czech Republic

Egypt

Finland

France

Germany

Greece

Hungary

Israel

Italy

Japan

Kenya

Korea

Nigeria

Mexico

Poland

Portugal

Romania

Russia

Slovenia

Slovakia

South Africa

Spain

Sweden

Switzerland

Thailand

The Netherlands

Turkey

United Kingdom



As stated, IMEKO is a non-governmental organisation with **governmental MOs** e.g. NMI (9 = 25%)

Albania

Austria

Belgium

Brazil

Bulgaria

Canada

China

Croatia

Czech Republic

Egypt

Finland

France

Germany

Greece

Hungary

Israel

Italy

Japan

Kenya

Korea

Nigeria

Mexico

Poland

Portugal

Romania

Russia

Slovenia

Slovakia

South Africa

Spain

Sweden

Switzerland

Thailand

The Netherlands

Turkey

United Kingdom



As stated, IMEKO is a non-governmental organisation with **super MOs** i.e. mixed (4 = 11%)

Albania

Austria

Belgium

Brazil

Bulgaria

Canada

China

Croatia

Czech Republic

Egypt

Finland

France

Germany

Greece

Hungary

Israel

Italy

Japan

Kenya

Korea

Nigeria

Mexico

Poland

Portugal

Romania

Russia

Slovenia

Slovakia

South Africa

Spain

Sweden

Switzerland

Thailand

The Netherlands

Turkey

United Kingdom

Remember from Opening Session...

Oops...

Is your home country not yet on the list?



Remember from Opening Session...

Is your home country not yet on the list?

**JOIN
US**




Remember from Opening Session...

Is your home country not yet on the list?

- Please contact the **Secretariat** for information on adhering for **Member Organisations**
- Thank you for coming to this **Plenary Lecture N° 11**

New Future Member Organizations of IMEKO

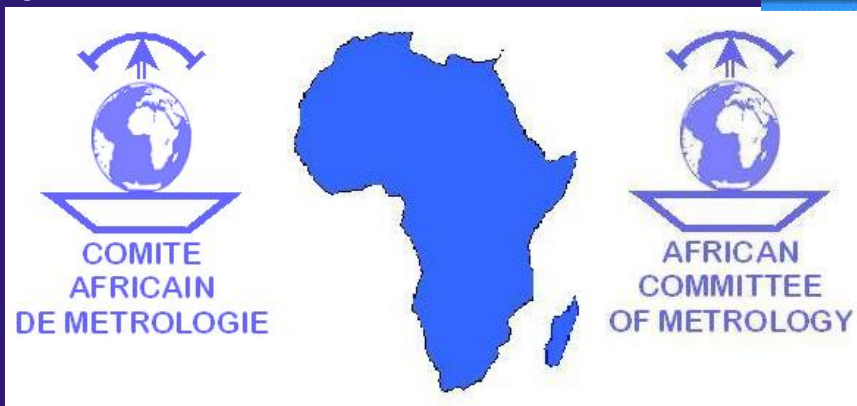
“Future actions and measures”:

- Regain **USA** as MO (is in progress, former USA MO was ISA and that society has changed its scope)
- Attract new MOs from **Latin** and **South America** (in course; helped by World Congress organisation and hopefully also from this presentation and from excellent contacts with the **SIM** :  and their new President **Prof. Humberto Brandi**; expected period of operations 2005-2008)

New Future Member Organizations of IMEKO

“Future actions and measures”:

- Improve penetration in **Africa** through the set-up of a Regional Development Centre and co-operation with CAMET, via NIS in Egypt (2006-2009)



New Future Member Organizations of IMEKO

“Future actions and measures”:

- Improve membership from **Austral-Asia** region through future IMEKO Officers (planning for 2006-2012)

OBJECTIVES

The **fundamental objectives** are:

- the **promotion** of international **interchange** of scientific and technical information in the field of **measurement and instrumentation**
- the **enhancement** of international **co-operation** among scientists and engineers from research and industry


GENERAL PRINCIPLES

DEFINED IN THE CONSTITUTION

(Chapter 1, Art. 2)

- From the defined general principles IMEKO can be regarded as a **global network**, a **forum** where instrument makers, users, research and development experts, legal metrology scientists and university professors meet and exchange ideas
- IMEKO's **responsibility** is to consider the **challenges of measurement science** and **technology** coming from important **application** areas and to form **visions for the future development of human society**

OUTLINES

1. INTRODUCTION
2. AIMS, OBJECTIVES AND HISTORY
3. STRUCTURE 
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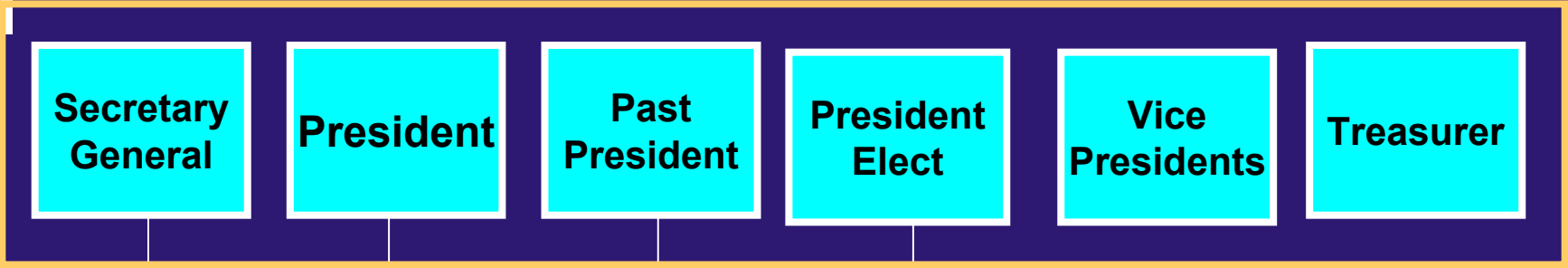
3. STRUCTURE

The structure is defined by the set-up of:

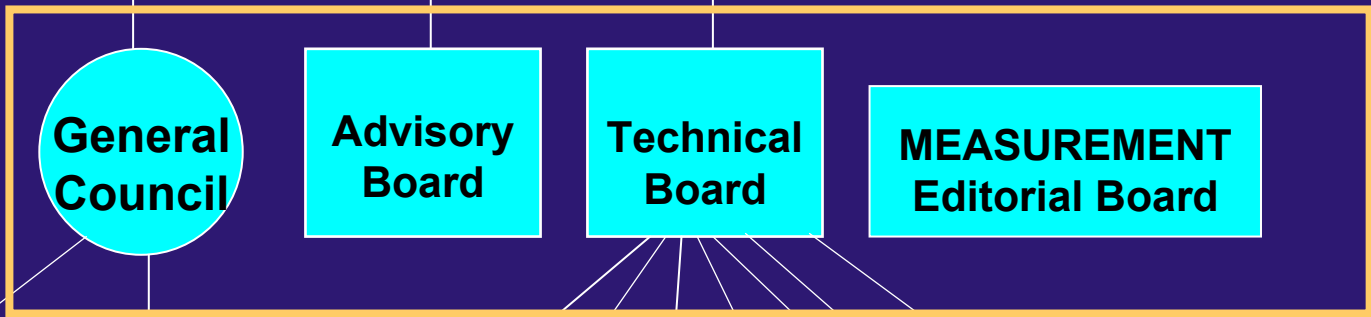
- The **Boards** (Permanent Organs)
- The **Committees**
- Role and tasks of the **Officers**



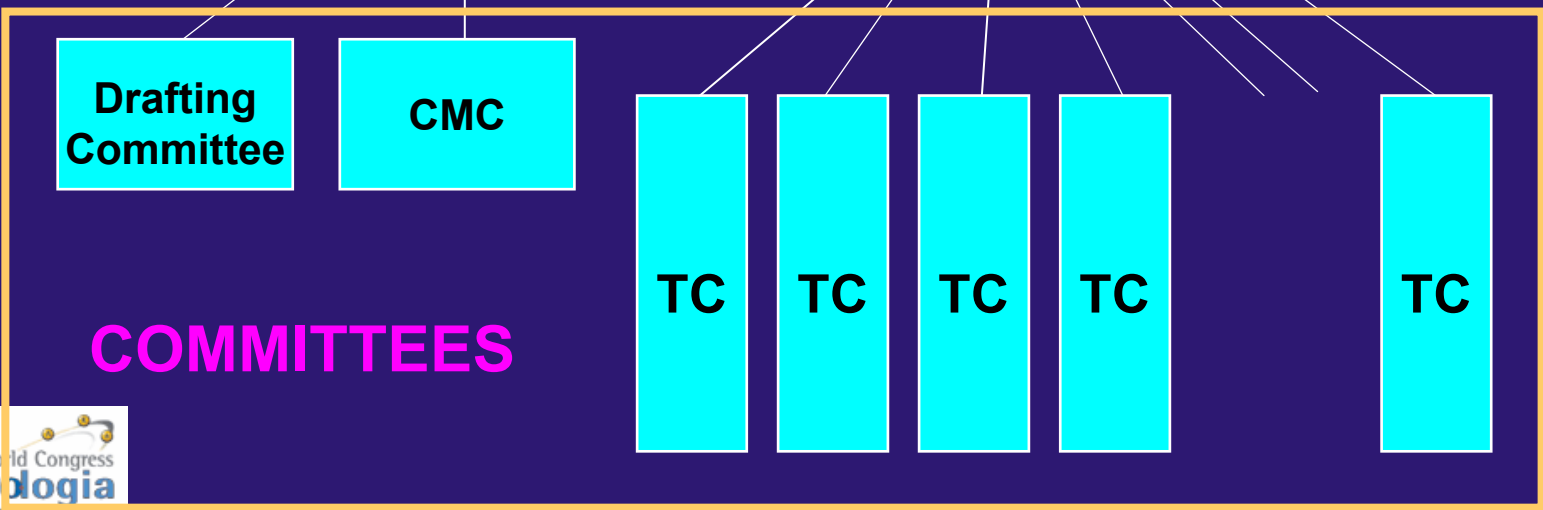
OFFICERS



BOARDS



COMMITTEES



Officers (2003-2006) ending today

President: Prof. dr. ir. Leo Van Biesen



Vrije Universiteit Brussel
Dienst ELEC
Pleinlaan 2
1050 Brussels
BELGIUM



Officers (2006-2009)

President: Prof. Dr. António da Cruz Serra



Instituto Superior Técnico
Av. Rovisco Pais
1049-001 Lisbon
PORTUGAL



Officers (2003-2006) ending today

Immediate Past President:

Prof. Dr. Manfred Peters



Physikalisch-Technische
Bundesanstalt
Division Mechanics and
Acoustics
Bundesallee 100
38116 Braunschweig
GERMANY



Officers (2006-2009)

Immediate Past President:

Prof. dr. ir. Leo Van Biesen



Vrije Universiteit Brussel
Dienst ELEC
Pleinlaan 2
1050 Brussels
BELGIUM



Officers (2004-2006) ending today

President Elect:

Prof. Dr. António da Cruz Serra



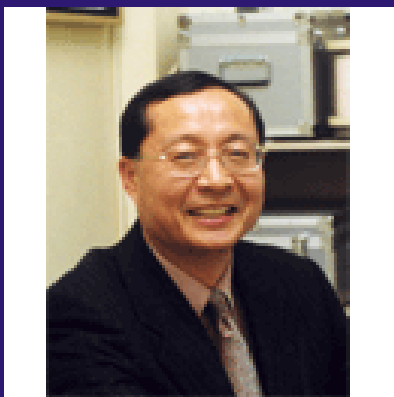
Instituto Superior Técnico
Av. Rovisco Pais
1049-001 Lisbon
PORTUGAL



Officers (2006-2009)

President Elect:

Dr. Dae-Im Kang



Dr. Kang, Dae-Im

KRISS - Korea Research
Institute of Standards
and Science
Taedok Science Town
Yusong-Gu, Taejon
REPUBLIC OF KOREA



Officers (2003-2006) ending today

Secretary General: Dr. Tamás Kemény



c/o IMEKO Secretariat
P.O. Box 457
1371 Budapest
HUNGARY



Officers (2006-2009)

Secretary General: Prof. Dr. Mladen Boršić



Croatian Metrology
Society

Berislaviceva 8

HR-10000 Zagreb

CROATIA



Officers (2003-2006, 2006-2009)

Treasurer: Prof. Dr. Ing. P. H. Osanna



TU Wien
Institut für
Fertigungstechnik
Abteilung Austauschbau
und Messtechnik
Karlsplatz 13/3113
1040 Wien
AUSTRIA



Officers (2003-2006, 2006-2009)

Information Officer: Dr. Dirk Röske



Physikalisch-Technische
Bundesanstalt
Division Mechanics and
Acoustics
Bundesallee 100
38116 Braunschweig
GERMANY



Officers (2003-2005)

Vice President in charge of IMEKO XVIII World Congress: Prof. Dr. Maurício N. Frota



Appointed during GC 2003

Catholic University of Rio de Janeiro, Rua Marquês de São Vicente, 225, Gávea, Rio de Janeiro, RJ - Brasil - 22453-900

General Chair of IMEKO XVIII World Congress (2005-2006)

Prof. Dr. Humberto Brandi

Inmetro & Sociedade Brasileira de Metrologia (SBM),

Av. Nilo Peçanha 50, 906 – Rio de Janeiro, RJ - BRAZIL



Appointed by SBM 2005

Officers (2005-2006) ending today

Vice President in charge of External Relations: Prof. Dr. Mladen Boršić



Croatian Metrology
Society

Berislaviceva 8

HR-10000 Zagreb

CROATIA



Officers (2006-2009)

Vice President in charge of External Relations: Dr. Hidetaka Imai



Emeritus Advisor, The
National Institute of
Advanced Industrial
Science and Technology
AIST Tsukuba Central 2
Tsukuba, Ibaraki 305-8568

Japan

Officers (2006-2009)

Vice President in charge of XIX World Congress: Prof. Pedro Girão



Instituto Superior Técnico
Av. Rovisco Pais
1049-001 Lisbon
PORTUGAL



Some Past Officers in the History of IMEKO (1958-2003)

1. SECRETARY GENERAL

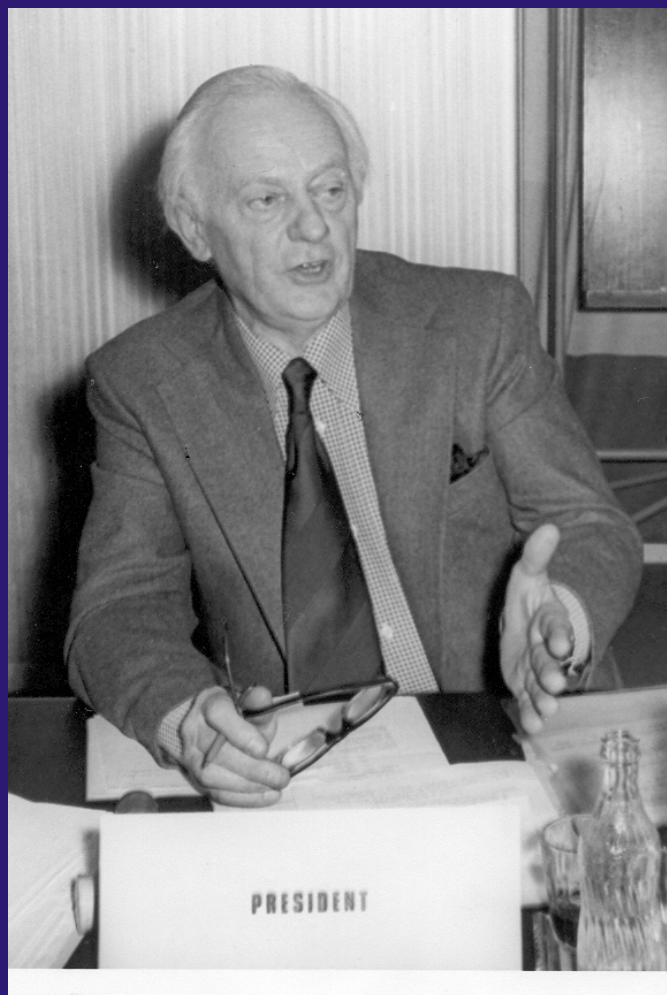
1958-1991 + Professor **György Striker** (Hungary)
(1958-1985)



The Secretary General fulfilled the duties of **President** until
1971



1973-1976 Mr. **Sam S. Carlisle**, UK



1976-1979 † Professor V.V. **Karibsky**, USSR



1979-1982

Professor **Tilo Pfeifer**, (West) German MO

1982-1985 + Mr. **Ludvik Kuhn**, Czechoslovak MO

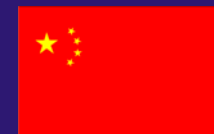




1985-1988 Mr. **George Toumanoff**, USA



1988-1991 Mr. **Meng Zhaoqian**, China



1991-1994 Professor **Giuseppe Zingales**, Italy



1994-1997 Professor **Olli Aumala**, Finland



1997-2000 Dr. **Kozo Iizuka**, Japan





2000-2003 Professor **Manfred Peters**, Germany



Permanent Organs

Include the **Secretariat** and

BOARDS



GC: **G**eneral **C**ouncil

AB: **A**dvisory **B**oard

TB: **T**echnical **B**oard

Drafting **C**ommittee

CMC: **C**redentials and **M**embership **C**ommittee

EB: **E**ditorial **B**oard

Secretary General and Secretariat

The **Secretariat** is the executive body headed by the **Secretary General**

It carries out the decisions of the **GC** in accordance with the resolutions passed at Sessions

Location of Secretariat

Hungarian Parliament





Executive Secretary:

Karolina Havrilla

(since 1-10-1971)

Secretary General:

Dr. Tamás Kemény

(since 1985 up to 2006)

General Council

The **General Council** is the supreme governing body.

The **GC** consists of one or two delegates from each **Member Organization** and holds yearly **Sessions**

General Council

Some photos of previous GC-meetings

GC-2001 in Düsseldorf, Germany



GC-2002 in Dubrovnik, Croatia



GC-2003 in Dubrovnik, Croatia



GC-2003 in Dubrovnik, Croatia



GC-2004 in Lisbon, Portugal



GC-2005 in Brussels, Belgium



Advisory Board

The task of the **Advisory Board** is to formulate proposals on the policy and strategy of IMEKO, chaired by the **Immediate Past President**



AB meeting in Brussels in 1996



Advisory Board

The main continuous tasks of the **AB** are

- a) the formulation of proposals on the **policy** and **strategy** of IMEKO
- b) the **analysis** of the scientific activities of IMEKO
- c) the advancement of the Image of the Confederation
- d) publication policies and public relations
- e) development of membership in new areas
- f) nominations for various officers
- g) advice to the President on award matters
- h) consultations with the Treasurer on the financial plans of IMEKO

Technical Board

The task of the **Technical Board** is to analyse and to support the activities of the **Technical Committees**

The **TB** is chaired by the **President Elect**



Technical Board

The **TB** is responsible for

- a) **the critical examination of proposals for founding TCs and/or dissolving such with obsolete topics**
- b) **the development of proposals for the formation of new TCs in areas where such action is necessary**
- c) **the high level of TC activities, the future plans and the regular flow of information to „Measurement“**
- d) **the coordination and possible sponsorship of TC activities**
- e) **the approval of events to be organized by the TCs**

Technical Board

The **TB** is responsible for

- f) the support of the Editorial Board of „Measurement“ particularly in the steady increase of subscriptions
- g) assistance in preparing Technical Sessions and Round Tables at World Congresses, on topics close to TC interest

Drafting Committee

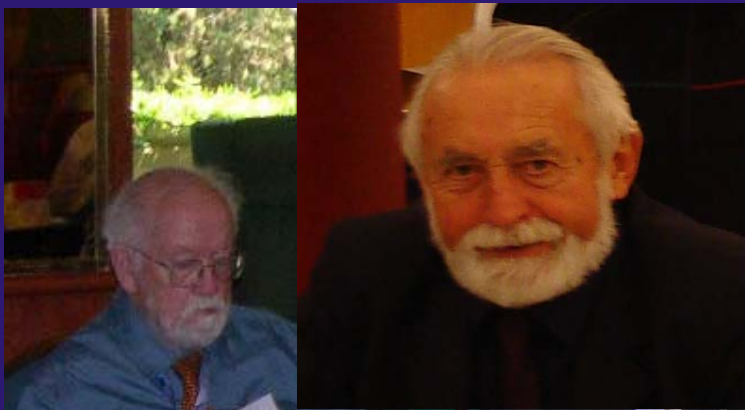
The **Drafting Committee** is responsible for the Resolutions and Minutes of GC Sessions



Chairman: T. Pfeifer (middle)
K. Grattan (member right)
C. Eugène (member left)

Credentials and Membership Committee

The task of the **CMC** is to confirm the validity of credential letters of GC delegates and to examine applications for membership



Mr. J.D. Tallantire, UK
(Chairman, left)

Prof. Roland Collay
(right)

FINANCES

The **M**ember **O**rganizations provide the financial means required for the operation of the **Secretariat**

The **Treasurer** supervises financial activities

All officers serve on a honorary (unpaid) basis

FINANCES

IMEKO conducts all its financial activities using the total income collected from the following sources:

- a) **membership dues** from **MOs** (ranging from € 450 → € 3600 /year)
- b) **5% contributions** from **participation fees** received at **TC Conferences** and other events at which fees are collected and **10%** at **IMEKO World Congresses**
- c) Revenues from **Elsevier** for publishing the **IMEKO Journal 'Measurement'** (20.000,- € from 2005 onwards)
- d) **royalties** on **IMEKO publications** based on **IMEKO copyrights**
- e) profits from periodical publications
- f) contractual income from UNESCO, UNIDO, etc.
- g) unconditional donations,
- h) other sources

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4. TECHNICAL COMMITTEES

The activities of **IMEKO** are basically carried out through the **T**echnical **C**ommittees to realize the objectives set out in the Constitution and By-Laws

The **22** active **T**echnical **C**ommittees do

- organize **symposia, conferences, workshops, seminars** on specific topics at regular intervals
- publish **proceedings** of events, textbooks, glossaries, studies, etc.

TC1 - Education and Training in Measurement and Instrumentation

TC2 - Photonics

TC3 - Measurement of Force, Mass and Torque

TC4 - Measurement of Electrical Quantities

TC5 - Hardness Measurement

{TC-6 Vocabulary Committee}

TC7 - Measurement Science

TC8 - Traceability in Metrology

TC9 - Flow Measurement

TC10 - Technical Diagnostics

TC11 - Metrological Infrastructures

TC12 - Thermal and Temperature Measurement

TC13 - Measurements in Biology and Medicine

TC14 - Measurement of Geometrical Quantities

TC15 - Experimental Mechanics

TC16 - Pressure and Vacuum Measurement

TC17 - Measurement in Robotics

TC18 - Measurement of Human Functions

TC19 - Environmental Measurement

TC20 - Measurement Techniques for the Construction Industry

TC21 - Mathematical Tools for Measurements

TC22 - Vibration Measurement

TC23 - Metrology in Food and Nutrition

TC1 - Education and Training in Measurement and Instrumentation

(established in: 1967)

Chairman: Prof. dr. ir. Paul **Regtien**

University of Twente
Enschede
The NETHERLANDS



TC1 provides a forum for:

- discussions on all kind of **educational aspects** of measurement science and instrumentation
- dissemination of concepts for real and virtual tools for training in measurement and instrumentation
- exchange of ideas on globalisation and the use of internet for the further development of education in measurement
- **forthcoming activities will be reported by the chairman at the closing session!**

TC2 - Photonics

(established in: 1962)

Chairman: Prof. Dr.-Ing. Tilo **Pfeifer**

RWTH Aachen
Aachen

GERMANY



The aim of TC2 is to study the application of **photon detectors** for:

- conversion of optical images to electrical signals
- conversion of optical images to optical images
via the spectral transposition in measurement technology for:
 - photometry
 - radiometry
 - optoelectronics
 - optical communication
 - astronomy

• forthcoming activities will be reported by the chairman at the closing session!



TC3 - Measurement of Force, Mass and Torque

(established in: 1967)

Chairman: Dr. D. I. **Kang**

Korea Research Institute of Standards
and Science
Taejon

REPUBLIC OF KOREA



The aim of **TC3** is to bring to the forefront the latest developments and achievements in the **measurement of force, mass, torque and density**

The scope of **TC3** covers all areas from industrial applications and new transducers to improvements of the scales for the different quantities, the realization of new standards and fundamental research

- forthcoming activities will be reported by the chairman at the closing session!

TC4 - Measurement of Electrical Quantities

(established in: 1984)

Chairman: Prof. Pasquale **Daponte**

University of Sannio
Benevento

ITALY



The objectives of **TC4** deal with **Electrical Measurements in the broad sense**, i.e. including both power and HF measurement which are of vital importance in various fields of science and technology

Progress in the domain of electrical measurement science and instrumentation is very fast: it offers continually new possibilities in accuracy and speed of measurement

- forthcoming activities will be reported by the chairman at the closing session!

TC5 - Hardness Measurement

(established in: 1973)

Chairman: Dr. Konrad **Herrmann**

Physikalisch-Technische Bundesanstalt
Braunschweig

GERMANY



The aim of **TC5** is to

- organize international symposia on new theoretical knowledge in the field of **hardness testing** with the presentation of papers including also recently developed equipment
- exchange of experience among members of the Committee
- solve outstanding problems, transmitting the results to the interested organizations or experts in different countries

• forthcoming activities will be reported by the chairman at the closing session!

TC6 - Vocabulary Committee

(established in: 1974)

Activity suspended
Dictionary on Metrology
English-French-German-Russian
has been published

TC7 - Measurement Science and Metrology

(established in: 1975)

Chairman: Prof. Dr. Luca **Mari**

Università Cattaneo
Castellanza

ITALY



The objectives of **TC7** are to promote **measurement theory** on international scale

The aim is to help increasing efficiency

- in research, by allowing easier solution of problems as a result of a deeper understanding
- in education, by rationalization of teaching as a result of a objective generalization
- in production, by easier quality control as a result of greater repeatability

• forthcoming activities will be reported by the chairman at the closing session!

TC8 - Traceability in Metrology

(established in: 1972)

Chairman: Prof. dr. ing. Carlo **Ferrero**

CNR Istituto di Metrologia
"G. Colonnetti"
Torino

ITALY



The objectives of **TC8** are to investigate:

- Fundamental criteria and technical aspects of **traceability in metrology**
- Rules of calibration in chain systems
- Reliability and limits of traceability schemes

The goals of **TC8** are to:

- Organize symposia, colloquia, training courses on timely topics of metrological traceability for physical quantities

TC9 - Flow Measurement

(established in: 1976)

Chairman: Dr. M. J. **Reader-Harris**

National Engineering Laboratory
Glasgow

UNITED KINGDOM



The objectives of **TC9** are to promote International exchange of information and organization of Conferences on **Fluid Flow** Measurement through closed pipes, covering gases, liquids, and mixtures of these, with emphasis on industrially relevant research activities

TC10 - Technical Diagnostics

(established in: 1976)

Chairman: Laszlo **Monostori**

Hungarian Academy of Sciences
Budapest

HUNGARY



The objectives of **TC10** are to

- facilitate the exchange of scientific and technical information on **diagnostic methods**, instrumentation and systems
- support co-operation between scientists and engineers in different subject areas in solving various diagnostic problems
- bring attention to the basic principles and development trends in diagnostic work and the co-ordination of the solution of fundamental problems
- seek unified diagnostic methods and components of diagnostic systems

TC11 - Metrological Infrastructures

(established in: 1976)

Chairman: Prof. M. **Boršić**

Croatian Metrology Society
Zagreb

CROATIA



The objective of **TC11** is to

- collect, discuss and disseminate know-how about **development, establishment and operation of institutions and services concerned with measurement standards**, measuring instruments, calibration, metrological assurance, certification and accreditation, taking into account the specific economic, social and educational needs of individual countries with special emphasis on developing countries

• forthcoming activities will be reported by the chairman at the closing session!

TC12 - Temperature and Thermal Measurements

(established in: 1979)

Chairman: Dr. Francisco **Righini**

CNR Istituto di Metrologia "G.
Colonnetti"
Torino

ITALY



TC12 provides forum for an international exchange of opinions among experts in the field of temperature and thermal measurements

Attention is paid to

- **sensors**
- **new measurement methods**
- **the use of electronics and microcomputers in temperature and thermal measurement and control systems**

Emphasis is given to the

- **improvement of efficiency in industrial applications**

• **forthcoming activities will be reported by the chairman at the closing session!**

TC13 - Measurements in Biology and Medicine

(established in: 1980)

Chairman: Dr. P. **Kneppo**

Bratislava

SLOVAKIA



TC13 focusses on:

- **Measurement:**
 - **measurement of whole body, organ and cellular function**
 - **invasive and non-invasive measurements**
 - **sensing and measurement of physical variables**
 - **electrical measurement**
 - **chemical and nuclear sensing and measurement**
 - **measurement at the bedside in the critical care unit**
 - **measurement in the clinical laboratory**

- **forthcoming activities will be reported by the chairman at the closing session!**

TC14 - Measurement of Geometrical Quantities

(established in: 1980)

Chairman: Prof. Dr.-Ing. A.
Weckenmann

Universität Erlangen-Nürnberg
Erlangen

GERMANY



The aim of **TC14** is to promote in theory, fundamental research and application the development of measurement technologies for **Product-Inspection, Process-Control and Quality Management**

- forthcoming activities will be reported by the chairman at the closing session!

TC15 - Experimental Mechanics

(established in: 1984)

Chairman: Prof. A. **Freddi**

Università di Bologna DIEM
Bologna

ITALY



TC15 focusses on:

- static, dynamic and stability problems in **experimental mechanics**
- problems of geometric and physical non-linearity
- time-dependent response of materials and structures
- the effects of elastic-plastic, visco-elastic and visco-plastic as well as of inhomogeneous and non-isotropic response of materials
- the phenomena of fracture and fatigue
- the effects of impact loading, wave propagation, experimentally, as well as measurements in modal analysis and systems identification



TC16 - Pressure and Vacuum Measurement

(established in: 1986)

Chairman: Dr. J. **Guzmán**

CENAM
Querétaro

MEXICO



- The objectives of **TC16** are to organize symposia, workshops, round table sessions, etc. on **pressure measuring techniques**, application, sensor design and calibration

- forthcoming activities will be reported by the chairman at the closing session!



TC17 - Measurement in Robotics

(established in: 1987)

Chairman: Prof. K. **Tachi**

The University of Tokyo
Tokyo

JAPAN



TC17 main objectives:

- to deal with all aspects relevant to **robot sensors**, both internal and external ones:

- force sensor
- tactile sensor
- distance sensor
- visual sensor and others

employed in robot motion and navigation control-principle

- methodology and applications
- communication sensors interfacing between man and robot

• forthcoming activities will be reported by the chairman at the closing session!

TC18 - Measurement of Human Functions

(established in: 1998)

Chairman: Prof. K. **Ito**

Tokyo Institute of Technology
Yokohama

JAPAN



TC18 provides the opportunity and forum for discussing all aspects relevant to **Measurement, Analysis and Modeling of Human Functions, Movement, Perception and Cognition:**

- Human movements and actions, such as hand manipulation, arm movements, posture control, gait locomotion, sports exercises
- Human perception and cognition: vision, auditory and somato-sensory systems, space and motion perception, attention and performance
- Interaction and integration of human perception and cognition with movements and behaviours

• forthcoming activities will be reported by the chairman at the closing session!



TC19 - Environmental Measurement

(established in: 1999)

Chairman: Prof. P. **Girão**

Instituto Superior Técnico
Lisbon

PORTUGAL



TC19 provides an international platform for collaborating in the field of **environmental measurements**

- forthcoming activities will be reported by the chairman at the closing session!

TC20 - Measurement Techniques for the Construction Industry

(established in: 1999)

Chairman: Dr. K. **Hariri**
Technical University Braunschweig
Braunschweig

GERMANY



TC20 Scopes of **monitoring**:

- deformation and force measurement
- concentration of chemical species as moisture, chloride, pH
- corrosion
- sensor development is essential (data acquisition, evaluation have to be improved, strategies and decision making are required)

Highlights of **TC20** work in the future:

- improve sensor development and monitoring strategies
- build an interface between metrology and civil engineering

TC21 – Mathematical Tools for Measurements

(established in: 2004)

Chairman: Prof. Franco Pavese
Istituto di Metrologia “G. Colonnetti”
Turin

ITALY



TC20 Scopes:

- To promote the harmonisation, the coordinated use and the development of new mathematical and statistical tools for measurements, and their implementation in guides, procedures and codes, acting as a portal on an international environment.

• forthcoming activities will be reported by the chairman at the closing session!

TC22 - Vibration Measurement

(established in: 2005)

Chairman: Dr. T. **Bruns**
Technical University Braunschweig
Braunschweig

GERMANY





TC23 – Metrology in Food and Nutrition

(established in Rio de Janeiro: 2006)

Chairman: proposed by **TB** and accepted
by **GC**

Prof. I. Venkatesh
Tufts University, Boston

USA



NEW TECHNICAL COMMITTEES

(in creation by TB)

TC24 - Chemical Metrology

TC25 - Artificial Intelligence in Measurements

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5. WORLD CONGRESSES
6. PUBLICATIONS
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5. WORLD CONGRESSES

- An **IMEKO World Congress** is the **gathering** of scientists and engineers in order to discuss **selected papers** and reports and to exchange experiences in accordance with the general aims of **IMEKO**
- The **structure**, **subject matter** and **duration** of a Congress is determined by a common decision of the **GC** at a Session

HISTORY OF WORLD CONGRESSES

(1958-2006)

Past IMEKO World Congresses

IMEKO I	Budapest	Hungary	1958
IMEKO II	Budapest	Hungary	1961
IMEKO III	Stockholm	Sweden	1964
IMEKO IV	Warsaw	Poland	1967
IMEKO V	Versailles	France	1970
IMEKO VI	Dresden	German D.R.	1973
IMEKO VII	London	Great Britain	1976
IMEKO VIII	Moscow	Soviet Union	1979
IMEKO IX	Berlin(West)	F.R. Germany	1982
IMEKO X	Prague	Czechoslovakia	1985
IMEKO XI	Houston/Texas	USA	1988
IMEKO XII	Beijing	China	1991
IMEKO XIII	Torino	Italy	1994
IMEKO XIV	Tampere	Finland	1997
IMEKO XV	Osaka	Japan	1999
IMEKO XVI	Vienna	Austria	2000
IMEKO XVII	Dubrovnik	Croatia	2003

Some photos of previous World Congresses



Budapest, Hungary, 1961

Opening Ceremony IMEKO XVII in Dubrovnik, June 2003



View on the bay of Cavtat from the venue of IMEKO XVII in Hotel Croatia



Social gatherings...



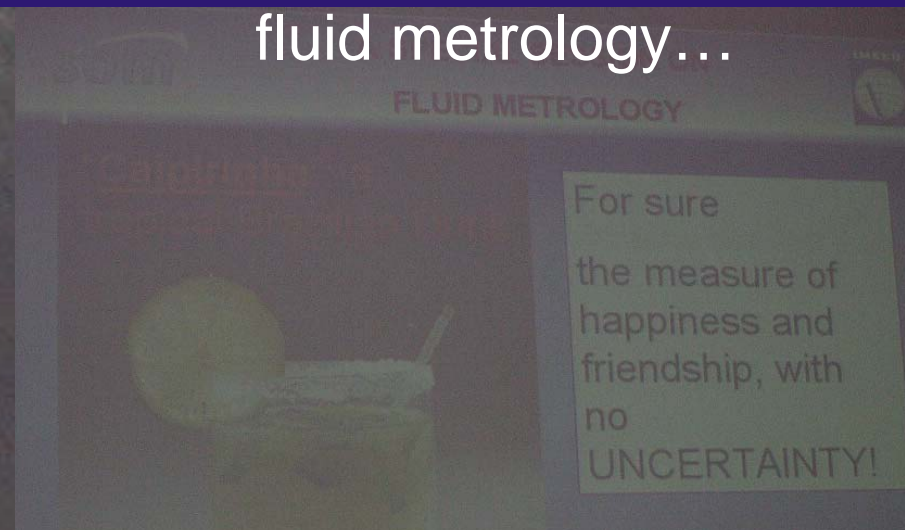


**Closing Ceremony and Awards at
IMEKO XVII
in Dubrovnik, June 2003**

Announcement of some fluid metrology...



Handing over the
flag of IMEKO to
the Brazilian MO for
the next WC-2006



Brazilian happy hour

György Striker Junior Paper Award

Purpose: donation of the Founder and first Secretary General of IMEKO and his wife, to be given to a **junior author** under **35 years** of age, whose paper reflects a deep understanding and knowledge of the theme of a World Congress.

György Striker

SECRETARY GENERAL

1958-1991 † Professor **György Striker** (Hungary)
(1958-1985)



The Secretary General fulfilled the duties of **President** until
1971



György Striker



14



Jena Technology Days '86

5th Int. IMEKO Symposium on Intelligent Measurement

Friedrich - Schiller - University JENA, GDR

June 10 - 14, 1986

György Striker Junior Paper Award ¹³⁴

The International Measurement Confederation (IMEKO) invited applications for the György Striker Junior Paper Award **2003 also 2006** subject to the following rules:

1. The sum of the award is **US\$ 1100**.
2. Only one person will be awarded: a **junior author under the age of 35 years** (by the date of the Congress).
3. The applicant should be the **principal author** of a high-level scientific paper on one of the topics of the Congress.
4. The International Programme Committee (IPC) will do the preliminary selection on the basis of quality and the scientific novelty of the submitted abstracts. The final decision is made by the Chairmen of the TCs and by the President of IMEKO based on the full text received.

IMEKO

György Striker Junior Paper Award

attributed to **2003**

XVII IMEKO

World Congress

Dubrovnik, Croatia

Laureate 2003

Marcin Gnyba

Gdansk University of Technology, Poland



Paper:

**"Sol-Gel Materials Investigation by
Means of Raman Spectroscopy"**

IMEKO

György Striker Junior Paper Award



to be attributed in **2006**
to the **XVIII IMEKO**
World Congress
Rio de Janeiro, Brazil

György Striker Junior Paper Award 2006

Come and see at the closing
session of today!

Award 2006 = **1.200,- US\$**
(about 937€)

ACTUAL WORLD CONGRESS

Actual IMEKO World Congress

IMEKO XVIII

Rio de Janeiro

Brazil

2006

NEXT WORLD CONGRESSES

Future IMEKO World Congress			
IMEKO XIX	Lisbon	Portugal	2009
IMEKO XX	?	?	2012

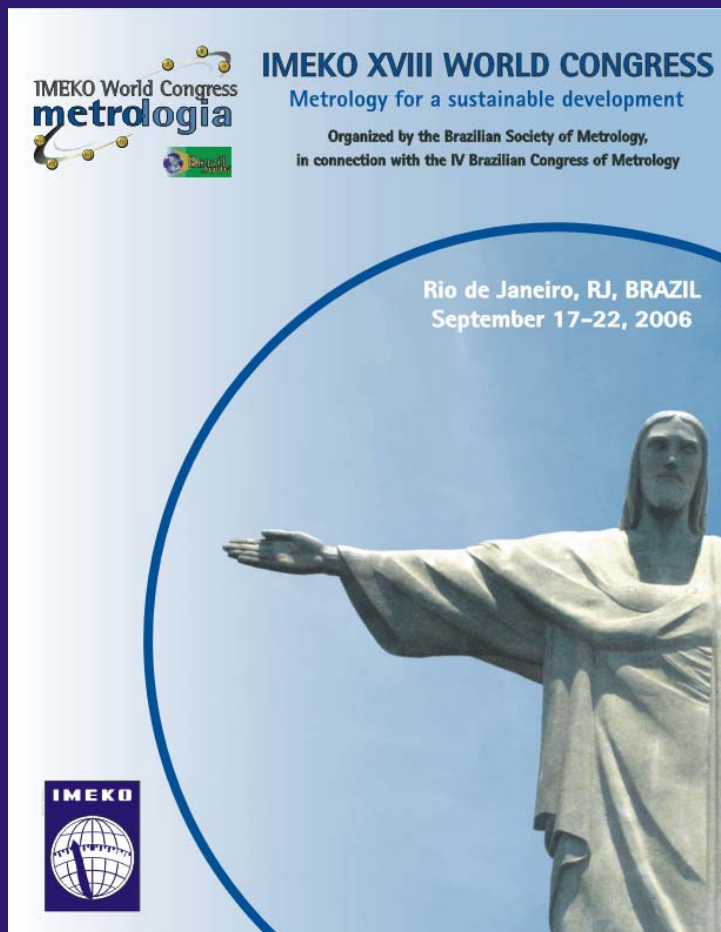
Actual IMEKO World Congress

IMEKO XVIII

Rio de Janeiro

Brazil

2006



IMEKO World Congress
metrologia

IMEKO XVIII WORLD CONGRESS
Metrology for a sustainable development

Organized by the Brazilian Society of Metrology,
in connection with the IV Brazilian Congress of Metrology

Rio de Janeiro, RJ, BRAZIL
September 17-22, 2006

IMEKO



Theme:
Metrology
for Sustainable
Development

IMEKO


IMEKO XVIII World Congress Rio de Janeiro, RJ, Brazil - 2006

The **International Measurement Confederation (IMEKO)** is a non-governmental federation of 36 Member Organizations individually concerned with the advancement of measurement technology.

Its fundamental objectives are the promotion of international interchange of scientific and technical information in the field of measurement and instrumentation and the enhancement of international cooperation among scientists and engineers from research and industry.

Founded in 1958, the Confederation has consultative status with UNESCO and UNIDO and is one of the five Sister Federations within Five International Associations Coordinating Committee (FIACC), further consisting of International Federation of Automatic Control (IFAC); International Federation for Information Processing (IFIP); International Federation of Operational Research Societies (IFORS) and International Association for Mathematics and Computers in Simulation (IMACS).


BRAZIL

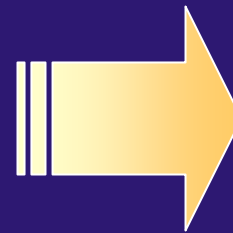

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6. PUBLICATIONS

- **ACTA IMEKO** - proceedings of the World Congresses
- **IMEKO TC Events Series** - proceedings of TC events
- **MEASUREMENT** - published by Elsevier Science Ltd, Oxford
- **IMEKO BULLETIN** - semi-annual newsletter



Journal
Measurement
published by



**IMEKO
BULLETIN**
downloadable from
the IMEKO
website:

www.imeko.org


**INTERNATIONAL MEASUREMENT CONFEDERATION
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7. INTERNET

IMEKO's website is hosted by servers at PTB, Germany

The URL = www.imeko.org

The *webmaster* is the **IMEKO Information Officer**, dr. Dirk Röske

WITH MANY



TO



Internet, World Wide Web Homepage

IMEKO.ORG - Microsoft Internet Explorer

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IMEKO

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Updated: Jul 03, 2006

Symbols:

Authorization required

International Measurement Confederation

IMEKO HOMEPAGE

The next IMEKO World Congress 2006





IMEKO XVIII WORLD CONGRESS

Metrology for a sustainable development

[IMEKO XVIII World Congress](#)
September 17-22, 2006

Remarks for young scientists (up to the age of 35 years):
Did you consider to apply for the
György Striker Junior Paper Award?
Read more on the [awards](#) page or download the
[application form](#) (MS Word ) and contact the organizers.

Some of the next IMEKO events

 <p>November 26-30, 2007 Merida MEXICO</p>	 <p>November 26-30, 2007 Merida MEXICO</p>
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Some of the next IMEKO co-sponsorships

News

June, 2006:
Updated links to the Top 25 of papers from "Measurement" are available on the [publications](#) page. The new IMEKO [bulletin \(#45\)](#) can be downloaded now.

May, 2006:
New events are announced for **2007**. Please find the related information with our [event finder](#). All **493** papers from the proceedings of the last World congress 2003 in Croatia are available for download now from the [proceedings](#) page.

Hints

Please use the IMEKO [event finder](#) to quickly find conferences, symposia, congresses and workshops.

Do you want to use the IMEKO [bulletin board](#)? Please contact the [webmaster](#) to

- establish new forums
- create user groups
- select moderators

Start | My Computer | My Network Places | Add Network Place | Network Setup Wizard | Wireless Network Setup... | Entire Network | Desktop | Norton | 20:51 woensdag

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8. QUALITY POLICY

Quality policy

based on ISO 9001

documented in the
IMEKO Quality Manual

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- 5 Sister Federations within **FIACC**
(Five International Associations Co-ordinating Committee)

IFAC - International Federation of Automatic Control

IFIP - International Federation for Information Processing

IFORS - International Federation of Operational Research Societies

IMACS - International Association for Mathematics and Computers in Simulation

- friendly working contacts with OIML, BIPM, ... and with **CAMET!**

**Many thanks to
all the IMEKO Officers and the Secretariat :**



THANK YOU!

