Agenda of the 64th joint GC-TB Session

1. Opening address (President, 3 minutes)
2. Approval of the agenda (President, 2 minutes)
3. Roll Call and certification of a quorum (Secretariat, 5 minutes)
4. Approval of the Minutes of 63rd GC Session and TB Meeting (1 change) (President 3m)
5. GC Decision on the New Editor-in-Chief of Acta-IMEKO (President, 3 minutes)
6. Technical Board (President-Elect)
   a. Fees to pay to IMEKO after TC events or World Congress (30 minutes)
   b. TC Decision on new TC members, (10 minutes)
   c. GC Decision on new TC officers (5 minutes)
   d. TC Workshop (20 min)
   e. Establishing a new Quantum TC (8 minutes)
7. Fee of the World Congress in 2018 (President-Elect, 20 minutes)
8. Adoption of the amended Constitution with a special decision. (SG, 15 minutes)
9. Adoption of the amended By-Laws. (SG, 30 minutes)
10. Report of any Officer: Short report of the Secretary-General (10 minutes)
11. Report on the XXIII IMEKO World Congress, Japan, 2021 (VP of IMEKO XXIII) (10 minutes)
12. Date and Place of the 65th TB-GC Session: (Saturday - Sunday) 28th - 29th August 2021 (2)
13. Any other business (10 minutes)
15. Adoption and Signing of the Decisions of the Session (10 minutes)

Note: there will be a short coffee break after agenda point 6 or 7
Agenda of the 64th joint GC-TB Session

1. Opening address (President, 3 minutes)
2. Approval of the agenda (President, 2 minutes)
3. Roll Call and certification of a quorum (Secretariat, 5 minutes)
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   a. Fees to pay to IMEKO after TC events or World Congress (30 minutes)
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13. Any other business (10 minutes)
15. Adoption and Signing of the Decisions of the Session (10 minutes)

64th General Council Session and Technical Board Meeting

Saturday, 20 March 2021
- video conference -
Technical Board (President-Elect)
Establishing a new TC Quantum Measurement and Quantum Information

TC25 - Quantum Measurement and Quantum Information

Chairperson: Mrs Barbara Goldstein
Vice Chairperson: Mr Nicolas Spethmann
Scientific Secretary: Tim Prior
New members:
- Alexander (Sasha) Tzalenchuk, NPL Fellow in Solid State Quantum Technologies
- Jay Hendricks, NIST

Find more details in, "Quantum Measurement and Quantum Information Summary 2021-03-19.docx"
The second quantum revolution is revolutionizing metrology

Our most precise standards leverage advances in quantum technology

- Optical clocks
- Josephson voltage standards
- Quantum Hall resistance standards

...and quantum technology is enabling new, chip-scale standards

- And challenging the foundation of international metrology
  - What does traceability mean — when it’s not through an NMI?
  - How do we assure quality?
  - How do we provide mutual recognition?
  - Shifting roles of the NMI, industry, users

Quantum measurement & quantum information are inseparable

- The level of control and manipulation needed for precision metrology is exactly what is needed for quantum information processing
  - Control of quantum states
  - Manipulating, transducing, preserving and reading out information from quantum states

- Making a measurement is essentially a transfer of information
  - Entanglement is used for cooling and read-out of the Aluminum ion clock
  - Measurements are an observation of how information stored in a system evolves over time
Scope

Provide a forum to discuss advances in quantum-based measurement, the quantum technologies they support, and the changes they imply for the international metrology infrastructure and for applications.

Topics include:

- **Trends & best practices** in quantum-enabled measurement across multiple disciplines
- Technology and standardization **readiness** of quantum technologies
- Creating a foundation for international acceptance of field-deployable, **chip-scale quantum-based standards**

Expected Results

- **Articulation** of the role of quantum technologies for the realization and dissemination of standards;
- **Recommendations** for the international acceptance of chip-scale quantum standards;
- A **forum** to advance the use of novel quantum measurement techniques in applications, and to dialog with and educate the broad community of **metrology institutes, industry, and academia**.
Related TCs

TC1 – Education and Training in Measurement and Instrumentation
TC2 – Photonics
TC3 – Measurement of Force, Mass and Torque
TC4 – Measurement of Electrical Quantities
TC7 – Measurement Science
TC8 – Traceability in Metrology
TC12 – Temperature and Thermal Measurements
TC16 – Pressure and Vacuum Measurement

Potential Members

People from related IMEKO TCs, the broader metrology community and its industry partners with expertise in:

- The new SI and its application to metrology
- Quantum sensing/metrology and its applications
- Quantum engineering and its measurement needs
- Quantum education and outreach

Proposed members so far:

- Jay Hendricks, NIST
- Alexander (Sasha) Tzalenchuk, NPL
Technical Board Update

TC6 - Digitalization ctd.

- The aim of the TC is to develop, organise and disseminate fundamental concepts of measurement science that relate to digitalisation and digital transformation in science, industry, and society.
- The TC promotes the accumulation and curation of knowledge, in a variety of forms, relating to digitalisation of measurement methodologies and measurement outcomes. Its purpose is to provide a robust body of knowledge to support digital transformation when measurement is involved.
- The multidisciplinary nature of digitalisation is expected to overlap with the interests of other IMEKO groups, so TC6 will encourage collaborations and joint activities with other TCs.

find more details in: "Agenda item 6 Proposed scope and aims TC6.docx"

TC10 - Measurement for Diagnostics, Optimization & Control

Chairperson: Dr Zsolt Janos Viharos

Resigned member: Milen Jakovic

- Renaming of the TC
- Former name: Technical Diagnostics

find more details in: "Agenda item 6 TC10 new topics 202103.pdf"
Strategy of IMEKO
IMEKO contribution of conference fees

19. FINANCES

19.1 For in-person TC conferences and other IMEKO events (except IMEKO World Congress), a 15% contribution from participation fees is levied for IMEKO, made payable to the Secretariat. For a joint event with other organisations, the minimum contribution is proposed by the Technical Board and determined by the General Council.

19.2 For an in-person World Congress, a 15% contribution from participation fees is levied for IMEKO, made payable to the Secretariat.

19.3 In case of an on-line or hybrid event, the General Council or the Presidential Board agrees on the contribution fee to be levied with the event organiser.

19.4 The minimum fee for in-person TC events organiser to say is:

19.4.1 750€/450€ for events with no more than 40 participants.

19.4.2 1000€/600€ for events with an attendance of 150 and above.

19.4.3 A private scale is applied between €2500 and €15000 when the number of participants ranges between 150 to 1500.

19.5 The General Council or the Presidential Board shall set the contribution for events that do not have an in-person component.

19.6 If appropriate, the General Council or the Presidential Board may agree on or a special fee with the event organiser.

19.7 To attract and support young researchers, the event organiser does not need to pay a fee when the participant is under 35 years old.

19.8 Heads of Distinguished Service Award, IMEKO Secretariat and IMEKO Officers who are pensioners or have non-income from Member Organisation with your credit standing are, and who have an active role in the function in the IMEKO World Congress or another event may be paid for full reimbursement of their conference fees (e.g., hotel costs) with the prior consent of the Presidential Board.

19.9 New TC Chair may apply for.
Strategy of IMEKO
IMEKO contribution of conference fees

Proposal of a financial concept for future IMEKO conferences:

- online
- hybrid
- in person

- no costs
- caterin
- visits
- gala Dinner

- rent
- on site service (cleaning, security, ...)

- proceedings
- speaker
- contingency insurance
- technical personnel, IT, server
- conference management system

Technical Board (President-Elect)

TC Workshop

- The GC decided to organize a voluntary WS for TC

Aims of the TC Workshop

General information and discussion about ...

- the role of the Technical Board (TB)
  - Shall the curium be modified for the TB?
  - What information shall be included in the TB report on the TC?

- the role and functioning of the Technical Committees (TC)
  - Create a guide on how to run a TC (especially for new TC officers)
  - What is the role of the officers (chair, vice chair, secretary)?
  - ...
Technical Board (President-Elect)
TC Workshop

IMEKO Cross-TC Collaboration (C-TC)
First suggestions for supporting each other in TC management and operation

2021.02.16.

Dr. Zsolt János Viharos

Technical Board (President-Elect)
TC Workshop

Proposed time & days for the WS

- UTC 12 pm (noon) – 2 pm
- May 8 (Saturday)
- May 22 (Saturday)
- May 28 (Friday)
- May 29 (Saturday)

Doodle poll

due to time shift: 2 meetings at convenient time(s)
64th IMEKO General Council Session
20.03.2021
IMEKO Regulations
Zoltan Zelenka, Secretary General

What has happened this year

1. IMEKO had the first on-line workshop on the regulations 😊
   • Not only the MOs, but the TCs and officers were present
   • Detailed discussion on the Constitution
   • Thank you for the comments before and after!

2. Updated draft were sent to a lawyer
   • New lawyer, new requirements 😊
   • Clarification with the possibilities

3. Presidential Board (the drafting group) agreed on the new version.
Major changes/amendments

1. Individual and associated membership was removed
   - Alternative: changing to association from confederation
2. A remedy should be provided in case of exclusion of a MO.
   - PB excludes, GC provides remedy.
3. The Supervisory Committee’s detailed description was moved from the IMEKO financial guide to the Constitution (No new statements).
4. Members in arrears in their membership dues are not allowed to exercise their voting rights.
5. Presidents must, and all other IMEKO Officers shall usually be nominated from a Member Organisation’s active membership.
6. The new Constitution will be in effect after the Yokohama GC in August.

Providing access to the Secretariat public documents

The aim is to send links instead of attachments.
- Investigated sharing
  - Google drive (is in use at the secretariat)
  - Microsoft SharePoint
- Alternatively provide information on the support homepage
Visible Improvements

- The Secretariat produced three new style newsletters
- Arranged and hosted a workshop on Constitution and Bylaws. Thank you all once more who attended or sent their comments or both!
- Doubled the followers on LinkedIn
- All the TCs have a closed LinkedIn group now
- 15 posts on LinkedIn
- Started IMEKO-ACTA on Facebook with the new ACTA Editor in Chief (not public yet)

Newsletters

- All newsletter can be downloaded here:
  - Newsletter February 2021 (February, 2021)
  - Newsletter from the President's Board (December, 2020)
  - Newsletter on the 11th GC-sessions (November, 2019)
  - Newsletter Summer 2020 (June, 2020)
  - Newsletter Winter 2019 (November, 2019)
Improve the general computer literacy of the Secretariat - Individual mailings, Calendar invites

6th Joint General Council-Technical Board Session
Saturday, 20 March - 10.30 to 13.30

Zoellem (IBT) is inviting you to a virtual Zoom meeting.
Join Zoom Meeting:
https://us02web.zoom.us/j/618413399
Meeting ID: 618 413 399
Passcode: 741807

For more information, contact Zoellem at: zoellem@ibt.org
Some Invisible Improvements

The Secretariat keeps on modernising

- Excel database is created for all IMEKO affiliated
- The Supporting page is growing, data sharing under construction
- Surveys and online registration form created
- A new GDPR consent is practically ready
- Mass email individualised created, and in use
- Data backup system has been created
- Bitrix24 for internal projects and recording the time spent

“Coming together is a beginning, Keeping together is progress, Working together is success.”
Henry Ford
The XXIII World Congress of IMEKO in 2021
- held as a Web based conference

March 20, 2021
**Review of IMEKO2021**

**Measurement: sparking tomorrow's smart revolution**

Each submitted paper will be reviewed by three reviewers. Reviewers have been recommended from TC chairman and IMEKO2021 planning & executive committee.

**Schedule**
- April 29: Deadline of extended abstract submission
  - Assigning 3 reviewers to each paper
- May 10: Peer review will be started.
  - (In review, request email will be sent to reviewers.)
- May 31: Peer Reviews will be finished.
  - (Acceptance decision and preparation for notification)
- June 15: Notification of acceptance

**Events of IMEKO2021**

- **Aug 30:** Opening ceremony
- **Sept 3:** Award & Closing ceremonies, Introduction of IMEKO2024
- **Sept 30:** Web site will be closed.
  - Proceedings will be published.

IMEKO2021
Plenary Lectures

Metrology and Digitalization

Dr. Martin J.T. MILTON
Director, International Bureau of Weights and Measures (BIPM)

Biography
Dr. Martin Milton joined the International Bureau of Weights and Measures (BIPM) in October 2011 as Director-Designate and became Director on 1 January 2013.

Dr. Prof. H. C. Frank HÄRTIG
Vice President, Physikalisch-Technische Bundesanstalt (PTB), DE

Biography
Frank Hartig received the diploma degree in electronic engineering from the University of Karlsruhe. Thereafter, he worked as development engineer in the field of coordinate measuring technology. He received the PhD degree from the Rostock University of Technology. After that, he joined the former measuring companies in the field of metrology. Since 1999, Dr. Hartig works at the Physikalisch-Technische Bundesanstalt (PTB) in Braunschweig. Between 2010 and 2012, he was head of the PTB laboratory and responsible for the BIPM's Kibble balance.

Instrumentation and Sensors

Mr. Koichi TANAKA
Executive Research Fellow / General Manager, NanoScience Research Laboratory, Showa Denko Corporation, JP

Biography
Degree
1982.4: B.S. in Physics
1984.3: M.S. in Physics
1986.3: Ph.D. in Physics

Ms. Barbara L. GOLDSTEIN
Associate Director, Physical Measurement Laboratory, Program Manager, NIST on a Chip National Institute of Standards and Technology (NIST)

Biography
Ms. Barbara Goldstein serves as Associate Director of the Physical Measurement Laboratory, the largest operational unit of NIST, consisting of approximately 1,800 staff and associates and three joint institutes, and which is responsible for conducting precision physical measurements to support commercial, defense and research enterprises. Ms. Goldstein manages the "NIST on a Chip" program which is establishing a new paradigm of measurement science and technology through the design, fabrication, and use of microfabricated devices, in disciplines including length, time, wavelength, force, and mass.
Plenary Lectures

Time and space, Connectivity

Prof. Hidetoshi KATORI
Department of Applied Physics, Graduate School of Engineering, The University of Tokyo, Quantum Metrology Laboratory, RIKEN, Space-Time Engineering Research Team, RIKEN, JP

Biography
Hidetoshi Katori was born in Tokyo, Japan in 1984. He graduated from the University of Tokyo in 2008. In 2008, he worked at MAX P (Hattori). In 2009, he joined RIKEN. His research has been

Dr. Iwao HOSAKO
Director General of the Wireless Networks Research Center and the Security Research Center, National Institute of Information and Communications Technology (NICT), Japan. He is also a professor at the University of Tokyo.

Biography
Iwao Hosako received his Ph.D. in physics from the University of Tokyo in 1999. After two years at NICT, he joined the National Institute of Information and Communications Technology in 2001, where he is currently a director.

Plenary Lectures

Sustainability

Dr. Akira YOSHINO
Director, Global Zero Emission Research Center (GZERC), AIST, JP

Biography
Dr. Akira Yoshino was born in Tokyo, Japan in 1932. He received his Ph.D. in physical chemistry in 1968 and has been a professor of chemistry at Ritsumeikan University since 1971. He is known for his work on electrochemical systems, including batteries, in 1985, which led to the development of the lithium-ion battery.

2019 Nobel laureate in Chemistry

Dr. Hiroshi TSUDA
Principal researcher, National Institute of Advanced Industrial Science and Technology (AIST), JP

Biography
Dr. Hiroshi Tsuda received a Ph.D. in applied chemistry from the University of Tokyo in 1976. He is a member of the International Academy of Quantum Science and Technology (IAQST) and has been a professor at the University of Tokyo since 1999. He is known for his work on quantum mechanics and quantum computing.
Proceedings

The IMEKO2021 proceedings will be published on Measurement:Sensors (on-line journal) by Elsevier until the end of September.

The proceedings including the accepted and presented paper only will be published after world congress.

In conference, the accepted papers will be provided as on-demand preprints along with each presentation video on the IMEKO2021 website.

Publication of accepted papers

All authors should be attention to the publishing possibility of the accepted papers of the IMEKO2021 World Congress in “Measurement:Sensors”, “Measurement” and “Acta IMEKO”, the official IMEKO Journals.
In 2021, the XXIII World Congress of IMEKO as a Web based conference with on-demand video

We are looking forwards to be accessed from all over the world.

Proposal of next IMEKO General Council and related meetings

March 20, 2021
Weekly Cases (March 19, 2021)

- Europe: 400k cases
- South Africa: 100k cases
- Brazil: 40k cases
- Russia: 40k cases
- India: 40k cases

1 million cases
100k cases
10k cases
10k cases
10k cases

82 candidate vaccines in clinical evaluation
192 candidate vaccines in pre-clinical evaluation

DRAFT landscape of COVID-19 candidate vaccines
(March 19, 2021)
The IMEKO 65th General Council and related meetings

Proposed
IMEKO 65th General Council and related meetings as online LIVE meeting.

Date: August 28 - Technical & Editorial Board Meeting
August 29 - General Council Meeting

Time: 13:00 CEST (UTC+2), 20:00 JST (UTC+9), 7:00 EDT (UTC-4)
Host: Japanese MO

Advisory Board Meeting
August 27, 13:00 CEST (UTC+2), 20:00 JST (UTC+9), 7:00 EDT (UTC-4)

RESOLUTIONS
of the 64th General Council Session of IMEKO
20th March, 2021, 12:00 Berlin time.

By Zoom
1. Opening address (President)

**Resolution:**
The Members of the General Council and the Officers were welcomed by the President to this second online GC meeting.

2. Approval of the agenda

**Resolution:**
The Agenda previously circulated was approved.
3. Roll Call and certification of a quorum

Resolution:
The roll call was held (in the absence of the Chair of CMC) by the IMEKO Secretary and the meeting was declared quorate.

4. Approval of the Minutes of the merged 63rd GC Session and TB Meeting by Zoom in November 2020

Resolution:
The Minutes of the 63rd GC Session and TB Meeting held by Zoom in November 2020 were approved and adopted.

(one minor comment received by correspondence prior to the meeting was agreed)
5. New Editor-in-Chief of Acta-IMEKO

Resolution:

General Council Decision on the New Editor-in-Chief of Acta-IMEKO (3 minutes).

The appointment of Professor Francesco Lamonaca was approved by the GC and he was thanked for taking on this role.

6. Report from the Chair of the TB (1)

Resolution:

The Report from the Technical Board, presented by the President-Elect/Chair of the TB was approved including:

- Creation of TC-25 Quantum Measurement & Quantum Information (a presentation from Di Barbara Goldstein (NIST) on the scope of the new TC was received with thanks)
- Update on (new) TC-6 Digitalization
  (the President-Elect gave a brief report on the scope of the TC)
- TC-10 re-named as Measurement for Diagnostics, Optimization & Control
- New members reported for these TCs.
  - TC-8 Traceability in Metrology
  - TC-15 Experimental Mechanics Chair
  - TC-16 Pressure and Vacuum Measurement
  - TC-17 Measurement in Robotics
  - TC-20 Measurement of Energy & Related Quantities
6. Report from the Chair of the TB (1)

Resolution:
The Report from the Technical Board, presented by the President-Elect/Chair of the TB was approved including:
- Creation of TC-25: Quantum Measurement & Quantum Information
- Presentation of IMEKO Technical Report on the scope of the TC
- TC-21 presented a Measurement in Diagnostics, Optimization & Control
- Several reports were presented on these TCs.

IMEKO

7. Fees for the World Congress in 2018

Resolution:
The Report from the President-Elect/Chair of the TB was made on feedback received from GC members after the November GC meeting and a meeting held with the President and Honorary Secretary of the UK MO, the Institute of Measurement & Control, with the Presidential Board.

The Presidential Board had considered the matter and circumstances and agreed to put the General Council the proposal that the TUI and final offer of £7500 (~€8500) from the UK MO be accepted.

The proposal was agreed unanimously by the General Council, with the exception of France abstaining in the vote.

IMEKO
8. Adoption of the Amended IMEKO Constitution

Resolution:
The report of the Secretary-General on the new Constitution, following the discussion held at the last General Council, and action taken since following legal advice was received and approved, subject to minor amendments discussed which can be approved by a Special Decision of the GC.

9. Adoption of the Amended IMEKO By-Laws

Resolution:
The report of the Secretary-General on the new By-Laws, following the discussion held at the last General Council, and action taken since following legal advice was received and approved. Relating to Section 19 (Finances), further clarification of this Section, especially in relation to fees for events, would be circulated by e-mail, and members asked to comment on this.
10. Report from IMEKO Officers: Secretary-General

Resolution:
The report from IMEKO Officer, the Secretary-General, on the widened activity of the Secretariat of IMEKO, including Newsletters and IMEKO’s presence on social media, was accepted with thanks.

11. Report on the preparations for the XXIII IMEKO World Congress in Yokohama, Japan, 2021

Resolution:
The report presented by the Vice President on the planning for the XXIII World Congress as a virtual meeting was received with thanks.
12. Date and Place of the 65th GC Session with the TB and Editorial Board meetings
(Saturday – Sunday, 28th – 29th August 2021)

Resolution:
It was agreed that this would be held on Saturday – Sunday, 28th – 29th August 2021 as an online event.
Details are:
• Advisory Board (to be arranged)
• August 28th – Technical & Editorial Board Meetings
• August 29th – General Council Meeting
Start time 13.00 (CET+2)
Host: Japanese MD

13. Any Other Business

The President-Elect asked for nominations, especially of female candidates for the role of President Elect 2022-24 and hence President 2024-27. These can be sent to the Secretariat for consideration by the Presidential Board.

The Past President reminded TC Officers that the new IMEKO Journal Measurement Sensors was interested in proposals for publication of TC activities. The Past President could be contacted on k.tv.geitmann@cvyr.ac.uk to take these forward with the Publishers, Elsevier.
14. Adoption and Signing of the Resolution of the 64th GC Session

Resolution:
the Resolutions of the 64th GC Session were adopted and signed.
Kenneth Grattan