IMEKO NEWSLETTER
2026 APRIL


City picture of Vienna

DEAR FRIENDS, DEAR COLLEAGUES,

Welcome to the April 2026 edition of the IMEKO Newsletter, which focuses on the first place on key developments in the community. Even though we are still in April, the beginning of this year seems distant. In March, the first conference of 2026, which saw significant participation, was held in Hangzhou, China.

The Presidential Board has convened five times this year, with the most important meeting being the Spring Meeting on 21 March in Vienna, Austria. They focused on implementing the IMEKO strategy at every step. Their fruitful discussions included preparations for the upcoming World Congress in Rimini, Italy, scheduled for 2027; the activities of the IMEKO Working Groups; ongoing investment projects to enhance the Confederation's activities; and the worldwide promotion of the Confederation's initiatives.

In this issue, we report on an impressive number of events, workshops, and seminars for 2026. We are excited to announce Nobel Laureate William D. Phillips as the first confirmed keynote speaker for the XXVth IMEKO World Congress in Rimini, Italy, 2027.

The Newsletter also includes a personal farewell from the retiring Mr José Ángel Robles Carbonell, a meeting with Dr Pedro Silva Girão who has been with the Confederation for many years, and a tribute to the late Dr Hidetaka Imai. We look at the future of the Young Scientists Initiative (WYSM) led by Dr Valentina Bello, and meet in the series IMEKO Goes to Young Scientists Dr Andreas Mattwieser.

Additionally, we share news on publishing: Measurement: Energy's acceptance for coverage in Scopus and more information on Acta IMEKO.

The industry spotlight is on SBEM Private Limited from India. There is an in-depth report from the 3rd Forum on Metrology and Digitalisation, emphasizing the significant advancements in Digital Calibration Certificates (DCCs) and the role of AI in enhancing productivity and documenting the last 150 years of metrology.

MR JOSÉ ÁNGEL ROBLES BIDS HIS FAREWELL TO THE IMEKO COMMUNITY AS HE RETIRES

"Dear Friends and dear Colleagues,

As I come to the end of my professional career, I would like to express my heartfelt gratitude to all of you with whom I have shared so many memorable years within IMEKO.

My first involvement dates back to the 1990s, when I had the opportunity to join TC3. Those early meetings opened for me a world of collaboration, technical debate, and genuine passion for measurement science. I remember them with great affection, not only for what I learned, but also for the warmth and generosity with which I was welcomed.

From the late 1990s onward, I had the honor of serving on the General Council as the national Spanish representative.

Those World Congresses, together with the Conferences of the various Technical Committees, have been among the most enriching experiences of my professional life. They offered a unique combination of scientific excellence, international cooperation, and the chance to learn from colleagues whose expertise and dedication I have always deeply admired.

Throughout these decades, IMEKO has been much more to me than a scientific organisation. It has been a place of growth, inspiration, and friendship. I feel fortunate to have met so many excellent professionals, and even more fortunate to have shared ideas, projects, discussions, and unforgettable moments with them. Thank you for everything I have learned from you, and for all the support and kindness you have shown me along the way.

I retire with immense gratitude and the certainty that IMEKO will continue to lead scientific progress in measurement with the passion and excellence that define it.

With warmest regards and my very best wishes for the future, José Ángel."

Mr José Ángel Robles Carbonell has played a key role in the development of the Spanish national metrology institute, CEM, since 1984 and until his retirement. Throughout his career at CEM, he has held several senior technical and leadership positions, including Head of Mass and Force Departments, Subdirector for Scientific and Institutional Relations, Director of Mechanical Quantities Division, and, since 2021, Director of the institution. His work has been fundamental in developing high-level metrological infrastructures and ensuring traceability to the International System of Units (SI).

He has made significant contributions to scientific and applied metrology, particularly in mechanical quantities, participating in international comparisons, and supporting industrial competitiveness. He has also been deeply involved in standardisation and legal metrology, contributing to the implementation of European regulations in Spain.

Internationally, he has actively collaborated with organisations such as IMEKO, where he played a key role in organising the 15th TC3 Conference, strengthening global cooperation in force and mass measurement. In addition, he has contributed extensively to knowledge dissemination through publications, conferences, and training initiatives, helping to educate generations of metrology professionals.

MEET DR PEDRO MANUEL BRITO DA SILVA GIRÃO

Pedro Manuel Brito da Silva Girão is a (retired) Full Professor of the Department of Electrical and Computer Engineering, Instituto Superior Técnico (IST), University of Lisbon (UL), and a Senior Researcher of the Instituto de Telecomunicações (IT). Holding a 5-year degree (Licenciatura, 1975) and a PhD (1988) in Electrical and Computer Engineering from IST, Dr Silva Girão taught at IST from 1974 until 2022, when he retired. In charge of more than 25 courses lectured at the BSc, MSc, and PhD levels, he was, among many others, a member of the commissions that designed and installed the Engineering and Industrial Management and Environmental Engineering degrees at IST, and served as Dean of the Department of Electrical and Computer Engineering, (2010-2013) and as President for Administrative Affairs of IST (2008-2009). He lectured, as an invited professor, at the L. N. Gumilyov Eurasian National University, Nur-Sultan (Kazakhstan), the Warsaw University of Technology (Poland), the Technical University of Catalonia (UPC - Spain), the Universidade Eduardo Mondlane, Maputo (Mozambique), and the Faculty of Electrical Engineering, "Gh. Asachi" Technical University, Iasi (Romania).

Dr Girão's research activity started in 1974, centred in the broad domain of metrology, including instrumentation and measurements of physical and chemical quantities, particularly for environmental monitoring and biomedical applications.

In 1997, he was one of the founders and later the Head (2000-2023) of a research group within the Instituto de Telecomunicações. A Senior Member of the Institute of Electrical and Electronics Engineers (IEEE) since 2001, he was elected Chair of IEEE Instrumentation and Measurement Portugal Chapter in 2024, and between 2015 and 2018, he presented invited talks as an IEEE Instrumentation and Measurement Society Distinguished Lecturer in Thessaloniki (Greece), Yerevan (Armenia), Iasi (Romania), Lisbon (Portugal), Puebla (Mexico), Bangkok (Thailand), and Jaipur (India).

A chartered engineer since 1983 by the Ordem dos Engenheiros, Dr Girão served as a member of its Admissions and Qualifications Board (2010-2016) and, between 2012 and 2023, he chaired and/or participated in the evaluation commission of 20 EUR-ACE processes. He was appointed Advisor Member of the Ordem dos Engenheiros in 2012.

Quality is also a domain of interest of Dr Silva Girão. In 1990, he became the first Portuguese auditor in the electrical sector to accredit calibration and testing laboratories, a role he paused in 2007 after conducting over 30 audits and training young auditors and laboratory technicians in quality and laboratory techniques. Since its creation in 2018, he has been a member of the Fórum da Qualidade (Portugal).

In 2009, he was invited to serve as one of the 13 members of the Fusion for Energy (F4E) Executive Committee (ExCo), later the Procurement and Contracts Committee, a position held for 4 years (the maximum allowed), until 2013.

MEET DR. PEDRO MANUEL BRITO DA SILVA GIRÃO

Dr Silva Girão began participating in IMEKO activities in 1995, attending, as an author, the IMEKO TC4 7th International Symposium on Modern Electrical and Magnetic Measurements in Prague, Czech Republic. Between 2004 and 2014, he chaired TC19 Environmental Measurements, and is currently its Honorary Chairman. A member of TC1 Education and Training in Measurement and Instrumentation, he participated in the organisation of several IMEKO events, namely as Chair of the 2009 World Congress held in Lisbon (Portugal) and as Vice-President in charge of that World Congress (2006-2009). He has been a member of the Advisory Board since 2012 and served on the Editorial Board of Measurement between 2006 and 2017.

Dr Silva Girão authored or co-authored some 460 publications, including 60 pedagogical texts, served on the editorial boards of 15 international journals (3 nowadays), and participated in the organisation of more than 100 congresses and scientific meetings in more than 30 countries worldwide.

Dr Silva Girão, who is included in the list of World Top 2% Scientists (Career Impact) (1960-2021/22/23) elaborated by Stanford University (USA), is Doctor Honoris Causa of the Faculty of Electrical Engineering, Technical University "Gheorghe Asachi", Iasi, Romania, Fellow of the Institution of Engineering and Technology (IET), Chief Advisor of the International Association for Promotion of Healthcare and Life-Science Research (IAPHLSR).

He is also a member of the Executive Council of the Asian Society for Research in Engineering Sciences (ASRES), President of the General Assembly of the Portuguese Metrology Society, and President of the Maria Inês de Menezes Vaz de Sampaio Foundation.

Since January 2023, he has served as Deputy Dean of the ULisboa School, Shanghai University, appointed by the University of Lisbon.

In the picture from left, Prof. Mladen Borsic, Dr Dae-Im Kang, Prof. Leo van Biezen, Prof. António da Cruz Serra, and Prof. Silva Girão.

Written by Prof. Silva Girão.

IMEKO GOES TO YOUNG SCIENTISTS

Dr Andreas Mathwieser: My Journey

Looking back at the start of my academic journey, I remember being curious about physics and eager to learn. During my studies at the Technical University of Graz, I was amazed by the new effects explained in lectures. While working as a research assistant during summer breaks at Joanneum Research, I discovered the world of photonics. In the same team, I conducted my Master's thesis, where I helped build a two-photon polymerisation setup from the ground. I enjoyed setting up optical experiments and working with advanced lasers, which led me to pursue a PhD at RWTH Aachen University and work at Fraunhofer IPT. For my PhD, I again used two-photon polymerisation, this time to create structures that change color when strained. The idea was simple but hard to put into practice: use custom microstructures as optical, non-contact strain sensors. We designed structures whose color changed under mechanical load. It was rewarding to see basic physics turn into a working measurement system.

Developing new research ideas

Coming up with new research ideas was one of my favorite parts of the job. The enthusiasm of the people at my institute and at other institutes in Aachen, as well as my university contacts, made the work very rewarding. I enjoyed turning big ideas into real project plans with others who shared my passion. At Fraunhofer, I am especially grateful to Prof. Robert Schmitt and Dipl.-Phys. Niels König, whose support helped me succeed and connect with their network.

At the crossroads

After finishing my PhD, I am at a crossroads. Should I stay in academia or move into industry? Both options have their own challenges and rewards. Academia offers the chance to do deeper research, possibly become a professor, teach, and help train future engineers and physicists. Industry would let me use my skills to develop new devices and processes, and maybe lead a team. The choice is not just about work. Career options depend on the economy, long-term prospects, salary, and the number of research jobs available, all of which can change with politics. Social factors matter, too, like being close to family and job opportunities for my wife. Both paths appeal to me, and since academic jobs are highly competitive and team-leading roles in optical metrology are also limited, I am applying for both.

Becoming a Junior Member of IMEKO

I recently became a junior member of IMEKO Technical Committee 2 for Photonics. I am proud to be part of this respected international network. I see two main benefits in joining IMEKO that I hope will help me grow. Firstly, I wanted to broaden my perspective beyond my own research area. Optical measurement science is evolving rapidly, and quantum effects are becoming increasingly important. Industry is also shifting, driven by global changes in manufacturing and greater specialisation among European companies. New technologies such as artificial intelligence, photonic integrated circuits, and advanced sensors for autonomous driving are likely to significantly change production. Through IMEKO, I can stay up to date on these developments and guide my career towards the work that matters most to me.

Secondly, I hope to expand my professional network through IMEKO. By connecting with experts from universities, research institutes, and industry, I can learn about different ways of working. Research does not happen in isolation, and sharing ideas with the community is becoming increasingly important. Open exchange and learning together will help us face future challenges.

FAREWELL TO DR HIDETAKA IMAI (1942-2026)

The Japanese National Committee of IMEKO is deeply saddened by the loss of Dr Hidetaka Imai, who passed away on 19 January 2026.

A distinguished leader in metrology, he devoted his career to advancing measurement science in Japan, the Asia-Pacific region, and the global community.

Dr Imai served with distinction as a delegate of the Japanese Member Organisation of IMEKO, and he contributed significantly to the organisation's international engagement as Vice President for External Relations of IMEKO. Owing to his exceptional leadership and vision, the Japanese Member Organisation successfully hosted the XV IMEKO World Congress Osaka 1999, a milestone event in Japan's metrology history.

Dr Imai also played a leading role in bringing the IMEKO World Congress 2021 to Japan. At the General Council Sessions in 2016, he delivered an excellent presentation on the significance of hosting the event in Japan and the cultural attractions that would welcome visitors from abroad. His outstanding contribution successfully led to Japan being selected as the host of the World Congress.

Due to the COVID-19 pandemic, IMEKO held its World Congress 2021 online for the first time in its history.

The conference received strong support from a large number of participants, and it became a valuable experience for IMEKO.

His national contributions were equally remarkable. Dr Imai served as Director General of the National Research Laboratory of Metrology (NRLM) from 1997 to 2001, and subsequently as a Member of the Board of the National Institute of Advanced Industrial Science and Technology (AIST) in 2001. He also supported the scientific community as a Fellow of the Society of Instrument and Control Engineers (SICE), the Japanese Member Organisation of IMEKO.

Internationally, he chaired the Asia Pacific Metrology Program (APMP) and contributed to the Joint Committee for Guides in Metrology (JCGM), helping to strengthen the development, harmonisation, and dissemination of key international guidance documents in measurement science.

Colleagues valued his sound judgement, collegial spirit, and dedication to scientific integrity. His work greatly strengthened international measurement comparability and confidence in test and calibration results. His legacy lives on in the institutions he guided and the many professionals he mentored.

We extend our deepest condolences to Dr Imai's family, friends, and colleagues. We honour his distinguished service and lasting contributions to metrology with profound gratitude and respect.

Written by the Japanese National Committee of IMEKO.

ACTA IMEKO: THE DIAMOND OPEN ACCESS JOURNAL PUBLISHED BY IMEKO

In the previous issue of the IMEKO Newsletter, we published an interview with Prof. Francesco Lamonaca, the Editor-in-Chief of Acta IMEKO, about some of the most important aspects of the journal. As a follow-up, let's say a few words about Acta IMEKO itself: some general information and a few key points for prospective authors and readers.

Acta IMEKO is the online journal of IMEKO. The journal's main goal is to support the academic activities of IMEKO by providing a platform for the wider dissemination of scientific output from its events. High-quality papers presented at its conferences, workshops, or congresses are selected by the event organisers and the corresponding Technical Committees (TCs), and authors are invited to submit an extended version of their papers to Acta IMEKO (or the *Measurement* journal, issued by Elsevier). However, Acta IMEKO also publishes scientific articles on measurement and instrumentation that are not related to the Confederation's events. In this context, the research area of 'measurement and instrumentation' should be interpreted as any of the fields covered by the IMEKO Technical Committees. Detailed information about the subject areas of each Technical Committee can be found on their pages. (Technical Committees.)

The Acta IMEKO editorial team is composed mostly of volunteers who undertake this work alongside their main jobs. Their hard work has supported the journal's activities since 2012, when it was founded.

The journal provides open access to its content immediately upon publication, based on the principle that making research freely available to the public facilitates global knowledge exchange.

Moreover, it does not require the payment of any Article Processing Charges (APCs) or article submission charges. This feature is quite rare in the panorama of scientific publishing, and thanks to it, Acta IMEKO is defined as a 'Diamond' Open Access Journal.

There are four Regular Issues published each year, one per quarter. An issue is published as soon as the first three papers are ready; further papers are then added until the end of the quarter, when the issue is finalised. Each Regular Issue contains one or more Special Issues, i.e., thematic sections related to an IMEKO event. Authors who presented at an IMEKO event can publish an extended version of their work in the relevant Special Issue. A list of previous and upcoming Special Issues can be found under the Announcements on the journal's website. For example, the March 2026 issue includes papers related to the 2023 SBM Metrology Conference, held in Brazil from 28 to 30 November 2023.

Papers with no reference to an IMEKO event ('freely submitted papers') can be considered for publication in the general section of a Regular Issue.

Acta IMEKO uses a single-blind peer-review process, meaning each submission is reviewed by at least two independent, anonymous reviewers. Submissions must fulfil the requirement of originality, meaning that the paper, or parts of the paper, are neither plagiarised nor derivative. We have strict rules regarding the similarity checking of papers. Our anti-plagiarism policy requires that all submitted manuscripts undergo a similarity check to detect plagiarism. We check papers for similarities with other published academic and general web content to avoid any potential misconduct.

ACTA IMEKO: THE DIAMOND OPEN ACCESS JOURNAL PUBLISHED BY IMEKO

A second plagiarism check is performed at the end of the peer-review process to ensure that no published papers contain plagiarised material. Any manuscript containing relevant cases of plagiarism is immediately rejected, either after the first or after the second check.

To facilitate the consistent formatting of papers, we offer a Word template and a LaTeX class for submissions. Both contain further instructions for authors. Authors need to register with the journal before submitting; if already registered, they can simply log in and start the 5-step process. You can find more detailed information about Acta's stylistic and bibliographic requirements in the Author Guidelines. When submitting their paper, authors are asked to indicate either the Special Issue in which they wish their paper to be included or the most appropriate IMEKO Technical Committee(s) that deal with its specific measurement topics.

Dear Readers,

The first issue of volume 15 (year 2026) of Acta IMEKO is now complete. It contains 20 research papers on metrology topics, including biomedical diagnostics, industrial metrology, energy systems, environmental monitoring, advanced instrumentation, and digital infrastructure.

As the Editor-in-Chief's Introductory notes say:

"Such diversity reflects the intrinsic interdisciplinarity of modern metrology and its increasing integration with computational intelligence, digital technologies, and emerging paradigms such as Industry 4.0 and Metrology 4.0.

A common thread across many contributions is the adoption of advanced data processing techniques, ranging from artificial intelligence and machine learning to stochastic modelling and optimization algorithms, to enhance measurement accuracy, robustness, and efficiency. At the same time, several studies emphasise the fundamental importance of uncertainty evaluation, traceability, and standardisation, reaffirming their central role in ensuring the reliability and comparability of measurement results across different domains and applications.

Additionally, this issue highlights the growing role of metrology in addressing sustainability-related challenges. From renewable energy production and greenhouse gases monitoring to resource-efficient digital infrastructures and sustainable education models, the presented works demonstrate how measurement science can actively support the transition toward more sustainable and resilient systems."

A table of contents and all the papers are available on the journal's website: Acta IMEKO. We hope that you will enjoy reading them!

Written by the Acta IMEKO editorial team.

NEWS ABOUT IMEKO'S MEASUREMENT ENERGY PUBLISHED BY ELSEVIER

From Anna Hajduk, IMEKO's Elsevier Publisher

"I am delighted to share the wonderful news that Measurement: Energy has been accepted for coverage in Scopus and will receive a CiteScore. Congratulations to Professor Yong Yan and all of us on this important achievement!

We expect the first citations to begin appearing in Scopus within the next 2-3 months. Newly accepted titles are typically listed separately in the Scopus Title List within approximately one month of the acceptance date.

Please note that Scopus journal pages displaying a CiteScore (including the CiteScore Tracker for new titles) are updated twice yearly, in April/May and October. In the meantime, any citations that have already been indexed can still be found in Scopus. However, they may not yet be linked to a dedicated journal page. To locate them, you can perform a document search on Scopus.com using the journal's International Standard Serial Number.

Thank you all for your contribution and support in reaching this milestone. We are clearly heading in the right direction, and hopefully, the Journal Impact Factor will follow shortly as well."

About Measurement Energy by Elsevier

Measurement: Energy is an open-access journal open to original, high-quality contributions from all relevant fields of this highly topical and multi-disciplinary subject.

Measurement: Energy is a companion journal to Measurement: Journal of the International Measurement Confederation (IMEKO). It is one of the journals published by IMEKO with Elsevier.

The main aim of this journal is to provide a leading scientific publication platform for the international exchange and knowledge transfer of the latest advances in measurement science, metrology, characterisation, diagnosis, and condition monitoring in relation to renewable and conventional energy sources, heat and power generation, power transmission and storage, energy efficiency, and related scientific, technological, and environmental issues. The journal encourages the submission of manuscripts that provide novel insights and papers reporting recent advances in the field.

Subject areas:

Energy (General), Electrical and Electronic Engineering, Instrumentation, Control and Systems Engineering, Industrial and Manufacturing Engineering.

REPORT ON THE 3RD FORUM ON METROLOGY AND DIGITALISATION

Report on the 3rd Forum-MD (Forum on Metrology and Digitalisation, CIPM, 9-13 February 2026), BIPM, Sèvres (France) by Alexander Knaak

Forum-MD has been established by the International Committee for Weights and Measures (CIPM/CGPM27) to address the challenges of the global digital transformation in metrology and to digitalise the services and products offered by BIPM. As an inclusive, horizontal organisation, its mission is to serve as a platform for exchanging information and creating synergies.

This year, the third Forum-MD (CIPM) convened from 9 to 13 February 2026 at the Bureau International des Poids et Mesures (BIPM) in Sèvres, near Paris. IMEKO was represented by its Advisory President Frank Haertig.

The first day of the Forum-MD started with the Sessions of the Task and Working Groups.

Session 1 was devoted to the important subject of FAIR data, the true foundation of digital interoperability. The Working Group has held wonderful webinars on the subject, which will be uploaded to the BIPM homepage shortly. More excellent projects are in the pipeline there, for example, a brand-new paper on the current state of things regarding FAIR.

Identified challenges include the need to further extend comprehensive inclusion (geographically, as well as interorganisationally), and that financial FAIR-expenses are a significant burden for smaller companies/organisations; therefore, stateside mitigation would be welcome.

The AI Working Group has organised important invited talks over the last few months by Martina Paul, Agnes Delaborde (LNE), Paul Duncan (NPL), and Hans Rabus (PTB). A foundational document on the vocabulary for safe & trustworthy AI is in the pipeline; identified challenges include uncertainty and responsibility in AI. Different vocabularies need to be harmonised, and contact with the international communities will be further intensified.

The Working Group for the SI Digital Framework (SIDF) reported that the SI Reference Point 2.0 (SIRP) will be available shortly. The digitalisation of the Key Comparison Database (KDB) is ongoing, with excellent progress, and its implementation will be finalised by 2027. An important survey on the needs, priorities, and expectations of NMIs regarding the digital Services of the BIPM has been evaluated and will soon be published.

For metrological semantics, fascinating presentations by Blair Hall (MSL) on the M-Layer and a new metrological ontology, Mark Kuster (NCSLI) on a new taxonomy, and Moritz Jordan (PTB) on the new DCC-vocabulary concluded the session.

Second Day

The coordination between Regional Metrology Organisations (RMOs) has been based on a constant exchange of information.

REPORT ON THE 3RD FORUM ON METROLOGY AND DIGITALISATION

This includes, for example, software tools for comparison, webinars on FAIR Data, research data management exchange, DCCs' hands-on training, and the upcoming third metrology forum in Saudi Arabia.

Reports from the six RMOs (AFRIMETS, APMP, COOMET, EURAMET, GULFMET, and SIM) showed a strong commitment to DCC (Digital Calibration Certificates) implementation, laboratory automation tools, staff competence enhancement, and the future implementation of the Key Comparison Evaluation Software "DME" ("Digital Metrological Expert"). There was much interest in the further development of the Digital Verification Certificate (DVC), improved interoperability of measurement data, updating EURAMET's Digitalisation Strategy, the organisation of Digitalisation Spring Camps with external input, compiling draft digitalisation strategies, the establishment of contact points for the digital transformation of metrology, the establishment of a comparison framework with working groups, organisation of AI metrological activity use cases, to evaluate AI's potential to simplify the handling of DCCs, the challenges of establishing FAIR Data principles in smaller NMIs, where metrological research is only a secondary activity.

The WG dedicated to harmonising DCC and DRMC has an ongoing programme for identifying canonical terms, with a new white paper in the pipeline, and the dissemination of the DCC schema is ongoing. 80 canonical terms have already been identified for the administrative shell of DCCs, but, often, help is needed in NMIs from IT departments in order to implement DCCs.

Various regional solutions for 1-click creation of DCCs have been established, while DCR-generators are under development, and standards are needed for the further dissemination of DCCs. One of the most urgent necessities is to establish DCCs for electrical quantities, while the establishment of a dedicated DCC repository has been successful. The CABUREK project of PTB was a huge success. A regional project for the dissemination of DCCs and the automation of Calibration in South Korea will be funded with $20 million from 2026 to 2029. In China, the comprehensive implementation of a 360-degree DCC network system based on the PTB-DCC, linked to the SI-Digital Framework, is ongoing, including a national calibration platform to be completed in the near future. In Germany, pharmaceutical industry heavyweight Boehringer-Ingelheim (revenue 2024: $ 27 billion) has announced to go "DCC only" from 1 January 2027 for its more than 150,000 calibrations annually. DCCs for new measurands are currently being developed. PTB and DKD (German calibration service) are currently organising working groups. External collaborators from other NMIs, organisations, or companies are welcome. PTB's next DCC release candidate 3.4.0 will be published in 2026, and the next international DCC conference, organised by PTB, will take place on 22 to 24 March 2027 in Berlin to mark the 10th anniversary of the DCC.

The Coordination between Consultative Committees (CCs) is currently pushing forward an impressive range of digitalisation projects, the Working Group Gas Analysis is testing an LLM-based evaluation approach for CMCs (Calibration and Measurement Capabilities), and Key Comparisons will be further harmonised.

REPORT ON THE 3RD FORUM ON METROLOGY AND DIGITALISATION

Currently, there are 1,900 comparisons in BIPM's Key Comparison Database (KCDB). Urgent requirements are the unique identifiers, the versioning of data and its provenance, a harmonised measurement value structure, and canonical concepts. At the same time, various architectural frameworks will be evaluated, where simple linear structures are being preferred, as well as data classification and the further development of the KCDB-digitalisation, where resources, scope, and format have still to be defined, the DCC-schema being a valid option. In the end, the needs of stakeholders will be central.

Third Day

Day 3 featured an all-day workshop on "AI in metrological context: AI for metrology and metrology for AI". Prof. Cornelia Denz (PTB), Chair of the Forum-MD, opened the workshop with a comprehensive overview of the topic and the sometimes challenging relations between AI and metrology. This laid a strong foundation for the presentations in the first session, "Metrology for AI systems: Assessment and methodologies", chaired by Peter Blattner (METAS). Martina Paul (ISO/IEC JTC1 SC 42 JWG 6, "Conformity assessment schemes for AI systems"), Thomas Doms (AIQI, TÜV Austria, "Test and certification of safety-relevant AI applications"), and Rania Wazir (NoLeFa, leiwand.ai, "Metrics and data for testing of AI systems") provided a conclusive description of the current situation regarding the conformity, certification, and metrics of AI: there are no silver bullets, only bullets; minimum performance requirements still have to be established.

Rodolfo Saboia Souza (Inmetro) made a passionate plea for integrating AI into DCC handling.

Agentic AI could be, according to him, the Archimedean lever that will remove the current challenges to the comprehensive introduction of the DCC by simplifying the handling of DCCs in the shortest possible time and at extremely low costs. The key here is not to produce cumbersome, complex code structures, but to task agentic AI directly with assignments related to the DCC. That said, he was met with approval, but also triggered warning voices cautioning against prematurely handing over responsibility to AI with unclear functionality (Blackboxes).

Dong Hun Ruy (Korea Testing Laboratory / KTL) provided a paradigm-shifting insight into the current complexity, pointing out, e.g., that KTL has 3,000 different analog calibration certificates in use, which form the basis for 120,000 calibrations per year. KTL recently started an AI model database from 100,000 certificates in order to begin a data conversion/harmonisation with AI, which has meanwhile been completed. He gave an impressive description of the effort required to assign similar, but not identical, or identical, but differently spelt, designations, the DCC implementation to follow.

Jeff Gust, Chief Corporate Metrologist at Fluke Corporation, reminded the audience that AI has the potential to increase productivity by 40 percent. He reported that at FLUKE in 2024, a workshop was held under the title "A day in the life of a metrologist" in order to collect all the needs and requirements of metrologists regarding data management. Digitalisation and the implementation of AI were key. In summary, Jeff underscored that AI is a two-step-forward, one-step-back learning model, while the possibilities of AI in metrology are virtually unlimited.

REPORT ON THE 3RD FORUM ON METROLOGY AND DIGITALISATION

Only with AI will it be possible to codify the past 150 years of metrology.

Fourth Day

Prof. Cornelia Denz (PTB) opened the General Assembly of the Forum-MD with a short report on activities at CIPM over the past year. Next to meetings and the fantastic 150-year jubilee of the Metre Convention, the preparation of this year's CGPM28 (28th Conference Générale des Poids et des Mesures), the decision-making body of the Metre Convention, was on top of the agenda. The venue will be the Palais des Congrès in Versailles, from 13 to 15 October 2026. Prof. Denz also reported on the draft Working Programme of the CGPM for the next 30 to 50 years. She expressed her expectation that, in addition to the first horizontal organisational form, the Forum, further cross-organisational structures regarding the most important topics in metrology will be added in the near future.

Dr Annette Koo, the new director of BIPM, reported on news from the Bureau. The Key Comparison Database comprises currently 2,029 comparisons with more than 26,000 Calibration and Measurement Capabilities. The new draft BIPM working programme for 2026/2027 lists the deliverables for the member states. And very nice news: the *Metrologia* journal is, as of 2026, completely open access. New comparison reports can be found in the supplement. Another good news: the voting draft of the 4th edition of the International Vocabulary of Metrology is currently being sent out. On top of that, at the end of 2025, the MoU with UNESCO, dating back to 1949, was renewed.

Dr Koo expressed her belief that cooperation with UNESCO, among other activities, will significantly increase the visibility of BIPM.

Prof. Cornelia Denz emphasised in her report of the Chair the fundamental importance of metrological quality assurance for data in order to build trust, and the need to address the emerging digital divide. Aging data networks also require ongoing maintenance to ensure they can continue to be used. The metrology of the future will be faster, smarter, and more integrated. The FAIR principles play a central role in this, as does the digitalisation of the International System of Units (SI). The Forum's nine working, task, and discussion groups currently involve around 100 people from 26 NMIs and 23 other organisations. The Strategy Working Group promotes the global dissemination of digital practices, with the SI Reference Point and the SI Digital Framework at its core.

Highlights of the past 12 months included meetings of NMI directors, a webinar on FAIR data, and a workshop on AI in a meteorological context. The annual international, virtual DCC conference served as an example of comprehensive global information exchange on a key component. The metrological use of AI for data quality assurance in image analysis (TraCIM) is another milestone in the comprehensive digitalisation endeavor. The Joint Statement of Intent roundtable (JSI) of the Forum-MD serves as a tool of inclusion within the realms of metrology and standardisation.

Anna Cypionka (BIPM) reported on key topics of the BIPM internal work programme 2028-2031.

REPORT ON THE 3RD FORUM ON METROLOGY AND DIGITALISATION

It included the further digital transformation of BIPM itself, the compatibility of the SIDF with other information/data systems, and the continuing global capacity building & knowledge transfer (CBKT) in areas such as digital certificates, sensor networks, and others. The updated Key Comparison Database 2.0 will be fully machine-actionable. The implementation and use of AI within BIPM is one of the crucial points of the agenda. The consultative committees (CCs) of BIPM, as well as the NMIs will be asked to provide prioritised lists of needs in the field of digitalisation to BIPM (Working Group of Coordination between CCs, Chair: Peter Blattner, METAS). Also, further coordination and communication with other stakeholders, such as UNTP, as well as interoperability with them, will be key. Details on the reports of the nine working, task, and discussion groups can be found in this year's Forum-MD written report. Since the usual terms of office for chairs are 2 years, many of them will change. The updated organisational chart will be online soon. The proposal for even closer, issue-focused cooperation within the Forum-MD groups met with widespread approval, as did the second proposal to present the working results online in addition to the written report.

The report on the activities of the Joint Statement of Intent (JSI) roundtable of the Forum-MD was submitted by the new Chair, Peter Blattner (2026-2027, new lead organisation: CIE - International Commission on Illumination). He began by thanking the outgoing Chair, Frank Härtig (2024-2025, lead organisation IMEKO - International Measurement Confederation), for his important groundwork over the past two years. Regarding the latest news of JSI, IUPAC was welcomed recently as the eleventh member organisation. Replacing the previous member ILAC, its successor organisation, the Global Accreditation Cooperation Incorporated (GACI), is now joining JSI. An ad-hoc Working Group of JSI will be convened shortly in Geneva to prepare a possible larger workshop of JSI parallel to the IEC General Meeting in November 2026 in Hamburg (Germany). As for CIE, a new lighting vocabulary is in the making. NCSL International will hold its 2026 Workshop & Symposium from 25 to 29 July 2026 in Kansas City (USA). CODATA is currently working on its all-new Cross Domain Interoperability Framework (CDIF). Sascha Eichstädt reported on behalf of the OIML Digitalisation Task Group (DTG) on the successful IMEKO M4D Conference in Benevento (Italy) and the upcoming IMEKO TC6 symposium in Berlin (Germany) from 9 to 11 September 2026. Finally, Camilla Ojansivu presented an important update from ISO/IEC: they recently established “smartSDU” (Smart Single Delivery Unit) to rapidly develop digital SMARTstandards for both organisations (www.smartsdu.org).

On the final day of the conference week, new applications for full membership were presented. All the applications were very convincing and well-founded, offering both a retrospective and a forward-looking view of the digitalisation projects and activities of the respective NMIs: DFM (Danish Metrology Institute), Korea Research Institute for Standards and Science(KRISS), and INMETRO (Instituto Nacional de Metrologia, Qualidade e Tecnologia, Brasil). All applications were greeted with warm applause. The final decision rests with CIPM. Next year's 4th Forum-MD will take place from 22 to 26 February 2027.

INTRODUCING SBEM PRIVATE LIMITED

Introducing SBEM Pvt. Ltd., a leader in the "Make-in-India" initiative in level, flow, and pressure measurement instrumentations, and IoT-enabled solutions

In India, several manufacturers produce flowmeters. Some of them are multinational companies (MNCs) and the majority are Indian companies. However, most of these manufacturers are located in western India due to its high level of industrialisation. These flowmeters include mass flowmeters, magnetic flowmeters, turbine flowmeters, ultrasonic flowmeters, differential pressure flowmeters, rotameters, etc., mostly for liquid applications. Some of the reputed manufacturers are listed in Table 1.

Table 1. Reputed manufacturers of flowmeters.

S.No.	Name & address of Manufacturer	Region of India
1.	Endress+Hauser India Pvt. Ltd., Aurangabad, Maharashtra	Western
2.	Kronhe Marshall Pvt. Ltd., Pune, Maharashtra	Western
3.	ABB India Pvt. Ltd., Bangalore, Karnataka	Southern
4.	Nagman Flow Level Systems and Solutions LLP, Chennai, Tamil Nadu	Southern
5.	SBEM Pvt. Ltd., Pune, Maharashtra	Western
6.	Adept Fluidyne Pvt. Ltd., Pune, Maharashtra	Western
7.	Electronet Equipment Pvt. Ltd., Pune, Maharashtra	Western
8.	Manas Microsystems Pvt. Ltd., Pune, Maharashtra	Western
9.	Aarohi Embedded Systems Pvt. Ltd., Rajkot, Gujarat	Western
10.	Fluidyne Control Systems Pvt. Ltd., Pune, Maharashtra	Western
11.	Micro-precision Products Pvt. Ltd. (A WIKA company), Dudhola, Palwal, Haryana	Northern
12.	Rockwin Flowmeter India Pvt. Ltd., Sahibabad, Uttar Pradesh	Northern
13.	Sapcon Instruments Pvt. Ltd., Indore, Madhya Pradesh	Central
14.	Nivo Controls Pvt. Ltd., Indore, Madhya Pradesh	Central

These companies provide high-quality products to various customers at very competitive prices. Most of these manufacturers export the flowmeters to different countries. I had the opportunity to see most of these manufacturers during NABL's (one of the accreditation bodies in India) assessment of their calibration laboratories under the ISO/IEC 17025 standard, as a Technical Assessor. My first visit to SBEM Pvt. Ltd. was in May 2015 in connection with the NABL assessment of its calibration laboratory under the ISO/IEC 17025 standard. My last visit to SBEM Pvt. Ltd. was in January 2026 to see their calibration and manufacturing facilities. I was amazed by their improved capability. In this short write-up, I would like to talk about SBEM Pvt. Ltd., Pune, a company with over 50 years of expertise that has grown significantly over the last 10 years.

SBEM Pvt. Ltd. was established in 1974 by Mr Narayan K. Bedarkar, a young engineering graduate from the Indian Institute of Technology, Mumbai (India's premier institute with a world-class ranking). SBEM is a pioneer in the end-to-end manufacturing of level, flow, and pressure measurement instruments and IoT-enabled solutions, with over 50 years of expertise powered by advanced technologies, serving 5,000+ clients in India and worldwide. It is an ISO-certified company with a DSIR-approved R&D center, CE-certified products, and large in-house calibration labs, ensuring exceptional accuracy. It serves various sectors, including water and wastewater, oil and gas, chemicals and fertilizers, power and steel, cement, food, pharma, and defense.

INTRODUCING SBEM PRIVATE LIMITED

SBEM's vision is to become a preferred partner and solution provider in the process control and automation industry. Its mission is to provide continuous value addition to its customers by offering reliable, cost-effective, and customised solutions.

SBEM reflects the true spirit of the Government of India's "Make-in-India" initiative for the indigenous development of various products and services for self-reliance. It also supports the Ministry of Defense by providing solutions for different defense projects. It also launched a dedicated defense business line to meet the requirements of the defense sector. SBEM launched its first product line, a level switch, in 1975. Over these 50 years, it has become a huge company by launching several products, such as level transmitters (radar, ultrasonic, hydrostatic, magnetostrictive, and capacitive), flow meters (electromagnetic, ultrasonic, residential, and open channel), tank gauging (ATLG, Servo), pressure transmitters (smart, intelligent, differential), battery-operated (level, flow, and pressure measurement instruments with IoT-enabled solutions), and other products. SBEM has 3 manufacturing units totalling over 77,000 sq. ft. for manufacturing the various products mentioned above. Its current manufacturing capacity for various products is given in Table 2.

Table 2: Manufacturing capacity of SBEM.

Sr. No.	SBEM Products	Quantity Production /Year
1	Flow Meter	20,000
2	Level Transmitter	50,000
3	Pressure Transmitter	20,000
4	Water Meter	60,000
5	Other Legacy Products	10,000

Figure 1: Different facilities available in SBEM plants/units.

Their manufacturing units are equipped with state-of-the-art facilities. Being there, you feel as if you were in an advanced country, as such facilities are common there.

There are several steps for production; however, due to space constraints, only photographs of some important steps are shown. After production, the products are tested/calibrated in testing/calibration facilities.

INTRODUCING SBEM PRIVATE LIMITED

For the testing and calibration of flowmeters and water meters, SBEM has established state-of-the-art testing and calibration facilities.

Figure 2. Domestic water meter test bench

The domestic water meter test bench is used for the accuracy testing of water meters as per ISO 4064 and OIML R-49 standards.

This test bench uses a weighing method to test domestic water meters (in this case, AquaSonic water meters) of sizes DN15, DN20, and DN25. 10 water meters can be tested in a single run. The flow range of the test bench is 0.005 m^3/h to 7.8 m^3/h with an expanded uncertainty of 0.28% at k=2 for approx. 95 % confidence level. In this write-up, all the expanded uncertainties are at k=2 for approx. 95% confidence level.

Figure 3. Calibration of magnetic flowmeters of sizes DN15 to DN300.

Up to DN300 size, it calibrates in a gravimetric-based primary water flow calibration facility shown in Figure 3. SBEM has established a new calibration facility as per ISO 4185 standard for the calibration of magnetic flowmeters of sizes DN15 to DN300. In this facility, 10 magnetic flowmeters up to DN50 size can be calibrated in a single run. This is based on a weighing method and flow is realised in fundamental units of mass, length, and time. There are two weighing systems with capacities of 1,000 kg and 6,000 kg in this facility, covering a flow range from 1 m^3/h to 500 m^3/h. At present, the performance evaluation of this automated calibration facility is being carried out. The targeted expanded uncertainty of this facility is 0.10%.

INTRODUCING SBEM PRIVATE LIMITED

SBEM uses the services of the CSIR-National Physical Laboratory (CSIR-NPL), New Delhi (i.e., National Metrology Institute of India), internationally known as NPLI, for the calibration of various sizes of flowmeters up to DN300 for tendering requirements and interlaboratory comparison purposes. CSIR-NPL has a primary water flow calibration facility as per ISO 4185 standard in the flow range of 0.01 m^3/h to 650 m^3/h. The facility uses 4 nos. of high-accuracy weighing systems with capacities of 12 kg, 300 kg, 3,000 kg, and 6,000 kg to cover the above-mentioned flow range. The flying start and flying finish method is used in 300 kg, 3,000 kg, and 6,000 kg weighing systems to cover the flow range from 0.1 m^3/h to 650 m^3/h.The standing start and standing finish method is used in a 12 kg weighing system to cover the flow range from 0.01 m^3/h to 0.5 m^3/h. The facility's expanded uncertainty is 0.03% to 0.05%.

Figure 4. Large water flow calibration facility based on tower volume.

For the calibration of meter sizes from DN200 to DN1200, a volume-based large water flow facility (Figure 4) has been established, using a tower with different level switches as a reference standard.

The volume between two level switches is calibrated by a calibrated vessel. The system compares the volume between the DUT flowmeter and the reference volume of the tower, and calculates the error of the flowmeter as totalised volume. The flow range of this large water flow calibration facility is 250 m^3/h to 3500 m^3/h, with a totalised volume range from 5 m^3 to 35 m^3. The expanded uncertainty of this facility is better than 0.1%. For the calibration of the meter size above DN1200 and up to DN3000, it uses the calibration facility of the Central Water and Power Research Station (CWPRS), Pune, and the Fluid Control Research Institute (FCRI), Kerala, India. The CWPRS has a water flow calibration facility as per ISO 4185 standard with a 100-ton weighing scale (two 50-ton weighing scales) with a flow range from 800 m^3/h to 11,000 m^3/h. The expanded uncertainty of this facility is 0.20%. The FCRI has a water flow calibration facility based on a weighing method as per ISO 4185 standard in the flow range of 0.1 m^3/h to 2,500 m^3/h with an uncertainty of 0.05% to 0.15% in volumetric flow rate. For calibration above 2,500 m^3/h and up to 15,000 m^3/h, it uses a large water-flow calibration facility with magnetic flowmeters as reference standards. The expanded uncertainty of this facility is 0.50%.

Written by Dr Shiv Kumar Jaiswal, Vice President, Metrology Society of India and Scientist-G and Head, Fluid Flow Metrology Section, CSIR-National Physical Laboratory, Dr K.S. Krishnan Road, New Delhi, India.

ANNOUNCING WILLIAM D. PHILLIPS, THE FIRST KEYNOTE SPEAKER OF THE IMEKO WORLD CONGRESS 2027

The International Programme Committee of the IMEKO World Congress 2027 is pleased to announce the first confirmed keynote speaker: Prof. William D. Phillips, Nobel Prize Laureate in Physics.

Prof. Phillips, awarded the Nobel Prize in 1997 for his groundbreaking work in laser cooling and trapping of atoms, is one of the most influential figures in modern physics and metrology. His contributions have significantly advanced precision measurement science and played a key role in the evolution of the International System of Units (SI).

At the IMEKO World Congress 2027, from 30 August to 3 September 2027, in Rimini, Italy, Prof. Phillips will deliver the keynote lecture titled: "A New Measure: the Quantum Reform of the International System of Units.

In the picture Prof. William D. Phillips with students

Abstract:

The metric system, officially the "International System of Units" or SI, has its roots in the French Revolution. Recently, we have experienced the greatest revolution in measurement units since that time. The quantum nature of matter now provides new definitions of the kilogram, ampere, kelvin, and mole. These quantities are defined by fixing values for the most fundamental quantum constants: Planck's constant, the quantum of electric charge, Boltzmann's constant, and Avogadro's number. In this talk, Prof. Phillips will explain how this transformation has been achieved, why it was necessary, and will offer insights into possible future developments of the SI, potentially driven by the emerging Second Quantum Revolution.

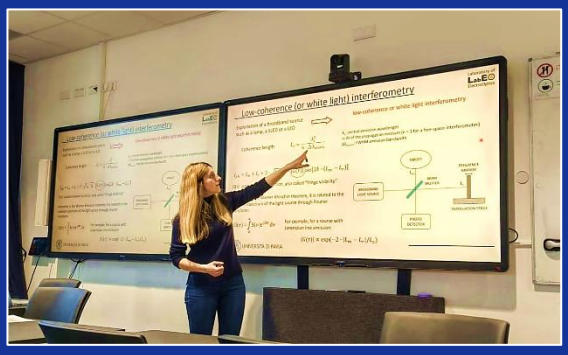
His keynote will offer a unique opportunity to explore how fundamental physics reshapes the way we define and realize measurement units, impacting science, technology, and everyday life.

Stay tuned for more keynote announcements and programme updates in the coming months.

We look forward to welcoming you all to IMEKO World Congress 2027 in Rimini!

Website: www.imeko2027.org
Contact Information: info@imeko2027.org

WITH DR. VALENTINA BELLO ON YOUNG SCIENTISTS



The recent initiative IMEKO Working Group for Young Scientists - WYSM has begun to take shape since the February edition of the Newsletter. Dr Valentina Bello, who has been appointed to lead the group, has started converting ideas into actionable plans. She has been asked to share these plans with the Presidential Board during their upcoming meeting. When we met again, she expressed her enthusiasm about the progress and the invitation. We discussed the latest updates and the strategies to be implemented.

IMEKO: First of all, Dr Bello, congratulations on your recent appointment as the leader of the WYSM for IMEKO. It is greatly appreciated that you volunteer for this challenge despite your busy schedule. IMEKO aims to continue its support for young scientists as it did in the past; only now, with you, Dr Bello, at the helm of a specific group within IMEKO, will this initiative reach new heights. I am pleased that both IMEKO's and your efforts will receive much greater exposure.

Dr Bello: *Thank you for your kind words. I'm truly honoured to take on this role and excited about the opportunity to contribute to IMEKO's long-standing commitment to supporting young scientists. In recent months, we have been working to turn initial ideas into concrete actions, with a strong focus on creating opportunities for collaboration, visibility, and professional growth among early-career researchers. From now on, we also aim to make this support more immediate and tangible by promoting initiatives that have a direct, practical impact on young scientists' careers.*

One of our main priorities is to build a supportive and dynamic community that connects young scientists across different Technical Committees and disciplines. The group is inclusive and eager to welcome new members, especially young researchers involved in the Technical Committees. A dedicated WYSM section will be established on the IMEKO website, along with a LinkedIn group, to enhance communication and facilitate the discussion of activities. I warmly encourage anyone interested in joining or supporting WYSM to reach out to the IMEKO Secretariat and become part of this initiative.

IMEKO: Do you think there would be any obstacles for young researchers, aside from the lack of time, to participate?

WITH DR VALENTINA BELLO ON YOUNG SCIENTISTS

Dr Bello: *Beyond the lack of time, which is certainly a common challenge, there can be other obstacles for young researchers, such as limited awareness of available initiatives, difficulties in building networks, or uncertainty about how to get involved in an international community like IMEKO. However, these barriers are not insurmountable. I have witnessed strong interest and motivation among many young researchers, eager to contribute when given the right opportunities. For example, Prof. Rovati and Prof. Rosenberger, whom I would like to thank, have kindly agreed to reserve a brief slot in the programme of the IMEKO TC1 Education and Training in Measurement and Instrumentation and TC2 Photonics Joint Symposium **PHOTOMET EDUMET 2026** - Metrology in Transition: Education, Photonics, and the Impact of AI & Robotics, 31 August - 2 September 2026, Klagenfurt, Austria. This conference will introduce the new WYSM initiative.*

IMEKO: If I may ask, what will you share with the IMEKO Presidential Board upon their invitation?

Dr Bello: *Firstly, I feel truly privileged to have been invited to share these ideas with the IMEKO Presidential Board. I intend to present a set of proposals aimed at further strengthening the involvement of young scientists within the organisation. These include the organisation of dedicated sessions for young scientists at IMEKO conferences, World Congresses, as well as initiatives to foster networking and collaboration among early-career researchers. Additionally, I would suggest the possible development of a dedicated communication channel or platform where WYSM members could present their research interests and areas of expertise. This could help facilitate connections among young researchers, particularly in view of potential collaborations or participation in European and transnational research projects. I believe this is a very timely moment for such initiatives, especially as IMEKO is launching a broader effort to provide more systematic support for early-career researchers. In this context, I would be very pleased to contribute further to this development.*

IMEKO: Dr Bello, thank you for your time. It has once again been a pleasure speaking with you. Currently, you are likely busy preparing for the forthcoming IMEKO conference in Klagenfurt and the Presidential Board meeting, in addition to all your other activities. I wish you great success in all your upcoming endeavors. I wish you much success in all your future activities, and I look forward to meeting you again.

Dr Bello: *Thank you for the interview!*

IMEKO UPCOMING WEBINARS

TC6 Digitalization

Announces the launch of its M4D Webinar Series, which aims to provide guidance on where to start the digitalisation journey and to offer a platform for exchanging experiences and knowledge on digitalisation in metrology. The series includes M4D Tutorials, M4D Talks, and M4D Expert Talks. The next event will be held on 27 April 2026 from 12:00 - 1:00 pm UTC. The M4D Talk will feature Shanna Schönhals (PTB). It will cover the International DCC Conference: Key Results and Messages from the Expert Community. Registration will open soon!

For more details, please visit: TC6 webinars

TC11 Measurement in Testing, Inspection and Certification

organises its next 45-minute "TIC Talks" discussion session on 29 April 2026 at 10:00 am CEST.

The session titled "Metrology in Food Safety: Ensuring Trust and Integrity in the Food Chain" will explore the essential role of metrology in ensuring food safety and combatting food fraud across the entire food supply chain. Metrology supports reliable, technically valid measurements of key parameters, including temperature, mass, volume, pressure, and gas concentration, all of which directly impact food quality and safety.

Within applied metrology, a wide range of equipment requires calibration, while in legal metrology, instruments must comply with regulatory verification procedures. Given its cross-cutting importance, metrology represents a fundamental pillar in ensuring traceability, transparency, and confidence in food systems.

The discussion will address key questions such as:

- How can metrology enhance the detection and prevention of food fraud?
- What are the main challenges in ensuring measurement traceability across global supply chains?
- How can applied and legal metrology better support regulatory and industry needs?

Brief biography of the moderator:

Luís Gonçalves (Lisbon, 1973) holds a degree in Technological Chemistry from the Faculty of Sciences of the University of Lisbon and a postgraduate qualification in Laboratory Management and Quality Engineering. He is a qualified auditor according to ISO/IEC 17025.

IMEKO UPCOMING WEBINARS

With over 20 years of experience as a trainer in metrology, legal metrology, and measurement uncertainty, he has worked extensively with laboratory professionals. He has served as a technical expert on international projects (including UNIDO initiatives in Mozambique). He has spoken at various national and international events. He is currently the director of the Metrology Laboratory at SGS Portugal.

This session is intended for professionals from food safety, laboratories, regulatory bodies, and certification organisations.

The free-of-charge session will be available by clicking on the day on this link: TC11-TICTALK.

TC19 Environmental Measurements

co-organises the online RadonNET workshop "Low-Cost Sensors and Calibration", which will be held on 29 April 2026 from 9:00 am to 15:30 pm UTC+2 (CEST).

The project RadonNET aims to eliminate preventable lung cancer cases caused by the radioactive noble gas radon (^{222}Rn) and its progeny. Through the development of advanced sensor networks and calibration techniques, the indoor air quality of future buildings shall be improved while accounting for the requirements of energy efficiency and health standards. Topics will include, among others, the following:

- Calibration process overview: chambers, sources, references, and accessibility of calibration services in Europe;
- Low-cost sensor calibration and linearity: aranetRn+ devices;
- Radon emanation source development and low-level radon detector calibration; Radon activity concentration calibration of commercial detectors;
- Time response, linearity, and range testing of electronic radon detectors, and more;
- Establishment of a radon testbed at the University of Helsinki;
- Measurements with electronic radon detectors in homes and workplaces;
- ML methods;
- Low-budget radon activity concentration detector development;
- Radon on the Moon - Chang'E 6 and DORN: Opening New Frontiers in Lunar Exploration;
- NuClim: Radon for climate research;

The speakers will introduce the audience to the RadonNET project, present results, and give an outlook on planned studies. Related projects concerned with ^{222}Rn will also be showcased.

The workshop will be conducted online. Registered participants will receive a link to the meeting room.

For registration, please visit: RadonNET Workshop - Low-Cost Sensors and Calibration

OVERVIEW OF IMEKO CONFERENCES 2026-2027

1. TC1 Education and Training in Measurement and Instrumentation and TC2 Photonics Joint Symposium IMEKO PHOTOMET EDUMET 2026 - Metrology in Transition: Education, Photonics, and the Impact of AI & Robotics, 31 August - 2 September 2026, Klagenfurt, Austria. Website
2. TC4 Measurement of Electrical Quantities Conference with a Special TC11 Measurement in Testing, Inspection and Certification Technical Session, 16 - 18 September 2026, Prague, Czechia. Website
3. TC8 Traceability in Metrology, TC11 Measurement in Testing, Inspection and Certification, and TC24 Chemical Measurements Joint Conference, 26 - 29 August 2026, Metro Manila, Philippines. Website
4. TC9 Flow Measurement FLOMEKO2026, 17 - 20 May 2026, Nara, Japan. Website
5. TC10 20th Conference on the "Measurement for Diagnostics, Optimization and Control to Support Competitiveness and Innovation", 28 - 29 September 2026, Lisbon, Portugal. Website
6. TC15 Collegium 2026, 10 - 12 June 2026, Prague, Czechia.
7. TC17 ISMCR 2026, 27th International Symposium on Measurement and Control in Robotics, September 17 - 18, 2026, Rio de Janeiro, Brazil. Website
8. TC20 Measurements of Energy and Related Quantities, ICME 2026, International Conference on Measurement of Energy, 7 - 9 October 2026, Sohra, Meghalaya, India. Website
9. TC26 International Conference on Metrology for Archaeology and Cultural Heritage - MetroArchaeo, 14 - 16 October 2026, Bari, Italy. Website
10. XXV IMEKO World Congress, "Metrology for Humanity", 30 August - 3 September 2027, Rimini, Italy. Website

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