DEAR FRIENDS, DEAR COLLEAGUES,

The IMEKO community's main event of the year is the World Congress in August in Hamburg, Germany. We are all preparing and look very much forward to it.

Besides the Technical Committee sessions, workshops and technical visits are organised at the World Congress. Find out more about these and the Helmholtz funds offering the Helmholtz Price.

Recently, IMEKO participated in the BIPM-initiated Digitalisation workshop and Forum. The Presidential Board is preparing its Spring Meeting. Talking about spring, Metrology Day 2024 is also coming soon. Meet Christian Eugène, a special long-time IMEKO community member, in this issue. Read about our partner's activities and interesting IMEKO-supported events.

NEWS FROM THE PRESIDENTIAL BOARD

The Presidential Board is preparing for the annual "Spring Meeting," hosted by the Secretariat and held on the 4th of May. Among the topics are the World Congress and adjoining General Council Sessions. At the GC, the triennial IMEKO officer's election will take place. If you wish to volunteer, please get in touch with the Secretariat for more information about available positions. The GC agenda will be sent out soon to help plan the journey to Hamburg.

WORLD METROLOGY DAY 2024

IMEKO supports Sustainability.

World Metrology Day, 2024's theme is chosen for its relevance to various measurement opportunities crucial for fostering a sustainable global economy and environment.

This year also marks the official recognition by UNESCO of the 20th of May from now on as a UNESCO International Day. This designation opens new avenues to promote metrology, aligning with UNESCO's mission to construct a better world through science and education.

The World Congress dedicates a workshop to the UN Sustainable Development Goals.

IMEKO WORLD CONGRESS WORKSHOPS, TECHNICAL VISITS

THE WORKSHOPS

1) Digitalisation

The workshop aims to combine the hands-on experience of digitalisation in metrology with a look into the future of metrology in the digital era. What will metrology look like in Smart Cities? Will artificial intelligence and remote services replace today's conformity assessment? What may a document-less quality infrastructure look like?

2) Quantum Technology
Short pitches about "news in quantum":

- QT for applications in medical physics and biological physics, and QComm, including a keynote by Ulrik Andersen from DTU in Denmark and other contributions
- Cross-sectional session with other IMEKO TCs

3) Workshop on the UN Sustainable Development Goals in cooperation with a Women in Metrology and Energy Research WIMER - Workshop. WIMER is a network for all the dedicated women in the metrology and energy fields.

4) Workshop on Metrological Traceability
Organised by the CIPM Forum on Metrology and Digitalization in partnership with IMEKO Technical Committees TC6 (Digitalization), TC8 (Traceability in Metrology), and TC21 (Mathematical Tools for Measurements), this workshop will be a highlight of the IMEKO World Congress. Two sessions are planned. One will delve into the foundational principles of metrological traceability and examine how those principles can be architecturally modelled and implemented in the digital transformation of international quality infrastructure.
The second will look to the future and consider how the core concepts of traceability are being reimagined and applied to digital frameworks. With a special focus on new developments in digital metrology (digital twins, sensor networks, and digital calibration certificates), this session will show how traditional metrology is evolving. Participants will be able to explore various topics, from the digitalisation of traceability in classical metrology to innovative applications in industry and research. The workshop fosters discussion on advanced methods, new approaches, and collaborative projects.

TECHNICAL VISITS

During registration, participants may choose from various highly interesting company visits.

These visits, in and around Hamburg, are organised for Thursday afternoon (the 29th of August) and will be by bus.

The "special" tour visiting PTB Braunschweig is on Friday (30th of August). An extensive program is being prepared, including lab tours assigned to three subject areas. Approximately 50 (!) laboratories will open their doors. The tour shall take place in small groups, visiting three laboratories and attending a plenary session with diverse short presentations.

The subject areas are Industrial Metrology, Basic Research and Life Sciences.

Thursday Afternoon Technical Visits
(the 29th of August)

Airbus Hamburg

Hamburg - the headquarters for Airbus Commercial Aircraft activities in Germany and the biggest Airbus location in Germany - plays a central role in the development and manufacturing of all Airbus jetliners. This makes the Airbus operation adjacent to Hamburg-Finkenwerder Airport the third-largest site in the civil aviation industry worldwide.

Deutsches Electron - Synchroton DESY

DESY is one of the world's leading accelerator centres. Researchers use the large-scale facilities at DESY to explore the microcosm in all its variety - from the interactions of tiny elementary particles and the behaviour of new types of nanomaterials to biomolecular processes that are essential to life. The accelerators and detectors that DESY develops and builds are unique research tools. The facilities generate the world's most intense X-ray light, accelerate particles to record energies and open completely new windows into the universe.

Eichdirektion Nord

The Northern Calibration Directorate calibrates, tests and monitors all measuring devices used in commercial transactions in Hamburg, Mecklenburg-Western Pomerania and Schleswig-Holstein, ensuring the highest level of consumer protection and legality in trade and commercial transactions. In addition, the North Calibration Directorate is the contact person for industry and trade for all questions and problems regarding measuring devices. Small and medium-sized companies, in particular, are increasingly using this service offered by the North Calibration Directorate against the backdrop of globalisation and the Europeanization of the increasingly complex measuring instrument market.

EMH ENERGIE-MESSTECHNIK GmbH

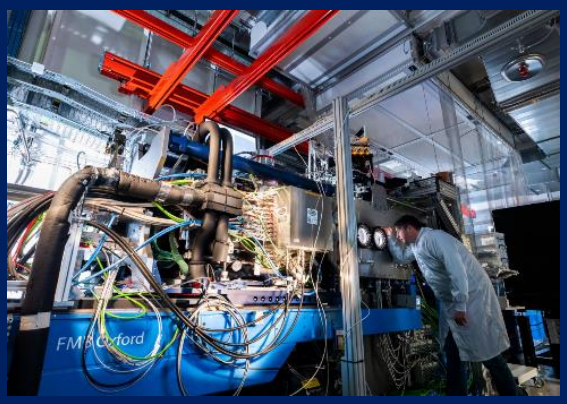
Energy suppliers supply electricity; this company supplies precision systems to measure and generate electrical quantities. EMH Energie-Messtechnik GmbH specialises in developing, producing and marketing electronic precision systems with which electricity meters are examined at legally approved testing centres. Energy suppliers and manufacturers of electricity meters use these products. In addition to mobile testing devices for on-site testing, the product range includes stationary, fully automatic measuring and testing systems for series tests.

Their offering is supplemented by products for quality assurance in energy supply, including monitoring power transformers and analysing power quality. The most recent addition is the Smart Grid Interface Module (SGIM). It monitors energy flows, ensures full transparency "on the last mile," and creates a reliable basis for decision-making for distribution network operators in the event of load fluctuations.

Hamburger Hafen und Logistik AG

HHLA is one of Europe's leading port and logistics companies, with activities stretching beyond the Port of Hamburg and into many parts of Europe. Together with its customers, HHLA develops logistical and digital hubs for the transport flows of the future. As a result, HHLA is paving the way for sustainable growth in its enterprise value. HHLA connects its customers with maritime and continental transport streams.

XFEL-European X-Ray Free-Electron Laser Facility GmbH



The European XFEL is a research facility of superlatives: It generates ultrashort X-ray flashes–27 000 times per second and with a brilliance that is a billion times higher than that of the best conventional X-ray radiation sources. The world's largest X-ray laser is opening completely new research opportunities for scientists and industrial users.

ZAL TechCenter

We are the leading technological research and development platform for civil aviation. Together with our partners, ZAL works on the integration and industrialisation of innovative aviation technologies. Together, we are making an important contribution to strengthening the world's third-largest civil aviation site, true to the principle: Future Created in Hamburg.

The fundamental idea of the ZAL TechCenter is to establish an international platform for aviation research under one roof. Since its opening in 2016, the research centre provides around 600 workspaces distributed across hangars, laboratories and offices for partners from academia and industry. Modern research infrastructure coupled with various event formats for knowledge transfer and networking round off the TechCenter's services.

For more on the World Congress, visit:

imeko2024.org

THE HELMHOLTZ FUND, A COMMITMENT TO TECHNOLOGICAL PROGRESS

Hermann von Helmholtz was an exceptional 19th-century researcher, a medical graduate, a physicist and philosopher and played a key role in shaping the scientific culture.

Metrology gives everything a measure, and we encounter it daily: precise and reliable measurements based on internationally harmonised units are the foundation of science, technology, and business. Without this, it would hardly be possible to produce efficiently and with high quality and reliability. Precision measurements are the prerequisite for ensuring that transported goods such as gas, water or electricity can be billed accurately and that we can rely on the amount of gasoline pumped at the filling station just as much as on the results of a blood test. However, the major challenges of our future, such as technologies for the energy transition, digitalisation, or quantum technologies, will require a scientific metrological basis. In short, new precision measurements and innovative measurement methods are helping improve the quality of our lives and, beyond that, to understand the world better.

For more than 100 years, the Helmholtz-Fonds e. V. has been a reliable and committed metrology partner for companies and research institutions active in this field. A good 25 years after the founding of the Physikalisch Technische Reichsanstalt (PTR) in Berlin, the PTR Board of Trustees established the Helmholtz-Fonds e. V. in 1913. On the initiative of the former PTR President Emil Warburg, the trustees, whose members included Carl von Linde, Walther Nernst, Max Planck, Wilhelm Conrad Röntgen, Wilhelm Wien and the brothers Arnold and Wilhelm von Siemens came together to form an unrivalled support association. In honour of the co-founder and first president of the PTR, the exceptional researcher Hermann von Helmholtz, the association bears his name: Helmholtz-Fonds e. V. All activities of the Helmholtz-Fonds e. V. particularly to promote progress in metrology, are financed by membership fees and donations. The Helmholtz-Fonds e. V. makes progress in precision metrology visible, discusses it and drives it forward. It brings together experts from research and industry for symposia, conferences, and workshops, promotes young scientists and honours outstanding work, not least with the prestigious Helmholtz Prize.

Presidential board: Prof. Dr. Cornelia Denz (Chairwoman), President of the Physikalisch-Technische Bundesanstalt Braunschweig; Dr.-Ing. Prof. Frank Härtig (Deputy Chairman), Vice President of the Physikalisch-Technische Bundesanstalt Braunschweig)

More information can be found under: https://www.helmholtz-fonds.de/helmholtz-fonds/

IMEKO AND DIGITAL TRASFORMATION

In the picture, on the far right, the IMEKO President, Dr Frank Härtig.

Digital transformation in metrology has made an essential step in March 2024.

Fostering digitalisation in measurement science and quality infrastructure has been an important task for IMEKO for quite some time now.

IMEKO is one of the founding members of the "Joint Statement of Intent" (JSI) to foster the SI Digital Framework and digital transformation in scientific and quality infrastructure. Meanwhile, ten international organisations have signed the JSI!

As a Signatory of the JSI, IMEKO contributed to the first international workshop, "Towards Digital Quality Infrastructure," held from 5 to 6 March 2024 at the headquarters of metrology, the BIPM, and online.

The workshop brought together speakers and delegates from industry, science, and quality infrastructure organisations.

It discussed how digitalisation in metrology can benefit users, scientists, and companies. It became clear that despite the immense benefits and opportunities, much work must be done to foster digital transformation. Workshops like this one in March are essential in progressing this development. Therefore, IMEKO will organise a special event during the IMEKO World Congress, 26-30 August in Hamburg, Germany.

With the outcomes and discussions from the workshop in mind, delegates from National Metrology Institutes (NMIs), Signatories of the JSI and others dived into the first meeting of the novel CIPM Forum "Metrology and Digitalisation" from 7-8 March 2024 at BIPM. IMEKO joined discussions and contributed expertise based on its 25 Technical Committees and international experience in organising knowledge exchange. The attendees put together proposals for eight sub-groups under the Forum - covering topics such as FAIR principles in metrology, artificial intelligence, traceability, and digital certificates. In the coming months, these groups are expected to formulate their draft terms of reference and establish themselves.

IMEKO'S WORKING GROUP ACTIVITIES

1. Publishing

The discussions involved the WG's future strategy, the UN's Sustainable Development Goals, the preparation of guides on best practices for authors and how to submit and review a paper.

2. Technical Committee TC Functioning

A guide on how to chair a TC is in preparation to aid new TC Chairs and summarise the best practices.

3. Technical Board Functioning

The group is working on a guide providing detailed task descriptions to IMEKO Officers.

4. Technical Committee Events

IMEKO supports events and co-organises them in a growing amount. The improved guide will help to oversee all this.

5. Branding

The group works on uniform templates and materials unique to IMEKO's brand.

Working Group Members, thank you very much for your dedication and time invested in these activities!

INTRODUCING CHRISTIAN EUGÈNE

A University Career Focused on Measurements

My name is Christian Eugène. I was born in Brussels, Belgium, in 1941, in the middle of the war. At the end of it, my father, who was a lawyer, died, leaving a widow with four children. Despite this precariousness, I had a happy childhood, immersed in French culture, my mother tongue, in a bilingual French-Dutch country. I did my secondary schooling in the "classical" stream of "Greco-Latin humanities", completed by a social life punctuated by scouting and the college choir. This contact during adolescence with the antique Greco-Roman civilisation didn't prepare me to pursue higher engineering studies, especially since I had to pass an entrance exam in mathematics on subjects going well beyond the program I followed. Ideally, this required an additional preparatory year. The prospect of progress brought by Science and Technology in Europe in full reconstruction certainly weighed on my decision to become an engineer.

I completed these engineering studies (five years) at the Catholic University of Louvain (UCLouvain), a French-speaking university hosted in Leuven in the Flemish region, in partnership with KULeuven, its Dutch-speaking sister (this partnership was created in 1425, and we will celebrate our 600th anniversary next year 2025: it was first a merger and then a cohabitation; UCLouvain was transferred from 1972 to the Walloon Region in the new city of Louvain-la-Neuve). I chose electricity orientation, and I obtained my engineering diploma in 1964.

Career

I immediately received an offer for a one-year temporary assistant position in the Electrical Measurements section of the Engineering Faculty (now Polytechnical School) of this university, which I accepted as a smooth transition to my aim for an industrial career. I obviously didn't imagine that I would stay there until my retirement! The Electrical Measurements section at UCLouvain was unique in the strict sense of the word. It was directed by a single man who founded it after the war with the mission to create a specific course in Electrical Measurements and an associated laboratory: Professor Lucien Morren, whose primary function remained to direct a private laboratory of metrology, specialised in the calibration and control of high precision electrical instruments. At the university, he was only aided by one assistant, the position assigned to me. During the week, I only saw him come to give his lessons, so much so that he booked me every Saturday morning for intense coaching. What a happiness it was to be trained in the practice of measurement by a man of such skills!

My one-year contract was renewed for two years at the end. I accepted it this time without hesitation because I had tasted the joy of the academic intellectual life made of trust, freedom of creation, and also the euphoria of transmitting knowledge at the highest level.

It was during this second term that my career at the university got carried away following the death of a professor who had a large course load in electricity that had to be urgently redistributed. I inherited the "Electric Circuits" courses for all the specialties of engineers while remaining with Prof. Morren's laboratory and its metrological environment. In 1969, at the age of 28, I was promoted to the Academic Corps of UCLouvain.

Strong prospects of expanding the laboratory became conceivable. With this in view, increasing my chances of consolidating my career at UCLouvain clearly required obtaining a PhD. High-frequency metrology was a possible subject of expansion, in which I trained myself through short stays abroad. It is in this context that Prof. André Vander Vorst, who just returned from a long stay at MIT (USA) with the aim to create a "telecommunication" section at UCLouvain,

offered to welcome me for a thesis on a theme of my choice in microwave metrology. This is how I defended my doctoral thesis in 1976 on new methods for calibrating the dielectric parameters of a material in microwaves.

That same year, Prof. Morren retired from the university. I succeeded him as director of his laboratory and for all of his courses: Electrical Measurements and, later created, Photometry and Lighting, an elective course that I taught from 1989 (I will come back to this later) while keeping the courses that had been previously assigned to me elsewhere.

My career was definitely launched, and I never stopped focusing on Electrical Measurements, even though my responsibilities gradually expanded in other areas. When I started, this discipline was still confined to classic electrical engineering, a subject I mastered thanks to my teaching on Electric Circuits. I then experienced the successive contributions of analogue electronics, digital electronics, microprocessors, computing and signal processing, from which my scientific work and teaching benefited continuously. The foray into microwave metrology did not continue. I returned to industrial frequencies, gradually moving away from "fine metrology", where I sometimes flirted with a ten-thousandth accuracy and became more interested in industrial measurements, particularly sensors. My field shifted therefore from "Electrical Metrology" to "Measurements and Instrumentation", the central theme of IMEKO.

This discipline of measurement has always appeared to me as much an art as a science, forging its letters of nobility in experimentation, which gives the incomparable flavour of the convergence between theory and practice. I loved it as a wonderful field for deploying both rigour and creativity. The multidisciplinary nature of measurement (the companion of all Sciences) led me to establish scientific contacts in many fields outside of electricity (biomedical, environment, fine arts).

Later, I felt a growing interest in Lighting, thanks in particular to the coming into play of LEDs as a new paradigm. This theme was connected to measurement through the photometric accent of my lectures in "Light and Lighting" with the benefit of a well-equipped darkroom. Teaching this subject through a metrological approach allows students to gain more profound knowledge of the light environment in which we are immersed and, therefore, to appreciate it better. This activity naturally led me to establish contacts with specialists in the discipline, first via the "Belgian Lighting Institute" of which I became a member of the steering committee and chairman of the "Lighting Sciences Working Group", and, at the international level, mainly in congresses organised by the "International Commission on Illumination".

I rose through the academic ranks to become a full professor in 1993 and continued my career until my retirement in 2006. Looking back, I can say, in this Olympic year and paraphrasing the Frenchman philosopher Michel Serres, that, through my teaching, I always had the feeling of having to pass on as much a torch as a message.

My research

The expansion climate experienced at UCLouvain from the start of my career, with the associated increase of responsibilities, never hindered my wish to enlarge the proficiency underlying my teaching activities. It was obvious that this bonus is obtained by the development of quality research which aims at "knowing better". There is no research without publications (all media combined), especially if they pass through the filter of referees at the international level. The ideal path is to first communicate in a scientific conference, if possible with proceedings, then have an in-depth publication in an international authoritative journal in the field. The enormous interest of the scientific conference is the direct contact with the researchers, which allows us to situate ourselves in the course of ideas and works. IMEKO, for which I reserve a last chapter, is a prestigious organisation I have often favoured: almost half of my international publications are held by IMEKO.

It is by looking back on my scientific publications (around 150, all genres and levels combined) that I can best identify the research themes that successively occupied my mind.

Many contributors are often involved in these publications as first or co-authors, on the occasion of their diploma thesis (I supervised around a hundred of them) or as part of preparing a PhD.

Until 1976, the theme of HF measurements had priority linked to my doctoral thesis. We don't find it any longer after this date.

Since 1978, the theme of microprocessor-assisted measurements has appeared, particularly in the measurement of impedances. In 1984, a fruitful theme opened for our laboratory: "Autonomous Microdata Loggers for Ambulatory Measurements and Recordings of in-situ Parameters" (mainly environmental or medical, a doctoral thesis). This theme earned us significant industrial funding (with patent filings), which allowed me to hire up to five researchers. This topic inspired me in the organisation of the TC4 conference in Brussels in 1993 (see below)

Then, the focus gradually shifted to the sensor aspect itself, starting with the use of ultrasonic echolocation methods, with application to the forestry and marine fields. This is between 1990 and 2002.

In 2001, we opened a new subject entitled "Dimensional Measurements of Objects by Laser Triangulation under Structured Lighting" (a doctoral thesis, a patent filing) (2001-2006). The environment was always forestry and medical but also robotic. It was still telemetry, but the sound wave was exchanged for a lightwave.

I mentioned above that, in 1989, I took the optional course "Photometry and Lighting" created by Prof. Morren. My first publication on the subject dates from 1999, and it has not disappeared since then until the last date in 2023. My contributions were mainly didactic, particularly when centred on the innovative teaching formulas I experimented with. For example, I expanded this course internationally by adopting the format of an intensive week with a panel of speakers addressing students, including those of UCLouvain, of the ATHENS network of European universities.

I should also mention the third pillar of our mission: "service to society", which completes "teaching" and "research".

It involves various expert reports, industrial collaborations, continuing training services, and more. However, I would be remiss if I did not mention that in 1985, I became director of the UCLouvain "Center of Continuing Education of Engineers", offering them training for a few days to refresh their skills in various disciplines.

My involvement in IMEKO

My association with IMEKO was important. I participated 37 times in events organised by the Confederation. Most were scientific events: 10 in TC1, 7 in TC4, and 10 in World Congresses. I also include my participation in General Councils, not coupled with a World Congress. I (co-) authored 28 papers and chaired 12 sessions. Not to mention the numerous papers I was asked to review in the selection phase. I judge this phase as fundamental: the scientific quality of the event is guaranteed only if this review is carried out carefully and without leniency bias. Respect for these requirements has always been my rule of conduct.

TC1 Education and Training in Measurement and Instrumentation

My first participation in an IMEKO event was a TC1 symposium called at that time "TC on Higher Education", which was typical in my emerging career. It was organised in 1971 in Delft, the Netherlands, by Prof. Bernard Veltman (Delft Technical University). In a friendly confrontation with specialists from diverse countries, I went there to discover how to strengthen 'the Sense of Measurement' in my teaching. But I have the memory of a relatively confidential meeting that was more about the "Science of Measurement" in the philosophical sense and which provoked memorable verbal jousts between certain participants who, at that time, played an important role in IMEKO. In a lighter way, as a digestive walk after lunch, Prof. Veltman took us for a ride into the centre of Delft for a visit to the flower market.

During the closing session, he also offered each participant a few tulip bulbs that brightened up our garden for a long time with pretty, typically Dutch spring flowers.

Subsequently, I participated in several more conferences in TC1, but to stay momentarily in chronological sequence, I must talk about my assistance, in the frame of my PhD, to the IMEKO Microwave Symposium (a theme assigned to TC4 at this time), in 1972 in Budapest. We know that this TC was reorganised in 1984 with a considerable expansion to all measurements of electrical quantities. I had an appointment at the Technical University of this town with my alter-ego colleague, Prof. Laszlo Schnell (†1995), a TC1 member whom I met in Delft. A Hungarian researcher assisted him in facilitating our conversation in English. It appeared that this assistant also spoke French well. To my question why, his answer sprang forth: "Because France is the symbol of freedom!". This anecdote represents the climate that reigned in Eastern Europe at this time, and Hungary was for me, the first example. I wanted to mention this about the headquarters country of IMEKO to recall how international organisations like it provide eminent services to bring people together!

Returning to my activity in TC1, the next event after Delft was in London in 1975, organised by Prof. Ludwik Finkelstein (†2011), who needs no introduction. The theme "The Nature and Scope of Measurement Science" consolidated that of Delft. I presented a paper on "Measurement Education in Polytechnical High Schools of Belgium" from data collected by the "Electrical Measurement Contact Group of Belgian universities" I initiated a few years earlier. This group was converted in 1978 into BEMEKO, the Belgian member of IMEKO.

My next TC1 session was Stockholm 1977, with the theme "Teaching Measurement Sciences through Laboratory Experiments", which suited me better. Prof. G. Brodin of the Royal Institute of Technology chaired it.

I returned to Budapest in 1980 with the paper: "Involvement of Microprocessors in Teaching and Research in Measurements and Instrumentation". From this event, I acted as a TC1 member at the suggestion of BEMEKO.

I attended six other TC1 conferences: Graz 1984, Warsaw 1986, Karlsruhe 1990, London 1993, Wroclaw 2002, and Annecy 2008. Let me highlight Warsaw 1986, where the costs (except flights) of TC1 members were covered thanks to Polish state funding!

TC4 Measurement of Electrical Quantities

For an essential historical review of TC4 from 1979-2002, see the article in 4 parts by Mario Savino (It) in the IMEKO Newsletters: June 2022, February, April, and November 2023.

TC4 was another TC where my participation in an event was a standard objective due to my specialty. The first was the Brussels symposium in 1993, which I initiated on my laboratory's work (see above) with the theme: "Intelligent Instrumentation for Remote and On-Site Measurements". Prof. Damien Burin, in charge of the National Organizing Committee, died during the preparatory period. I took over this mission in addition to the scientific presidency of the programs. It was an exciting experience with more than 120 attendees. They all came from European countries, showing the progress made by IMEKO on this point since that time with the progressive opening to Asia and Latin America. My biggest challenge was facilitating Eastern European countries' participation by offering them very special conditions for rooms, some of which turned out, deceiving my vigilance, to be catastrophic! I met there many delegates who later became friends: Mario Savino (It), Pasquale Daponte (It), Janusz Mindykowski (Pl), Vladimir Haasz (Cz), Jean Weiler (CH) (†1999), Vladimir Kneller (Ru) (†2021), Eleftherios Kayafas (Gr) and more.

Thanks to this success, Professor Adam Fiok (Warsaw University of Technology) (†2000), Chairman of TC4 at that time, asked me to become a TC member. In this quality, I still attended the TC4 in Prague 1995, Naples 1998, Athens 2004, Gdynia 2005, Florence 2008 and Benevento 2014. Sometimes, the organisers added a very original touch to the event. I will just highlight the one in Gdynia, Poland, 2005, led by Janusz Mindykowski, a professor at the Maritime University in this city. He received the delegates on one of the two training sailboats of this academy in the dressing of boat captain and, as an aperitif before, we left the port for a walk in the bay of Gdansk, leaving the students of the academy climbing into the sails and hoist them. The meeting continued in the seaside resort of Jurata, Hell Peninsula.

At the GC 2015 in Prague, I resigned as an active member of TC4, becoming an honorary member.

World Congresses

My first participation in a WC was in 1982 (West) Berlin, organised by Tilo Pfeifer (D) in the brand new Congress Center. From there on, I participated in all of them (except Osaka in 1999) until Lisbon in 2009. The specificity of these triennial congresses is that they concern all the fields of Measurement and Instrumentation covered by the different TCs, and thus is a way to broaden one's interests and an opportunity to meet more scientists. To stay on the level of anecdotes, I would highlight the Rio de Janeiro WC (2006) in a beautiful hotel near the sea in a dream environment, but close to the most famous favela. There was no question of walking alone (a delegate was robbed of his wallet in Copacabana under the threat of a weapon!). The welcome party was typically Brazilian, with local cocktails, including the famous Cachaça to get us into the local atmosphere.

During the closing session, no one will forget my dear friend Leo Van Biesen (free university of Brussels), the IMEKO president at that time, who played on his saxophone (invented by the Belgian Adolphe Sax) "What a wonderful world" immortalised by Louis Armstrong, and "La Garota de Ipanema" created by the Brazilian Carlos Jobin. What an emotion!

Other official IMEKO missions

From 2001-2018, as the Belgian delegate to IMEKO, I attended thirteen of the annual GC sessions. I was also a member of its Drafting Committee from 2006-2018. At this last GC in Belfast, unfortunately, in my absence, I was honoured with the "Distinguished Service Award". This marked the end of my activities in IMEKO. I saw in this unexpected distinction, comforted by a similar recognition received in 2019 from the International Commission on Illumination, a legitimacy for having accepted the request from the IMEKO Secretariat to "write about myself " in the Newsletters.

Afterword

After my retirement in 2006, I slowly but surely reduced my professional activities to open a final chapter of my life by focusing with my wife on our large family with the promise of surprising and beautiful new adventures!

Written by Christian Eugène
christian.eugene@uclouvain.be

NEWS ON THE SECOND GULF METROLOGY FORUM

The Second Gulf Metrology Forum, scheduled to take place in Dubai on April 22-23, 2024, is hosted by the Ministry of Industry and Advanced Technology (MOIAT) and organised by the GULF Association for Metrology (GULFMET).
Prominent organisations, such as the Bureau International des Poids et Mesures, the International Organization of Legal Metrology, the International Measurement Confederation, and EUROLAB, support the event.

The Forum revolves around the theme of "Metrology for Sustainability" and aims to foster knowledge exchange and collaboration among executives, experts, specialists, and technical personnel in the field of metrology. The program includes four sessions, focusing on sustainable environment and manufacturing, exploring how metrology can contribute to achieving sustainability goals.

Attendance at the Forum is free of charge. For further information and registration, please visit the Forum's website: https://gmf.gulfmet.org/ or contact Eng. Omar Kanakrieh at: okanakrieh@gso.or.sa

LABSUMMIT 2024

The Labsummit 2024 will take place in Coimbra, Portugal, from 16 to 18 May 2024. This major event is jointly organised by RELACRE, ISQ, and Ambidata, with the institutional support of EUROLAB. It will feature over 1,000 attendees, more than 30 exhibitors, and over 100 sessions.

The Labsummit aims to promote an inspiring environment where participants can enrich and share their knowledge, establish partnerships, and drive the advancement of the laboratory industry.

The main target ranges from scientists, researchers, laboratory managers and technicians to industry representatives, academics, Government Officials, entrepreneurs and startups.

The Labsummit presents various activities such as workshops, live laboratories, open discussions, updates on regulations and standards, and exhibitions of new technologies and products. It is a great opportunity for laboratories to explore new products and equipment and meet suppliers and manufacturers directly.

The event will feature expert lecturers, successful case presentations and panel discussions. Amongst the various high-level speakers, the EUROLAB will be represented by its President, Mr Paolo Moscatti, who will be a speaker at Labsummit.

All the different activities offer an excellent opportunity for networking and interaction between various realities and work environments that cannot be missed.

For further information, please access the official Labsummit website **here.**
For registration, click **here.**

AUTOMATION EXPO 2024, MUMBAI, INDIA

AUTOMATION EXPO2024™
17th India International Trade Show
21st to 24th August 2024
BEC, Mumbai India
Hall 1 & Hall 2

Mumbai, India April 2024: IED Communications, the organisers of Automation Expo 2024 - Asia's biggest International Exhibition & Conference of Automation Technologies will be held from 21st to 24th August 2024, at the Bombay Exhibition Center (Nesco), Goregaon (E) in Mumbai, India. It will highlight the transformative impact of Artificial Intelligence (AI) and Robotics on Process and Factory Automation.

In the dynamic realm of Industrial Automation, the 17th edition of Automation Expo aims to illuminate the profound influence of Artificial Intelligence (AI) and Robotics. Over the past decade, robotics has undergone a notable evolution, becoming increasingly cost-competitive and adaptable. The advent of collaborative robots, or cobots, has revolutionised manufacturing by securely working alongside human operators, diverging from traditional robots confined within cages. Meanwhile, AI applications in production data analysis have transformed tasks like predictive maintenance and waste reduction, augmenting efficiency across industries as both established entities and startups contribute to this technological evolution.

Dr M Arokiaswamy, Founder & Chairman of IED Communications, underscores the synergistic potential of AI and robotics in propelling industrial automation forward. This amalgamation pledges heightened productivity and efficiency, establishing new benchmarks for process and discrete manufacturing industries.

Jyothi Joseph, Director of IED Communications, emphasises the pivotal role of Automation Expo in facilitating India's transition into a global manufacturing powerhouse. Amidst increased investments and governmental incentives, the event aims to equip enterprises with the latest technologies and innovative solutions to capitalise on favourable market conditions.

With an expected turnout of 40,000 automation experts, Automation Expo 2024 stands as a premier platform for showcasing cutting-edge technologies and fostering meaningful connections within the Instrumentation and Automation Industry.

Anticipation is mounting for the upcoming Automation Expo 2024, an eagerly awaited event promising a dynamic and diverse experience for all participants. Set to surpass expectations, the expo offers an extensive array of activities crafted to inspire, educate, and facilitate networking within the automation community. Attendees can anticipate being enthralled by keynote speakers who are pioneers in the industry, sharing their insights and vision for the future.

A standout feature of Automation Expo 2024 is its interactive workshops, providing participants with hands-on experiences and practical knowledge. These workshops aim to bridge the gap between theory and application, allowing attendees to explore the nuances of cutting-edge automation technologies.

Moreover, the expo serves as a platform for exciting product launches, where industry leaders unveil their latest innovations, offering a glimpse into the technological advancements shaping the industry landscape.

The schedule features engaging panel discussions that unite a varied selection of industry specialists. These discussions explore relevant issues, emerging trends, and the future direction of automation. Attendees are urged to participate actively in these dialogues, acquire valuable insights, and add to the shared knowledge pool. Essentially, Automation Expo 2024 provides more than a mere event; it delivers a holistic experience tailored to diverse interests within the automation sphere, rendering it essential for those aiming to remain at the forefront of this swiftly evolving domain, along with an awards ceremony recognising exceptional exhibitors.

Concurrent Events

CEO Conclave 2024

Date & Venue: 21st of August 2024, NESCO Grande, BEC, Goregaon, Mumbai

Uniting Visionaries in the Automation Revolution 2024!

The CEO Networking event is a vital platform where top executives unite to plan the future of their organisations. It fosters innovative discussions, idea exchange, and strategic thinking, aiming to shape industries and drive sustainable growth. It's a catalyst for transforming the business landscape through shared insights and transformative strategies.

The CEO Networking Nite will have over 250 delegates who are CEOs from the manufacturers and users of Automation and Instrumentation.

Process Automation Conference 2024

Date & Venue: 22nd of August 2024, NESCO Grande, BEC, Goregaon, Mumbai

Proposed Topics:

1. Digital Twin applications
2. Cybersecurity and protection of critical infrastructure
3. AR/VR Applications
4. OPA, APL
5. AI in PA

Robotics Conference 2024

Date & Venue: 22nd of August, 2024, NESCO Grande, BEC, Goregaon, Mumbai

Proposed Topics:

1. Emerging Trends in Collaborative Automation
2. Vision-Guided Robotic Processes in the Automotive Industry
3. AI & Robotics in Warehousing and Logistics
4. Industrial Robotics and Automation
5. Robotic Perception and Sensing
6. Ethical and Social Implications of Robotics

Factory Automation Conference 2024

Date & Venue: the 23rd of August 2024, NESCO Grande, BEC, Goregaon, Mumbai

Proposed Topics:

1. Impact of AI & Robotics on Manufacturing
2. AI in Logistics, Supply Chain
3. AI, Robotics, Virtual Reality, Augmented Reality, Mixed Reality applications
4. Applications of Computer Vision and NLP applications in operations
5. 4.0 innovative use case, successful Digitally transformed businesses

Supporting Associations: Automation Expo has partnered with many International and National Technology Associations, with broad support and a major impact on the industry.

For further information, please visit www.automationindiaexpo.com or contact jyothi@iedcommunications.com