DEAR FRIENDS, DEAR COLLEAGUES,

This is the year's first newsletter issue, and if IMEKO hasn't reached you yet, Happy New Year! Since 2023 started, the Technical Committee's activities have been in full planning. After the successes of 2022, this year brings exciting news again on these events. The February issue contains the following articles: The TC events planned so far are introduced. The World Congress Hamburg 2024 is the upcoming XXIV IMEKO World Congress. The preparations are in progress; here is a little introduction to 2024 Hamburg. Meet "inotech Meter Calibration Systems GmbH" from the industrial contacts. "Academy Meets Industry" is the story's title on how the TC4 conference 2023 happened to take place with the largest fair of coil winding - COILTECH. Besides these, the story of the TC4 history continues. IMEKO welcomes many new members to the Technical Committees; their names are published in this newsletter.

THE 24TH IMEKO WORLD CONGRESS HAMBURG, GERMANY

The XXIV IMEKO World Congress will take place in Hamburg, GERMANY, on 26-29 August 2024. Right in the middle of the beautiful city of Hamburg is the CCH, Congress Center Hamburg.

The new CCH, one of the biggest in Europe in numbers: 50 halls and rooms with high flexibility, 36,000 m² of combined surface area, 12,000 Persons visitor capacity, 12,000 m² of exhibition space, a large rooftop garden for the coffee breaks, and to enjoy the views of the city.

The inner city can be reached on foot in a matter of minutes. The Dammtor mainline train station (with access to high-speed and commuter trains) is just a few steps away. Even the city's airport (with flights to and from approximately 130 destinations in 02/2020) is no more than 25 minutes away and well connected to the public transportation network.

And last but not least, more than 100 hotels of all categories with roughly 3500 rooms can be found nearby.

For more information on the details, the scientific program, registration and fees, besides technical visits, please visit the Website: www.imeko2024.org
Contact: imeko2024@ptb.de

INTRODUCING INOTECH METER CALIBRATION SYSTEMS

inotech Meter Calibration Systems GmbH

Inotech is a worldwide operating company specialising in calibration systems for gas, water, heat and electricity meters. In this niche market, inotech has built a very good reputation in its 30 years of activity, focusing on high-quality equipment for metrology institutes, meter manufacturers and calibration laboratories.

Since July 2021, the headquarters in southern Germany has been expanded by a subsidiary in Spain, which has taken over the experienced test equipment team of an American meter manufacturer. This has significantly expanded the company's expertise in the areas of testing equipment for water, heat and electricity meters.

Equipment for Meter Manufacturer Test facility for domestic gas meters. Complete smart meter calibration.

With its own in-house calibration laboratory for gas volume flow and the necessary auxiliary measurands, inotech offers calibration services for customers on-site as well as in-house.

This allows all gas meter test equipment to be calibrated based on DIN EN ISO/IEC 17025:2018 accreditation.

Newly produced gas meter calibration systems, including the corresponding calibration, are delivered directly, including the corresponding calibration.

In the field of gas meters, inotech offers the entire range of billing-relevant meter calibration systems, starting from domestic gas meter test systems based on critically operated nozzles up to high-pressure closed-loop calibration systems working with natural gas or gas mixtures.

Worldwide First Bidirectional High Pressure Closed Loop Test Rig for Gas Meters (Medium: Natural Gas 5.5 MPa / 11.200m³/h).

For the water and heat meter test systems, the entire meter size range as well as different temperature ranges, are also covered.

Software modules for the adjustment and calibration of smart meters are available for all systems. Thus, for example, micro-thermal gas meters can be calibrated with gases, or ultrasonic water meters can be adjusted and calibrated completely according to the manufacturer's specifications.

However, the services do not stop at the delivery and training of the equipment.

Further systems for data processing and mass data evaluation for production quantities are offered. An important goal in the development is always an economical operation of the equipment and highly automated processes. Further developments always take place in close coordination with the customers. This has resulted, for example, in systems that scan mechanical counters with a camera system or laser scanning rotary gas meters that massively reduce testing times.

Due to the continuous further development of the systems, updates and lifelong support services are available.

Inotech Meter Calibration Systems GmbH
Internet: www.inotech.eu
Email: info@inotech.eu

Equipment for Meter Suppliers Production for Rotary Gas Meters.
The Fastest Rotary Meter CalibrationSystem in the World
Leak-Test, Qmax, 0.2xQmax, QminTotal < 5min.)

Written by Ralf Schneiderat
ralf.schneiderat@inotech.eu

NEWS FROM THE SECRETARIAT

The date and place are now set for the General Council Sessions in September 2023. It will be held in Budapest, Hungary, on 8 Friday, in the afternoon and 9 Saturday, the whole day.

NEW MEMBERS OF THE TCS, WELCOME TO IMEKO!

TC1: Tzvetelin Gueorguiev, Bulgaria; Mehrija Hasičić, Bosnia and Herzegovina; TC2: Maria-José Martin Hernández, Spain; Soontorn Chanyawadee,Thailand; Nataliya D. Kundikova, Russia; Li-Lin Tay, Canada; Hristo Lyubomirov, Bulgaria; TC4: Vladimir Milojevic, Bosnia and Herzegovina; Régis Pinheiro Landim, Brazil; TC5: Carlos R. Beauchamp, USA; TC6: Khaled Mahmoud, Saud Arabia; TC7: Zijad Džemić Bosnia and Herzegovina; Šejla Ališić Bosnia and Herzegovina; TC8: Zijad Džemić, Bosnia and Herzegovina; Haris Memic, Bosnia and Herzegovina; Oleksandr Samoilenko, Ukraine; Wei Gao, China; TC9: Elsa Batista, Portugal; Oliver Buker, Sweden; Marc de Huu, Switzerland; Berislav Pavlovic, Croatia; Padipat Wongthep, Thailand; Theerarak Chinarak, Thailand; Markus Juling, Germany; Ernad Borovac, Bosnia and Herzegovina; TC11: Gertrud Mamiya, Rwanda; Antonio Shemakalu, Uganda; Kittiya Shearman, Thailand; Egor Pavlovich Sobina, Russia; TC16: Carmen Garcia Izquierdo, Spain; Avdiaj Sefer, Kosovo; Sven Ehlers, Germany; TC19: Aida Jotanović, Bosnia and Herzegovina; TC20: Srđan Čalija, Bosnia and Herzegovina; TC21: Zijad Džemić Bosnia and Herzegovina; TC22: Chad Michael Walber, USA; TC23: Mariusz Śliwiński, Poland; Petru Jitaru, France; Kang Ma, China; Aida Jotanović, Bosnia and Herzegovina

New Officers TC9: Vice Chair Chris Mills, UK; Scientific Secretary Gregor Bobovnik,Slovenia; TC13: Chair Elisabeth Costa Montero, Brazil; Vice Chair Jessie Pillay, South Africa;

THE HISTORY OF TC4, MEASUREMENT OF ELECTRICAL QUANTITIES, SECOND PART

Continuation of the newsletter article June 2022

4. The jubilee of the strain gauge

In 1988 16 October to 21, for the first time, the 11th World Congress in Huston, Texas, USA, was organised in conjunction with the 43rd Annual Conference and Exhibition of ISA, the Instrument Society of America, which is the world's largest professional body for the instrumentation industry. The Congress also celebrated the jubilee of the strain gauge. The first commercial strain sensors, consisting of electrical resistances, were introduced between 1930 and 1938. The actual invention of the electrical resistance strain gauges by two independent US researchers E. E. Simmons of the California Institute of Technology and A. C. Ruge of MIT (Massachusetts Institute of Technology), dates back to 1938. They had the idea of using thin metal wires for the realisation of the strain gauge. Simmons used constantan glued onto a piece of paper, which supported the structure to be controlled. The year 1938 is significant because it is considered by many the birth of industrial sensors.

During the Congress, Jean Weiler organised a Round table for the TC4 on "Electrical Quantities with special emphasis on Harmonic, Inter-Harmonics and Transients". I participated in the roundtable with only two other colleagues: Jean Weiler and Istvàn Kollàr. There was not much time to organise the event. So, in the end, rather than a round table, it was similar to a usual presentation of two papers. On the other part, the performance of our Chairman Jean Weiler during the rodeo was much appreciated. (picture1)

After the Congress, we had the opportunity to visit the laboratories of NIST (National Institute of Standards and Technology) in Gaithersburg near Washington. It is noteworthy that 1988 was the year the Institute changed its name from the National Bureau of Standards (NBS), established in 1901.

5. From the power measurement to the smart instrumentation

The 3rd Symposium on "Measurement in Electrical and Electronic Power Systems" was held in Zurich, Switzerland, September 20-22, 1989, organised by Jean Weiler. The topics of the Symposium were: measuring devices; main's measurement; power definition and measurement; special problems; special instrumentation. As is clear from the topics, also this Symposium was oriented toward low-frequency measurements. During the TC4 meeting, as he had promised in Como, Jean left the Chairmanship to Adam Fiok and was appointed TC4 Honorary Chairman.

The 4th Symposium on "Intelligent Measurement of Electrical and Magnetic Quantities" was held in Varna, Bulgaria, November 15-17, 1990. Despite some logistical problems, the Symposium was a success. As is evident from the title of the Symposium, Varna can be considered an important milestone for the change in the topics of the TC4 events. There was a trend identified in the field of "computer science", and many papers were presented with special reference to smart instrumentation.

In 1991 for the first time, an IMEKO event was organised in China from 5 September to 10. At that time, China was beginning to open to the international free market, as Giuseppe Zingales, the incoming President then of IMEKO, emphasised during the opening ceremony. During the Congress, two sessions were devoted to TC4, with particular emphasis on the keynote paper written by Fiok and Weiler, inherent to the measurements of electrical systems.

6. Scientists sometimes have heated discussions

The 5th Symposium on "Electrical Measuring Instruments for Low and Medium Frequencies", organised by W. Wehrmann, an Austrian member of TC4, was held in Vienna, Austria, April 8-10, 1992. The Chairmanship of Adam Fiok led to the emergence of a broader range of topics. Partly owing to the attractive venue, the 4th Symposium saw an increase in the number of papers presented to almost a hundred. Adam tried to increase the frequency range of the measurements in our committee, so there was one topic relative to broadband measurements, along with traditional ones such as electrical, magnetic and electrostatic measurements. During the Symposium, I had a heated discussion with István Kollár. I opened a Session by presenting a paper concerning filtering techniques. István criticised the method presented, considering it too elaborate and time-consuming, and invited me to compare it with what he had proposed in his paper. I did something that a clever scientist should never do. In a moment of pride, I forgot that we must be humble and accept criticism from colleagues. I answered rudely and told him he was probably not familiar with the latest international research in the field. I did not mean what I said; in fact, I subsequently took István's suggestion into account and became convinced I should leave that type of research. Fortunately, after the presentation, István and I had the opportunity to clear the air. Four years later, we cooperated amicably in preparing the 8th TC4 Symposium in Budapest, Hungary.

7. The Electromagnetic Compatibility Testing

The 6th Symposium on "Intelligent Instrumentation for Remote and On-Site Measurements" was held in Brussels, Belgium, 12-13 May 1993. The official Symposium organiser was Damien Burin, who unfortunately died in August 1992. Christian Eugene, his replacement, took over all the duties connected with the Symposium. Christian Eugene was elected Chairman of the Belgian Member Organization of IMEKO. He was able to make the Symposium a success. The number of topics increased as never before; they included intelligent instrumentation and sensors based on optical fibres and non-contact devices, with remote measurements and networking, consisting of radio-wave telemetry and field busses.

For the first time, I took part in a TC4 meeting, replacing Italo Gorini, Deputy Chairman of TC4. I was distressed by Italo's serious illness, and it was only because of our great friendship that I agreed to temporarily replace him on the committee. The first part of the meeting was devoted to selecting the paper which would win the "Damien Burin Award" that had been established by the Belgian Member Organization to commemorate Damien. The consensus was that the award should go to the paper presented by my dear friend Alessandro Ferrero, inherent to the traditional topic of three-phase systems under nonsinusoidal conditions. In the second part of the meeting, the discussion focused on the proposal by the Austrian MO to create a new Technical Committee on Electromagnetic Compatibility Testing. The proposal had been outlined during the 35th Session of the General Council held in Vienna the year before. After a long discussion, the final resolution was: "EMC problems are being studied in many large, well, established international bodies. Several international scientific conferences with numerous participants are regularly and traditionally organised by these bodies. The number of experts in EMC testing is limited, and most of them are working in other circles connected with EMC, so there is a little chance of obtaining wide resonance for a new committee".

8. The scope of TC4 and the birth of the Workshop on ADC Modeling

In September 1993, my dear friend Italo Gorini, Deputy Chairman of TC4, died. In agreement with the Italian MO, he had proposed me as his replacement and successor in all his functions within TC4.

Adam Fiok had asked the IMEKO Technical Board and General Council to nominate me officially as Deputy Chairman of TC4. With the unanimous favourable opinion of all TC4 members, I was nominated Deputy Chairman of TC4.

Franco Cabiati and I cooperated with Adam in writing the TC4 keynote paper, an overview of the metrological aspects of digital instrumentation, to be presented at the 13th World Congress in Torino, Italy, 5-9 September, 1994. During the TC4 meeting, Adam Fiok proposed three new members: Linus Michaeli from Slovakia, Sabin Ozgul from Turkey and Antonio Serra from Portugal. All of them were accepted, but Jean Weiler, always respectful of the rules, saw the problem; the was no Portuguese Member Organisation in IMEKO. Because he appreciated Serra, he proposed to accept him on the committee unless there was a General Council opposition. Adam took the opportunity of the new IMEKO Expertise Service to try to include those activities regarding the whole range of frequencies into the scope of the TC4. I talked to Jean to try to convince him, but he was firmly opposed to what Adam wanted.

At last, I tried to mediate and proposed with Weiler, Cabiati and Henderson the following sentence as the scope of TC4: "All problems connected with measurements on electrical and electronic physical systems as well as electrical and electronic measuring techniques and instrumentation". During the meeting, the committee accepted the proposal submitted by Linus Michaeli (absent) and on his behalf by Pasquale Daponte to organise a Workshop on the ADC in Slomenice. Initially, the title should have been "ADC Modelling and Virtual Instrumentation", but the committee decided to delete the last two words.

The 7th Symposium on "Modern Electrical and Magnetic Measurement" was held in Prague, Czech Republic, 13-14 September, 1995. The Symposium was organised by Milos Sedlacek, and all the TC4 members stressed the importance of this Symposium, where a hundred twenty papers were presented, and the scientific level was very high. There were three very interesting, invited lectures presented by H. Schumny, S. Dado and J. Weiler concerning the digital measurement systems, the new sensors and the possibility of teaching or not the electrical measurements. Several social events were organised, and all the participants admired the sites of Prague, but unfortunately, Milos Sedlacek had to change the location for the gala dinner due to a bomb scare. (2)

As agreed in Torino, the 1st Workshop on "ADC Modelling" was organised in Smolenice Castle, Slovakia, 7-9, May 1996, by Linus Michaeli. (3)This was the first event for the Working Group on ADC, which was by this time known and esteemed in the world. The Group's work raised the profile of TC4 in the following years. Olli Aumala, then IMEKO President, took part in the Workshop, and he was impressed by the high level of the discussion. He stressed the importance of continuing the experience and suggested presenting "A European Project for a proposal of ADC Standardization". The President promised IMEKO support and backed the initiative.

9. The trend in digital measuring instruments

The 8th Symposium on "New Measurements and Calibration Methods of Electrical Quantities and Instruments" was held in Budapest, HUNGARY, 16-17 September, 1996. The Symposium was organised by Istvàn Zoltàn and Istvàn Kollàr. Unfortunately, during that period, Adam Fiok had a serious problem with his leg and stayed in the hospital several times. I was actively involved in the Symposium organisation and supported in this job, as for the scientific part, by Istvàn Kollàr. I opened the Symposium with an invited paper on the trends in digital measuring instruments, where the role of digital tools in the field of physics and engineering, as well as human and social life, was underlined. In those years, there was a drastic reduction in cost and increased flexibility in dedicated applications through data processing

computerised instruments, characterised by mixed hardware-software, mechanical-electrical, and analogue-digital design. Particularly the VXIbus allowed measuring instruments to extend the frequency range and improve data acquisition. The trend was to conceive an instrument as a data-processing system, which acquires the physical variable and yields information necessary to determine the desired figures.

The TC4 meeting approved the "European Project for a proposal of ADC Standardization". Michaeli also proposed the establishment of a Working Group on ADC and DAC within TC4. I agreed and proposed Michaeli and Daponte as co-ordinators of the Working Group (WG). The 2nd IMEKO Workshop on ADC Modelling and Testing was held during the 14th World Congress in Tampere, Finland, 1-2 June, 1997. The Workshop was a success, with a final round table on European projects, which was coordinated by Harald Schumny and Pasquale Arpaia. Michaeli suggested promoting links with industry, system integrators, final users, and IEEE experts in the field of ADC. Zingales also stressed that ADC's performance in transient conditions should be explicitly considered.

The normal term for the TC4 Chairmanship, as decided by TC4 members in Como, had been exceeded by Adam Fiok. Given that Adam was absent, during the TC4 meeting Jean Weiler proposed me as "Acting Chairman" of TC4. The proposal was accepted unanimously. In the light of their active participation at the previous TC4 Symposia, Milos Sedlacek and Antonio Serra were proposed by Jean Weiler as Deputy Chairman and Scientific Secretary of TC4, respectively, with effect from the following year under my Chairmanship. In those years, there were many suggestions on how to improve the activity of TC4. In particular, Weiler and Zingales asked for Electromagnetic Compatibility (EMC) to be included in the topics for the next TC4 Symposia and for a round table to be organised for the next world Congress in Osaka to set up a Working Group on EMC.

(1) "Suddenly, we saw Jean riding on a horse without being thrown out of the saddle, earning the applause of the whole stadium."

(2) Antonio Serra, Mario Savino and Milos Sedlacek

(3) In the picture from left to right, Olli Aumala (Finland), Linus Michaeli (Slovakia) and Pasqual Daponte (Italy)

The second part of the TC4 history is written by Mario Savino, Honorary Chairman of TC4.

HBK: SO HAPPY TO SEE EVERYONE IN THE METROLOGY COMMUNITY AGAIN

The international metrology conferences and world congresses of IMEKO are the main events for metrologists worldwide. Our relationship with IMEKO has always been very close. I regularly took part since 1996, and HBK, Hottinger Brüel & Kjaer is one of the companies that regularly attended world congresses and many technical committee events such as TC3, TC4, TC16, and TC22, to name only some.

Still, from my point of view, the participation in the IMEKO TC3|TC5|TC16|TC22 Conference in Dubrovnik, Croatia, in October 2022 was a truly extraordinary event. Therefore, I'd like to thank the Conference Organizers, the chairpersons of the Technical Committees and especially the Faculty of Mechanical Engineering and Naval Architecture of the University of Zagreb for their tireless work, which made this event so unforgettable.

After we could only talk on the PC screen for more than two consecutive years, we could suddenly meet face-to-face again in our metrology community. It was also a special pleasure for me to meet a dear friend from earlier times in addition to the official delegation from HBK: Torben Rask Licht, former Product Manager of Vibration Calibration Systems at Brüel & Kjaer and his wife Mette, also participated at the event. We owe Torben a lot regarding progress in this field. By the end of 2022, as part of our EMPIR Infra-AUV project involvement, HBK hosted the stakeholder meeting in our factory in the North of Copenhagen.

We are already looking forward to the IMEKO XXIV World Congress in Hamburg in August 2024. It is very special to welcome the worldwide metrological community to Germany, our home country. As I also attended IMEKO TC3 International Conference back in 2002 in Celle, Germany, I can hope so too.

For HBK, this year will be a year full of Metrology events.

The Congrès International de Métrologie (**CIM 2023**) in Lyon in France; The Sensors and Measurement Systems International (**SMSI 2023**) in Nuremberg, Germany; the Innovation Metrology (**IM 2023**) in Leoben, Austria; the **VDI** Measurement Uncertainty Conference in Erfurt, Germany, later in the year.

Written by Dr.-Ing. André Schäfer,
andre.schaefer@hbkworld.com
Hottinger Brüel & Kjaer, Germany

ABOUT HBK (Hottinger Brüel & Kjaer):

The company originates from Brüel & Kjær Sound & Vibration and Hottinger Baldwin Messtechnik. Brüel & Kjær was founded in 1942 and has grown to become the world's leading supplier of advanced technology for measuring and managing the quality of sound and vibration. Hottinger Baldwin Messtechnik was founded by the engineer Karl Hottinger in 1950 in a small Bavarian town in Germany. Constantly growing, it moved to Darmstadt in Hesse to soon be the master of measuring techniques based on the strain gauge principle. In 1973 HBM opened the first calibration lab of the German Calibration Service (DKD), now DAkkS, and participated in EU metrology projects from the very beginning. HBM and Brüel & Kjær joined forces four years ago and now provide seamlessly exceptional calibration system solutions.

HBK HOTTINGER BRÜEL & KJÆR

www.hbkworld.com

ACADEMIA MEETS INDUSTRY AT COILTECH, TC4 INTERNATIONAL SYMPOSIUM 2023

Dr Dragana Popovic Renella, COO SENIS Group Switzerland and IMEKO TC4 Vice Chairperson

In search of breakthrough innovation and to develop highly competitive products, companies increasingly collaborate with academic research. While the companies get fresh ideas and access to state-of-the-art knowledge, the academic partners learn about industrial trends and needs. Industrial-academic collaborations, therefore, significantly contribute to building, sustaining, and often transforming entire industrial ecosystems.

As our company SENIS Group, Switzerland, was able to grow strongly by combining the considerable academic competence of its founders with extensive industrial collaborations, I was thinking about how to generally contribute to academic-industry collaborations. I attend two events every September: the academic conference IMEKO TC4 and the industrial fair COILTECH. So why not kill two birds with one stone and combine these two events into one?

Therefore, I proposed to the COILTECH and the IMEKO TC4 committees to organise the next IMEKO TC4 conference at the international industrial fair COILTECH in Italy. The idea was accepted and strongly supported by Prof. Alexandru Salceanu, TC4's Past Chairperson and Mr Sebastian Küster, CEO of COILTECH.

On behalf of the Organizing Committee, it is a great pleasure to invite you to the 26th IMEKO TC4 International Symposium and 24th International Workshop on ADC and DAC Modelling and Testing (IWADC) that will be held in Pordenone, Italy, on 20-21, September 2023.

For the first time, this International Symposium will be organised in parallel with the industry-driven World Magnetic Conference at the international trade show COILTECH Italy.
https://conferences.imeko.org/event/3/
We are pleased to welcome Keynote Speakers from CSEM (Swiss Center for Electronics and Microtechnology) and SENIS Group, Switzerland, Physikalisch-Technische Bundesanstalt, PTB in Germany and the Imperial College London, England. We are also happy to inform you that we invited the UK Magnetics Society and CERN, the European Organization for Nuclear Research, to organise Special Sessions. There will be many other interesting sessions, topics and social events.

In my keynote presentation at IMEKO TC4 2023, I will show how our company SENIS grew by combining academic competence with industrial collaborations. It will be discussed how fresh concepts led to a paradigm shift in Hall-based magnetic sensors, laying the ground for the world-class performance of our magnetic field and electric current measurement devices. As SENIS is constantly trying to move the limits of the feasible in magnetometry and sensor technology, the demand for our products is continuously growing, giving proof of a successful academic industrial collaboration.

Written by Dragana Popovic Renella, COO SENIS Group Switzerland and IMEKO TC4 Vice Chairperson

ABOUT SENIS GROUP SWITZERLAND

SENIS provides smart, accurate sensors and instruments for measuring magnetic fields and electric currents. It engineers advanced solutions and ensures its customers benefit from innovative, optimised, and reliable systems. The company's products fulfil the high accuracy requirements for medical and scientific equipment, help control energy consumption, and optimise green car platforms and systems. As a result, they are continuously contributing to a sustainable future. SENIS collaborates with customers and universities, driving innovation with cutting-edge technologies and steadily extending the limits of feasible in magnetometry and sensor technology.

The company was founded in 2004 by Prof. Radivoje S. Popovic, who received the Lifetime Contribution Award of the UK Magnetics Society in 2021. SENIS recently received the Seal of Excellence from the European Commission and the AMA (German Association for Sensors and Measurement) Innovation Award for its novel Hall magnetic sensors.

COILTECH

COILTECH is an international exhibition and conference showcasing the latest innovations and technologies in producing electric motors, generators, transformers, and coils. It provides opportunities for professionals to network, exchange knowledge, and explore business opportunities. The World Magnetic Conference is a technical conference that takes place parallel to Coiltech. The conference is chaired by Prof. Marco Villani of the University of L'Aquila. It includes a steering committee of experts from academia and industry. The launch of Coiltech was in 2010 in Pordenone, Italy. Since 2022, the event is also held in Germany (Augsburg).

Sebastian Küster, COILTECH
www.quickfairs.net/

TC6 DIGITALISATION WEBINAR WITH OIML 29 MAR 2023

In recent years, several initiatives have been started to investigate the potential use of distributed ledger, also known as blockchain, technologies in metrology.

The use of blockchain technologies in metrology is seen as a way to improve the traceability and transparency of the measurement processes. Blockchain's nature makes it an ideal technology for creating secure, tamper-proof records of calibrations, measurements, and other metrological data. Furthermore, the distributed nature of blockchain can also help to improve the efficiency of data sharing and management processes in the quality infrastructure. This can lead to better collaboration between organisations and improved overall quality of the data used in metrology.

One example of an application is using blockchain to create a tamper-proof and transparent record of all calibrations performed on a piece of equipment. This would allow for easy traceability of the equipment's calibration history, which is crucial for ensuring the accuracy of measurements. Another example is using blockchain to create a distributed infrastructure for quality management processes, such as supplier management and product certification. This would allow for more efficient and secure data sharing among different organisations involved in the quality infrastructure. Overall, blockchain technology has the potential to revolutionise the field of metrology by providing a more secure and efficient way to manage metrological data and processes.

To further explore these potential applications and to bring together experts in the field, the IMEKO TC6 "Digitalisation" together with the International Organisation of Legal Metrology OIML "Digitalisation Task Group" will jointly organise a webinar on 29 March, 2023, from 11 to 14 UTC.

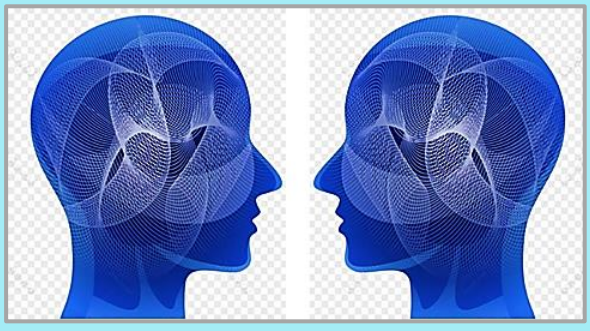
The webinar will serve as an opportunity for experts and interested colleagues from metrology, legal metrology and the general quality infrastructure to exchange ideas and discuss the topic. The presentations in this webinar will address topics from general distributed ledger technologies, identity management, and integration of measurement data to concrete use cases in the quality infrastructure. Additionally, the organisers hope to use this webinar as a starting point for a regular exchange, aiming for harmonisation and interoperability of developments in the long run.

This will be the first of four webinars organised by TC6 in 2023 - each focused on a dedicated topic in digitalisation. Further updates will follow on the TC6 website.

www.imeko.org/index.php/tc6-homepage

Written by Sascha Eichstädt TC6 Chairperson

TC11 TIC TALKS ON 21 MARCH, 2023



The next event in the series of TC11, Measurement in Testing Inspection, and Certification TIC Talks is "Driving the Relationship Between Metrology, Testing and Industry". This online event will take place on 21 March 2023 at 13:00 CET. (Using MS-TEAMS)

The topic is sharing the concept of solidifying the measurement technology foundation and promoting the application of advanced measurement management theories and methods. It provides an experience for enterprises to do a good job in industrial measurement and testing. The moderator will be Zhao Yongtao.

For more information and the link to the discussion, visit:

www.imeko.org/index.php/tc11-homepage

TC23, 7TH IMEKOFOODS CONFERENCE 25-27 OCTOBER 2023 FRANCE

IMEKO TC23, dedicated to Metrology in Foods and Nutrition, is organising the 7th IMEKOFOODS Conference: "Worldwide Food Trade and Consumption: Quality and Risk Assessment" at Maisons-Alfort / Paris, France on 25-27 October 2023. Scientists and professionals specialising in food are welcome to join the conference and present their work in food chemistry and related disciplines, food fraud, safety & quality, and risk assessment related to chemicals in food.

Food safety, quality and nutrition are closely linked to food security, disease and malnutrition. The globalisation of food trade, a growing world population, climate change, and rapidly changing food systems impact the safety and quality of food and, hence, public health. A study published in 2017 in the Lancet attributed 11 million deaths and 255 million Disability-adjusted life years (DALY's) to dietary risks factors such as high sodium intake, diets low in fibres, fruits and vegetables, and high in processed meat and sugar-sweetened drinks. In addition, the total burden of disease for a limited number (four) of chemical agents was estimated above 20 000 deaths and 1 million DALYs by the WHO and is clearly a huge underestimation of the burden of disease caused by chemicals in food.

To understand and tackle the health impact of unsafe and unhealthy food, scientists, risk assessors, governments, and industry should have access to correct food data obtained by metrological sound measurements. Food is a complex biological matrix with thousands of organic and inorganic substances. Developing and validating novel analytical approaches capable of coping with a large panel of chemical contaminants or substances of nutritional value in complex food matrixes is extremely challenging.

The 7th International IMEKOFOODS conference aims to welcome scientists whose work is focused on food chemistry & metrology, nutrition, food safety & quality, risk assessment, food fraud, etc. The coming together of these scientists achieves consumer protection, which is the ultimate goal concerning food quality & nutrition, where food metrology plays an extremely important role.

For more information, visit:
conferences.imeko.org/event/6/

Written by Joris Van Loco, Chairperson of TC23, Scientific Director at Sciensano, Belgium

Petru JITARU Conference Chairman, head of the unit "Trace metals and Minerals" of the Laboratory for food safety - ANSES, France

2023 CCM & IMEKO TC16 7th INTERNATIONAL CONFERENCE ON PRESSURE AND VACUUM METROLOGY

Announcing the 7th CCM International Conference on Pressure and Vacuum Metrology in conjunction with the 7th International Conference IMEKO TC16 will take place from May 15-18, 2023, in the Washington DC region. www.imeko.org/index.php/tc16-homepage/tc16-events

EVENT ELSEWHERE

"The Congress is dedicated to the best industrial practices and advances in R&D applied to measurements, analysis and testing processes: this great event will be the meeting point between science, industry and institutional organisations of metrology.

"From the 7th to 10th of March, 2023, at Eurexpo Lyon France, the CIM2023, the International Metrology Congress renews the experience with the biggest French industrial tradeshow dealing with industrial topics, Global Industrie, where more than 40,000 visitors are expected. The geographic location of the city offers many connections with bordering countries, a strong representation of the business sector, not to mention the gastronomy that Europe and the whole world envy so much.

A bold programme is facing the world's challenges.

The event becomes a 4-day event with the aim of approaching and dealing with all the topics responding to the most current global challenges. This is a unique occasion to share expertise and collect information on market developments, research and innovation in the field of measurement."

200 oral and poster presentations, 6 Round Tables on hot topics: Hydrogen, Circular Economy, Industry 4.0, Digital Transition, Evolution of the Profession, Health, 1 Plenary Session "Limitless Metrology at your fingertips" on 3 key applications such as Industry 4.0, Environment and Health,1 Climate Workshop - MetClimVOC, 10 Pitch' Experts presentations. Many networking activities (coffee/lunch breaks, aperitif cocktails, exhibitors' parties, Gala Dinner, MyGI mobile application...)

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