



DEAR FRIENDS, DEAR COLLEAGUES,

With this special issue, we are closing 2024. It has been a fantastic IMEKO year! The World Congress, the absolute highlight of the year, brought us closer and inspired all of us. We also had many other opportunities to put our hearts and souls into special activities, such as dedicated working groups, presidential board meetings, and spontaneous meetings and discussions of a particular subject, all of which were organised online.

IMEKO attracted in 2024 a lot of attention. Thanks to this, we became richer with many new members to our Technical Committees. As IMEKO, our ties are even stronger with our partners, such as regional metrological organisations and the industry.

Our Measurement Journals and the IMEKO online journal, Acta, did very well this year.

The new year shall mark the start of new adventures, some already known.

But before glimpsing into the future, let's stop and pause for a minute.

There are many things to say and many persons to thank who contributed to IMEKOs' success in 2024. This issue is dedicated to these people as well.

Lastly, as the holiday season approaches, IMEKO, as a worldwide organisation, looks around and reports, visiting Bulgaria, Kenya, China, Sweden, and the United Kingdom to find out how this festive part of the year is celebrated there.

SEASONAL GREETING FROM THE IMEKO PRESIDENT, PROFESSOR PAOLO CARBONE



As we approach the end of another eventful year, I want to take a moment to express my heartfelt gratitude to each of you for your invaluable contributions to our shared mission.

This year has been one of growth, discovery, and collaboration for IMEKO.

The IMEKO World Congress in Hamburg was excellently organised by the Advisory President, Prof. Frank Hartig and his fantastic team at PTB.

Sessions and exhibits, as did the interesting keynote speeches, made the Congress lively. I especially remember the gala dinner and the amusing show.

SEASONAL GREETING FROM THE IMEKO PRESIDENT, PROFESSOR PAOLO CARBONE

New activities are being planned for 2025, and periodic meetings are being held by the Presidential Board to solve issues and to plan for a bright IMEKO future. Many TCs, if not all, are planning events. We are also looking forward to a General Council meeting in Prague next year. Let me also take this occasion to thank Secretary-General Zoltan and Kristine, especially for their continuous support and work.

A few words about our journals: Acta IMEKO, Measurement, Measurement: Sensors, Measurement: Energy, Measurement: Food are all in good shape because of the care of many people and volunteers who contribute energy and motivation. Thank you. Let me add that a new journal will be added to this group: Measurement: Digitalisation, which will start operations next January.

IMEKO is truly the worldwide house for everyone interested in metrology, instrumentation and measurement.

With this spirit, we care about embracing new opportunities and collaborations among Academia, Metrological Institutes, and organisations working in this area.

As we look to the new year, let us carry forward this spirit of curiosity and partnership, ready to embrace new challenges and opportunities. I am confident that 2025 will bring even greater milestones, and I am excited for the journey ahead with all of you.

On behalf of IMEKO, I wish you a joyful and peaceful holiday season filled with moments of rest, reflection, and connection with loved ones.

May the new year bring happiness and continued success in all your endeavours.

Written by the IMEKO President, Professor Paolo Carbone,

PRESENT FROM THE CHINESE SOCIETY FOR MEASUREMENT



In August, the Chinese Society for Measurement (CSM) surprised IMEKO with a very generous gift at the General Council Sessions in Hamburg. Mr Aiwen Ma presented in the name of the society the textile-based and painted poster, which displays the measuring history of China. (It measures 1,3 m in width and is 0,5m in height.). A beautiful piece that IMEKO is very honoured to receive and shall treasure. The gift wrapping text reads: "Measuring everything Metering the universe Weighing the justice". Thank you very much, CSM, for this precious gift!

THE XXIV IMEKO WORLD CONGRESS 2024 HAMBURG - THE METROLOGICAL HIGHLIGHT OF THE YEAR!

The XXIV IMEKO World Congress 2024 marked an extraordinary gathering for the international metrology community. It resulted from several years of dedicated preparation by the core organising team. From August 26 to 29, experts, researchers, and industry leaders from around the globe convened in Hamburg's newly renovated Congress Center (CCH), setting the stage for meaningful scientific dialogue, collaboration, and groundbreaking presentations. The event attracted over 1,200 registered participants from 78 countries, reinforcing IMEKO's commitment to advancing the frontiers of measurement and instrumentation.

The congress preparation required exceptional coordination: the core team managed over 16,000 emails, held several weekly preparation meetings, and developed a custom web app to promote sustainability and eliminate paper use.

The opening ceremony took place in a grand atmosphere on August 26, beginning with a masterful piano performance by 15-year-old Julika Rossignol. The then IMEKO President, Professor Frank Härtig, welcomed attendees, followed by greetings from Dr Eva Gümbel, representing Hamburg's City Council, and PTB President Professor Cornelia Denz. Keynote speeches by Professor Joachim Ullrich and Dr Wynand Louw set the tone for an intensive week ahead, exploring the advancements and future trajectories of metrology.

The program reflected the rich diversity of metrological fields, featuring over 470 talks and 153 posters across 89 sessions organised by 25 Technical Committees.

Workshops on digital metrology and quantum technology offered insights into cutting-edge developments, and the exhibition area with 39 booths was a focal point for attendees, providing a first-hand look at innovations. Adding to this, participants appreciated the personal touch of the event, where many components were thoughtfully curated or hand-crafted, creating a warm and uniquely IMEKO 2024 atmosphere.

The social elements of the Congress played a crucial role in fostering camaraderie. The Senate Reception in the historic City Hall of Hamburg welcomed participants with a special address from Dr Melanie Leonhard, Hamburg's Minister for Economy and Innovation.

Later in the week, the Helmholtz Prize ceremony rewarded leading research teams in metrology. Among the honorees, the "Fundamental Research" prize went to Prof. Peter Baum's team for their work in capturing ultrafast atomic movements, while the "Applied Metrology" prize was awarded to an interdisciplinary team from Leibniz Universität Hannover, led by Prof. Dr Bernhard Roth, and the University Medical Center Rostock, led by Prof. Dr Steffen Emmert, for innovations in optical biopsies for skin cancer diagnostics. The award ceremony featured a keynote speech by Nobel Prize winner Prof. Stefan Hell, complemented by musical performances from the "ClaRo" quartet.

The gala dinner in the evening offered a blend of fine dining entertainment by improvisational artists "The Gorillas".

THE XXIV IMEKO WORLD CONGRESS 2024 HAMBURG - THE METROLOGICAL HIGHLIGHT OF THE YEAR!

The Congress was filled with remarkable anecdotes that underscored the dedication and energy poured into the event. A few behind-the-scenes figures from the week included congress chair Thomas Wiedenhofer's impressive tally of 67.3 kilometres walked within the CCH, facilitating countless connections and ensuring a smooth operation. Over 30 dedicated staff members from PTB earning our heartfelt thanks as the unsung heroes behind the scenes. True to the congress spirit, every aspect of the event - from technical setups to signature decorations - was hand-prepared, adding a personal touch that resonated with attendees. The pre-registration event on Sunday alone saw over 700 bottles of cold beverages, with 60 % non-alcoholic, served alongside nearly 1,500 pastries and countless signature drinks specially designed for the event.

In addition to all the delicious beverages, there were, of course, many other aspects worth mentioning, but time and space only allow for a brief glimpse. The Congress encompassed a vast range of sessions covering diverse topics, with hundreds of litres of coffee served during breaks to energise everyone throughout the event. The weather was almost perfect, with nearly uninterrupted sunshine and temperatures ranging from 11°C to 30°C. Only on the departure day, as the IMEKO congress came to a close, we needed the 300 kg of umbrellas distributed to the attendees - fittingly, as the sky itself seemed to shed a tear for the event's end. And - with a wink - only two PowerPoint presenters went missing, a surprisingly low number given the scale and energy of this unforgettable Congress.

Furthermore, sustainability and resource conservation were at the heart of the congress planning, with a strong emphasis on minimising environmental impact and promoting responsible practices. Accessibility was ensured through thoughtful design elements, such as an on-site guidance system. Catering was sourced regionally and seasonally to reduce the ecological footprint. Efforts were made to limit print materials, relying primarily on digital publications and a self-developed conference app that replaced traditional brochures. Additionally, attendees utilised the Hamburg App instead of printed maps and flyers for navigation. Even the tiniest details reflected a commitment to sustainability: pens provided at the Congress were crafted from ocean-recycled plastic, supporting coastal cleanups and circular economy efforts. At the same time, entry wristbands were made from recycled plastic bottles.

The transition of the IMEKO presidency from Prof. Frank Härtig to Prof. Paolo Carbone concluded the official program with a shared sense of achievement and anticipation for the next Congress in Rimini, Italy, in 2027.

But the closing ceremony didn't mark the end of the events! In the afternoon, participants dispersed in all directions to visit one of several prestigious companies, such as Airbus, the German Electron Synchrotron (DESY), the Calibration Directorate North (EDN), Energy Measuring Technique GmbH (EMH), Hamburg Harbour and Logistics (HHLA), the European X-Ray Free electron Laser Facility GmbH (XFEL), the Center of Applied Aeronautical Research (ZAL), and a harbour tour by boat.

THE XXIV IMEKO WORLD CONGRESS 2024 HAMBURG - THE METROLOGICAL HIGHLIGHT OF THE YEAR!

PTB provided 665 lunch boxes at departure time to ensure everyone was well-prepared for their journeys.

As an add-on highlight, a full-day excursion to PTB Braunschweig was offered on Friday, August 30. For this, 10 buses started in Hamburg at 7 am, 54 laboratories opened their doors for visitors, 3 plenary talks were held, and 505 lunches were served.

The event's success was further highlighted by participant feedback: 130 responses rated overall satisfaction at an impressive 4.6 out of 5. Survey insights emphasised the high quality of keynote speakers, the welcoming congress atmosphere, and the seamless execution of sessions and workshops. Suggestions for future improvements, such as enhancing the usability of the event WebApp and expanding refreshment access, will guide IMEKO's commitment to continuous improvement.

The Organisation Team extends their deepest gratitude to all participants, speakers, and supporters whose enthusiasm and expertise made the XXIV IMEKO World Congress an exceptional experience. This year's Congress highlighted the irreplaceable value of face-to-face interactions, offering unparalleled opportunities for direct exchange, meaningful networking, and personal connections - providing invaluable benefits compared to online or hybrid formats. As the metrology community looks forward to the next gathering in Rimini, this year's Congress is a testament to the power of collaboration and the relentless pursuit of knowledge.

Best regards, your IMEKO World Congress Team 2024 - Frank, Rolf, Thomas, Katja, Katharina, Maria, Haide

Written by Prof. Frank Härtig, Mr Thomas Wiederhoefer, and Mrs Katja Rossignol



FROM THE IMEKO SECRETARIAT

After the year's smaller and bigger excitements, the Secretariat is (very) happy to return to the background and report on 2024.

Let's talk about numbers first.

As you might know, we have a [Secretariat](#) page on the IMEKO website. The thought came in October to add all the meetings we organise so anyone interested in what was and what is to come could get a quick overview. Astonishingly, it seems:

- 28 IMEKO-related meetings are added to the page between October 2024 and mid-January 2025.

For the record, all 2024 events mount to a total of:

- 66 IMEKO-related meetings organised by the Secretariat.

IMEKO welcomed this year:

- 90 applications for TC membership on the day of writing.

So, how many applications have we had since 2021 at this time of the year?

- 270 membership applications were processed in precisely 3 years.

The bimonthly newsletters continued:

- 6 newsletters were published in 2024, from which 89 articles (almost all) resulted from collaboration. The Secretariat would like to say thanks to all who provided these. They were always accompanied by meaningful and pleasant exchanges.

We are going steady on social media but would be very happy to do more. For that, we welcome news!

- 52 LinkedIn and Facebook posts were prepared.

Some unusual items for this year on the list:

- 68 IMEKO ties and 34 IMEKO scarves visited the World Congress, strolling around until finding their rightful owners

The IMEKO-wide survey has been published:

- 149 people participated in the survey.

TC events already approved for 2025 so far:

- TC4 Measurement of Electrical quantities, Symposium, 15-17 September, Zagreb, Croatia.
- TC8 Traceability, TC11 Measurement in Testing, Inspection and Certification and TC24 Chemical Measurements organise a joint conference between 14-17 September in Torino, Italy.
- TC12 Temperature and Thermal Measurements, TEMPMEKO-ISHM 2025, 20-25 October, Reims France.

Now, enough of the numbers and on to more serious grounds - it was our pleasure to serve You, the Community in 2024!

We are very thankful for the incredible responsiveness and excellent collaboration achieved.

We also thank all the spontaneous volunteers for this year's new projects; your contribution made a lot of difference.

We asked small and sometimes huge favours to help IMEKO forward during the year. At times, these requests were answered on very short notice. Thank you very much for saying yes to those!

Though it has been a good year, planning for 2025, we are looking for ways to improve our services.

In 2025, the Working groups will continue their activities. We also have new ones exploring the various ways and opportunities for financial investments. A lot of progress is to be made in these areas, and we are on to it with many dedicated volunteers.

For now, as the end of the year is approaching, our best wishes for the Holiday Season ahead and the New Year. May you welcome a wonderful and prosperous 2025!

Thank you for being with us!

Kristine and Zoltan, IMEKO Secretariat

CHRISTMAS GREETING FROM CHINA



As snowflakes drift down and the distant jingle of reindeer bells is heard, we know that Christmas is just around the corner. In China, Christmas, a significant Western holiday, has undergone a transformation from enthusiastic participation to rational understanding. This evolution reflects the exchange and collision between Eastern and Western cultures, as well as the profound changes in people's ideologies and lifestyles amidst China's rapid economic development and globalisation.

At the beginning of the 21st century, with China's fast-growing economy and increasing openness to the world, merchants quickly recognised the substantial commercial potential of Christmas.

From large shopping malls to small street-side stores, many began to set up Christmas decorations such as Christmas trees, hanging lights, and Santa Claus posters by mid-December or even earlier, creating a festive atmosphere to attract consumers. This commercial drive quickly brought Christmas into the public eye, becoming a striking feature of city life. During this period, people born in the 1980s and 1990s became the main participants in Christmas celebrations. Influenced by Western culture and films, they yearned for the romantic and joyful elements associated with Christmas. They were familiar with the legend of Santa Claus, the kindly older man in a red robe who delivers gifts to children on Christmas Eve via his reindeer-driven sleigh.

CHRISTMAS GREETING FROM CHINA

On Christmas Eve, young people would gather to dine at Western restaurants, exchange apples as symbols of peace, or revel at KTV and other entertainment venues, viewing it as a fashionable social activity and relaxation method. Additionally, also couples consider Christmas an important romantic occasion, so they carefully prepare gifts to share beautiful moments together. In schools, particularly universities, Christmas was equally popular. Students organised various Christmas parties and celebrations through performances and gift exchanges, enhancing the festive atmosphere and fostering friendships while providing a platform to showcase themselves and experience Western culture.

Over time, the way Chinese people celebrate Christmas has evolved from simply imitating Western traditions to incorporating more local cultural elements. For example, merging traditional Chinese red elements with Christmas decorations to create a uniquely Chinese Christmas style; some businesses also introduced Christmas menus that blend Eastern and Western culinary features, combining traditional foods like dumplings and tangyuan (traditional Chinese dessert) with Christmas staples like turkey and cake, creating a unique dining culture.

The new generation of young Chinese born after 2000, who grew up in a relatively affluent era and with the internet, have been exposed to diverse cultures and customs from an early age. Their understanding of Santa Claus often stems from fairy tales, animations, and festive atmospheres created by businesses during their childhood.

As they grew older, they began to realise that Christmas celebrates the birth of Jesus Christ and might relate to ancient Germanic and Celtic winter solstice celebrations, though their understanding may not be profound. However, they recognise that the holiday carries a symbolic hope for light overcoming darkness and the continuation of life, much like the Chinese New Year, symbolising reunion. Nowadays, some shopping malls and international schools in areas with a high concentration of international residents and businesses in China also hold Christmas celebrations, such as hotels, shopping malls and restaurants in Beijing. While enjoying this joyful atmosphere, we also gain a deeper appreciation of the charm of Western culture.

As this special holiday approaches, we sincerely wish you a Merry Christmas! We hope that you can reunite with your family during this festival and enjoy a warm and cosy time together. May every family be filled with laughter, every child receives a cherished gift, and everyone feels the love and warmth this holiday brings. May your new year sparkle like the lights on a Christmas tree, shining with hope and beauty, and may all your dreams come true in the coming year!

Written by Ms. Wang Ziwen from the Chinese Society for Measurement.

CHRISTMAS IN SWEDEN



Christmas is a truly magical time in Sweden! The festive season begins with the wonderful yet humorous holiday ritual of pretending not to stress about all the preparations - from the intense cooking and cleaning to the hunt for the perfect presents.

Each year, families immerse themselves in this unspoken tradition, laughing together at the hustle and bustle and secretly rushing to get everything just right. As December progresses, another cherished custom unfolds: the lighting of Advent candles.

CHRISTMAS IN SWEDEN

Every Sunday, Swedish families gather to light another candle, bringing a soft, warm glow to their homes as the holidays draw near. It's a moment of reflection and togetherness, although sometimes there's a bit of confusion as everyone tries to remember which Sunday it is!

As Christmas Eve approaches, anticipation grows, and preparations for the famous Julbord begin in earnest. Julbord is an epic feast filled with all the Swedish favourites. There's herring in every imaginable flavour, from mustard to garlic to dill, each as unique as it is delicious. Then there's the pièce de résistance: a beautifully glazed Christmas ham that has been roasting for hours, spreading the delicious aroma of Christmas throughout the house. Other popular dishes include meatballs, sausages, potatoes, beetroot salad and, of course, Janssons Frestelse - a creamy potato and anchovy casserole that has become a must at Christmas. Each dish is lovingly prepared, and the table is a colourful display of Swedish culinary tradition.

At exactly 3:00 pm, all preparations stop for one of Sweden's strangest and most beloved traditions: "Kalle Anka och hans vänner önskar God Jul", or Donald Duck's Christmas Special. Practically, the whole country gathers to watch this show, a tradition that has lasted for generations. Grandparents, parents and children all sit together to enjoy scenes they know by heart, laughing and commenting on every moment. Why is this such an important part of Christmas? No one can really explain, but Swedes defend it fiercely, and for many, it simply wouldn't be Christmas without it.

After Julbord and Kalle Anka, it's time for the main event of the evening: the arrival of Jultomten, or Santa Claus.

This Swedish Santa Claus can be a jolly neighbour in a red suit, a playful family member or even a mysteriously convincing stranger. Whoever takes on the role arrives with a sack full of presents, knocks on the door and asks: "Finns det några snälla barn här?" (Are there any good children here?). The children's eyes light up with excitement, and Santa hands out the presents, often with at least one "funny" gift thrown in by a prankster relative to make everyone laugh. It's a joyous moment that combines tradition with humour and warmth.

If there's snow on the ground, it's considered a true Christmas miracle, as Swedish winters can be unpredictable and dark. But even when the snow hasn't yet fallen, families bring the spirit of a winter wonderland inside with extra candles, festive lights and decorations. The glow of candlelight in every window and the warmth of being together make up for any lack of snow and fill the evening with a cosy and magical atmosphere.

Christmas in Sweden is ultimately a celebration of warmth, tradition and family. Every moment, from the Advent candles to the Julbord, from Donald Duck to the arrival of Jultomten, captures the Swedish spirit of joy, humour and resilience in the face of winter's long, dark nights. It's a time when people come together to share love, laughter and a deep appreciation for the simple moments that make the season so special.

Written by Dr Oliver Büker, and Dr Joa-Cim Nilsson from the Research Institutes of Sweden RISE.

CHRISTMAS IN KENYA: A SEASON OF JOY, FAMILY AND TRADITION

As we head to the Christmas season, the festive mood is already in the air here in Kenya. Christmas is, without a doubt, the biggest celebration on our calendar. This year, the rains have graced the land, and the fields are adorned with lush green vegetation. For the mbuzi (our beloved goats), it's feasting season as they fatten up for the ultimate holiday. Of course, no Christmas feast is complete without "nyama-choma" (succulent roast goat meat) and chapati, our delightful flatbread, gracing the table.



I look forward to travelling upcountry, like most Kenyans. It is always a great moment to spend quality time with our ageing parents, our siblings and the extended family. Food is in plenty, and drinks are ever flowing, from local brews to expensive whiskeys. The fresh countryside air, food straight from the farm and the laidback village lifestyle are a welcome break from the constant hustle and bustle of the cities. Going to sleep to the chirping crickets and waking up to the melodious singing of the birds is therapy to even the weariest souls. It has a way of rejuvenating and healing our bodies and spirits.

For children, the village is an endless playground, a stark contrast to the confines of city apartments. They roam freely, their laughter echoing through the fields.

As I often tell the kids, in the village, everyone is somehow related to everyone, it is one big family. It is safe there.

Meanwhile, Nairobi – the city that never seems to rest – takes a well-deserved breather. With most of its residents heading out, the streets become uncharacteristically serene. Gone are the traffic jams, the crowds, and the usual haze of carbon emissions and smoke. It's as if the city itself embraces the festive peace, exhaling a sigh of relief.



Yet, as glorious as Christmas is, it comes with its bittersweet moments. The return to city life marks the end of the joyous season. The travel fares spike, the festive budgets often overshoot, and the looming school reopening ushers in the infamous "Njaanuary." For us Kenyans, January is aptly nicknamed for the hunger it brings – "njaa" being the Swahili word for hunger. Still, despite the challenges, no one would trade away the joy, love, and togetherness that Christmas brings. It remains the most treasured time of the year for us all.

From all of us here in Kenya,

Merry Christmas and a Happy New Year!

Written by Ms. Winfred Kimuya, Kenya Bureau of Standards - KEBS.

(The pictures are courtesy of her family)

CHRISTMAS IN BULGARIA

“Christmas is not just a date. Christmas is a state of mind.” - says the American educator, teacher, scholar, and author Mary Ellen Chase.

For us in Bulgaria, Christmas is a state of family. A time when everyone returns home and gathers with their loved ones around the festive table.

I must admit that in my lifetime, I remember two or even three ways of celebrating Christmas in Bulgaria.



(In the picture, Father Frost, Snowwhite and the writer, in the 1980's)

In my childhood, which was in the period of the People's Republic of Bulgaria and the rule of the Bulgarian Communist Party, Christmas was a tradition of the past. What I knew about the Christmas tradition- the prayer before the festive dinner, the lighting of the candles, the story of the life of Christ, all of this was told to me by my grandmother.

The atheist state had made the celebration of New Year's Eve the focal point of a child's expectations. If you are asking yourself if I knew about the Coca Cola version of Saint Nicholas - no, I did not.

One of my favourite moments was when Father Frost (*Dyado Mraz - Дядо Мраз*) and Snow White (*Snezhanka - Снежанка*) gave me a metal construction set on a freezing winter evening in my hometown - Pleven. Looking back at this precious moment, now I am pretty sure that my mother had bought it and gave it secretly to the person dressed as Father Frost..

When democracy came, I was already in my teenage years, and Christmas had lost its magic status from my early childhood. At the same time, I started to appreciate the religious aspect of the nativity of Jesus Christ (*Rozhdestvo Hristovo - Рождество Христово*) and the symbolism of the Holy Night.

Growing up and knowing that one day I would also become a parent provoked in me the desire to find out about the authentic way Christmas was celebrated by our predecessors. It was then that I first found out about the meaning of the 40-day Christmas Fasting period (*posti - пости*) that begins on November 15 and lasts till December 24 - Christmas Eve (*Badni Vecher - Бъдни Вечер*). The fasting begins with asking for forgiveness and giving forgiveness (*proshki - прошки*) to the elderly people in the family so that we cleanse not only our bodies but, more importantly - our souls.

CHRISTMAS IN BULGARIA

The Orthodox Christmas Eve dinner tradition says that the housewife shall prepare 7, 9 or 12 dishes without meat - 7 for the weekdays, 9 for the months of pregnancy, and 12 for the months of the year. Usually, these include dry red peppers stuffed with baked beans, rice in cabbage and/or grape leaves (*sarma* - *сарма*), olives with onion, boiled wheat, nuts, fruits, etc.



(In the picture, stuffed red peppers and stuffed wine leaves)



(In the picture, traditional bread (pita/pogacha - пита/погача))

A traditional bread (*pita/pogacha* - *пита/погача*) with a silver coin is baked. The oldest person in the family breaks it into pieces. e devotes and preserves the first piece for the Virgin Mary, the second one - for the house, and then each person gets one, starting from the eldest to the youngest.

Another interesting tradition is to “predict the future” using walnuts. Everyone picks a walnut and, after breaking the shell, tries to guess their future according to the walnut kernel inside. If it is looking good and is not broken, then the year to come will be prosperous. A specific characteristic of the Christmas Eve dinner is that food is left on the table the whole night. It is believed that the Virgin Mary comes down during the night and tastes the dishes.

Now that my wife and I are parents, we have established our family’s way of celebrating Christmas. We start decorating our home about two weeks before December 24. We add at least one new Christmas decoration toy to the Christmas tree each year, symbolising the new beginning. Without a doubt, I can say that Christmas was and still is a very special time for our children. For a full year, they have been expecting the magic night when the toy(s) of their dreams will miraculously appear. Presents are bought and piled up in the red sack that Santa Claus unintentionally “forgets” in a nearby room. Kids try to stay awake for as long as possible to get a glimpse of Santa Klaus, Snow White, the Reindeer, the Sleigh and other Christmas characters... Usually, presents are opened after the festive dinner on Christmas Eve or sometimes in the morning after it.

CHRISTMAS IN BULGARIA



(In the picture, cheese pie (banitsa sas sirene - баница със сирене)).

Also, at breakfast on Christmas Day, we prepare a cheese pie (banitsa sas sirene - баница със сирене). The housewife hides in it a coin and small pieces of paper (lucks/kismets - късмeти) associated with "health", "love", "prosperity", "a new house", "a new job", "a new baby", etc. The person who manages to get the coin in their piece of the cheese pie is believed to have enough money for the following year.

The fasting period is now over, and the festive Christmas lunch includes richly decorated dishes with pork meat (some people in the villages say that the Bulgarian word for Christmas - Koleda (Коледа) is linked to slaughtering a pig (kolya - коля) and eating its fresh skin, bacon, lard, and meat), sour cabbage, pickles, various types of dried meat delicacies, nuts, and cakes. Some typical salads are "Snow-white salad" (yoghurt, pickles, garlic, dill and ground walnuts) and "Russian salad" (boiled potatoes, carrots, peas and eggs, salami, pickles and mayonnaise).

Name-day traditions are very strong in Bulgaria, and sometimes people consider their name days to be more important personal holidays than their birthdays. Men named Hristo (a namesake of Christ) and females named Hristina celebrate their name day and receive presents. The third day of Christmas is dedicated to St. Stephen; all persons named Stefan or Stefka celebrate their name days.

After Christmas young families pay a visit to their godfathers and bring them cakes and fruits. The family tradition says that the kids in the family prepare a specially decorated stick called "survaknitsa" (сурвакница). It is piled with coloured woollen threads, dry fruits, and popcorn and starting from the eldest man, kids tap each member of the family on the back, wishing them health, prosperity, and abundance in crops and animals. In return, they get sweets and money. The original tradition is still preserved in villages and is performed only by boys aged 7 to 14.

If you would like to experience Bulgarian culture related to Christmas and other traditional festivals like Baba Marta, Sirni zagovezni, Kukeri and more, mark your 2025 calendars and be welcome to Bulgaria!

Written by Dr Tzveteling Gueorguiev and his family: Diana, Daria and Konstantin,

CHRISTMAS IN THE UNITED KINGDOM

Christmas in the UK is a big deal and - if you can look past the commercialism and crazy spending - a wonderful time for families. Although the shops start selling Christmas cards in September, most people don't really get into the Christmas spirit until after we have celebrated bonfire night (November 5) and Halloween (October 31), and then it's full speed ahead into the festive season. The run-up to Christmas sees nativity plays in school, Christmas fairs in the streets, brass bands playing on village greens (my personal favourite), and carol singers entertaining shoppers in the malls.



(In the picture, Christmas Carol singers)

There will be office parties (with stories to tell afterwards!), endless mince pies and mulled wine (inescapable), crowded motorways as workers head to family gatherings for a week off, hideous but essential Christmas jumpers, and advent calendars in every household. Most people decorate a tree and hang stockings for Santa Claus, ready for Christmas Eve. We also watch a few TV shows year after year, including The Snowman on Christmas Eve, which inevitably leads to tears...

My family is somewhat non-traditional in that we always order sushi for Christmas Eve, we often go away from home for Christmas itself (preferably to the UK's Lake District), and we prefer curry to the traditional roast turkey with all the 'trimmings'. But I think we are in the minority! Most families tend to take it in turns to host all the relatives, there will be board games like Monopoly to be played for hours (N.B. resulting arguments are unavoidable), and no one may leave the table after a late lunch without at least trying one brussels sprout.



(In the picture ,Christmas decoration in the UK)

Of course, we hope our celebrations will be made perfect by a dusting of snow, but more likely than not, we won't have any such luck and will head out to walk off the Christmas pudding in the traditional drizzle.

If this sounds like your kind of celebration, head over to the UK next year for a warm welcome!

Written by Mrs. Kay Tancock, Senior Publisher with Elsevier, taking care of the IMEKO Measurement Journals.

MOVING ON FROM THE IMEKO JOURNALS - IMEKO THANKS MRS. KAY TANCOCK



(In the picture from left to right, Prof. Paolo Carbone, Prof. Luca De Vito, Prof Kenneth Grattan, Prof. Yong Yan, Mrs. Kay Tancock, and Mr. Joris Van Loco.)

I am sad to say that I am stepping aside from my role as publisher with the IMEKO portfolio of journals after 6 very happy and interesting years. It has been an absolute pleasure and honour to work with such incredible editorial teams and to build these thriving journals with them. The Elsevier-IMEKO partnership is a strong and productive one, and working with everyone, including the wider IMEKO community, has been a career highlight and a lot of fun for me! I am delighted to see the growth of Measurement in recent years - in both size and impact - and so happy to be handing on all of the new open access' sister' titles to my successor, Dr Anna Hajduk, who will take them forward to equal levels of success.

Thank you for all your kind support, and the best of wishes to everyone who has contributed to these vibrant and prestigious journals.

Here's to 2025!

Written by Mrs Kay Tancock, Senior Publisher with Elsevier, taking excellent care of the IMEKO Measurement Journals.

IMEKO thanks Kay Tancock, who has been our Publisher, of the IMEKO family of journals from Elsevier for over ten years and is now moving on to a new role within Elsevier.

During Kay's time supporting us, we have seen great progress in our Journal portfolio - most researchers who interact with IMEKO now do so through the Journals. Kay helped us grow Measurement to be the top quartile, high-impact journal it has become, now making a greater impact than many of our competitor journals. With her support, we were able to expand the portfolio to create Measurement: Sensors, Measurement: Food, and, in the last year, Measurement: Energy, all IMEKO journals, which contributed to our reputation and impact. Through these journals, we have also published hundreds of key papers from the IMEKO events worldwide, including the recent IMEKO World Congress held in Hamburg. As Kay leaves us, we are advancing the plans she has laid for the development of a further, highly topical new journal, Measurement: Digitalisation.

In all of this, Kay has helped us to grow the financial support from the success of the journals to IMEKO (over €100k annually), enabling us to launch new initiatives supported by the Technical Committees. We were also able, with her support, to launch the Measurement, Sensor Systems and Applications Conference (MeSSAC), first run largely virtually in 2022, and with a second face-to-face event planned for 17-20 August 2025, at Beihang University, Hangzhou, China.

Those who have worked with her will say that Kay has been great to work with, being supportive and encouraging. We wish her well for the future and thank her again for all she has done to make the relationship with Elsevier a pivotal connection for IMEKO.

Written by Professor Kenneth Grattan, IMEKO Publication Officer and Editor in Chief of the Journal Measurement Sensors

THE NEW PATHS OPEN

It is typical to think about the future and the past at the end of the year and the beginning of a new one. A month ago, I was asked about "the future of metrology in Colombia", and I just couldn't give a satisfactory answer. These days, when we talk about the accountability of the efforts in the year, I can clearly see why I couldn't think of "a future", at least not in physical metrology, which is my working area.

But I can think of a great way to look at the path we have taken this year in physical metrology at the Instituto Nacional de Metrología INM Colombia.

“Caminante, no hay camino, se hace camino al andar.”

"Walker, there is no path; the path is made by walking" is a quote from the poem. "There Is No Road" by Spanish poet Antonio Machado.

The projects that were built this year came in very unsuspected ways because we made alliances for grants from special royalties funds. I'll share two that are, in my opinion, representative examples of this.

The first one was a biodiversity fund.



In Colombia, we have the highest diversity of birds on the planet, and we're proud of that, even in a country where the roofs are painted with birds!

Nevertheless, artificial lights and human-produced noises affect the birds, and measuring this effect is necessary. As the specificity of bird calls has been used extensively for species identification, a group of institutions and scientists designed a vast network focused on the development of "sounds landscape stations" distributed in different places like weather stations, so we could build sound landscapes which will allow overseeing the birds behaviour in the area.

In the project, the INM would be in charge of the traceability of the measurements of the environmental conditions and everything related to the acoustic devices. However, there was a little issue: the INM does not have acoustic metrology!

We took on the challenge and built our project to develop the acoustic metrology focused on the bird song frequency.

Sadly, the project did not win the grant. Still, we got a road map now to developing acoustic metrology in Colombia, which will hopefully start next year.

The second one was related to the life cycle of the groundwater. Water is a valuable resource that needs to be protected and conserved; then, we must know where it is located and the filling process of the groundwater reservoirs (aquifers). To study this, maps of gravitational equipotential are invaluable because the water flows from higher to lower values of gravity. This is the point where we hit a wall. As it happens, the long-time forgotten land of the south and east sides of the country, which makes up almost half of the continental surface of Colombia, does not have a single measure of absolute gravity!

THE NEW PATHS OPEN



<https://sirgas.ipgh.org/>

We can not ask an external institution to do the measurements; we have already tried that in the past, and it won't happen. Instead, we decided to do the absolute gravity measurements by ourselves.

The INM commandment will perform these measurements according to the international standardised methodologies and satisfy the required metrological traceability. It must be the INM because of the laboratory facilities necessary to perform this task. Eight institutions are working on the project, each with expertise in environmental, data, and social science, among others. This would undoubtedly be an incredible journey because we would carry the traceable measures of gravimetry to places that have never been measured before.

Those are two examples of new ways of developing physical metrology in Colombia. It focuses on communities, collaboration, and the environment, which are hardly related to calibration services or the fulfilment of regulations we just started in 2024. I am sure, though, that these are paths we'll keep walking in the future; after all, birds, bats, and other pollinisers are affected by the night lights, and we don't have calibration and measuring capabilities in that kind of light.

Written by Mr. Mayckol J. Morales Castro, Leader of the Pressure & Vacuum Laboratory National Metrology Institute of Colombia.

NEWS ELSEWHERE



EUROLAB: 23IND13 ScreenFood

As a Consortium Partner, EUROLAB extends an invitation to all interested stakeholders to get involved in the activities of the ScreenFood Project.

Stakeholders are key to the success of the project and the effective implementation of its results.

NEWS ELSEWHERE

Project stakeholders are invited to:

Participate in project meetings and workshops; visit NMIs for knowledge exchange, training and discussion of project results.

Contribute with knowledge, best practices, and peer reviews, and share industry perspectives.

Disseminate project results through their networks and raise awareness.

Support the implementation of the results. The project will also establish a Stakeholder Committee of 10-15 key stakeholders.

For more information, see the [project website](#). If you're interested in becoming a stakeholder and a potential member of the Stakeholder Committee, please [register here](#).

CIM 2025

The International Metrology Congress (CIM) returns for its 22nd edition, scheduled from 11 - 14 March 2025, at Eurexpo Lyon, France. This must-attend event in the measurement and metrology sector highlights best industrial practices and applied research on the reliability of measurement data.

Organised by the CFM (Collège Français de Métrologie), the CIM attracts nearly 650 participants from 45 countries annually. The Congress renews its partnership with Global Industrie, the largest industrial exhibition in France, thus consolidating its position as a key event for the sector.

9 am		5 pm	
TUESDAY 11	WORKSHOP QI-DIGITAL Metrology in the Digital Transformation of the International quality infrastructure	WORKSHOP QI-DIGITAL Metrology in the Digital Transformation of the International quality infrastructure	POSTERS P1 <ul style="list-style-type: none"> Mechanics Dimensional Robotisation, automatization Metrology for sustainability Quality infrastructure Digitalisation Biology Photonics Materials
	OPENING SESSION S1 Metrology for sustainability and health S2 Improving mechanical measurement IoT and metrology: toward an internet of metrology?		WELCOME APERTIVE
WEDNESDAY 12	S3 Metrology to tackle greenhouse effects S4 Dimensional Quality infrastructure in a digital world	PLENARY SESSION a new metrology for a sustainable industry and society	Tackling pollutants of emerging concern for a healthier tomorrow S5 Photonics S6 Implementing the new mass unit
	WELCOME		S7 Biomedical applications S8 Digital transformation EXHIBITORS' NIGHT PARTY
THURSDAY 13	Quantum sensing: the next industrial revolution S9 New challenges in chemical metrology S10 Metrology for machine learning and machine learning for metrology	POSTERS P2 <ul style="list-style-type: none"> Electromagnetism Machine Learning Quantum Technology Flow Thermometry, Hygrometry Chemistry Nanotechnology Uncertainties 	S11 Advanced methods for uncertainty evaluation S12 Electromagnetism Ensuring measurement traceability in ISO/IEC 17 025 laboratories
	WELCOME		S13 Nanotechnology S14 Mind the gap: challenges for the quality infrastructure GALA EVENT BURELÉQUE & WONDER'S NIGHT
FRIDAY 14	S15 Quantum technology S16 Digitalisation for metrology S17 Flow	Advances in thermometry and hygrometry: SI traceability for industry S18 Metrologist: an endangered species?	CLOSING
	WELCOME		INTERNATIONAL METROLOGY CONGRESS CIM2025 11 - 14 MARCH LYON FRANCE www.cim-metrology.org  FULL PROGRAM

For IMEKO participants exceeding a group of 10, a discount applies. For more information, please get in touch with the IMEKO Secretariat!