

EURAMET

European Association of National Metrology Institutes

Foreword from the Chairperson

Dr Kamal Hossain
EURAMET Chairperson



As EURAMET Chairperson, I am delighted to present EURAMET's Newsletter Issue 7 which provides highlights of our activities in 2012. It is indeed a very exciting and demanding time for EURAMET and I feel privileged to be given the opportunity to work with so many highly committed and professional colleagues who share a common vision for the organisation.

By supporting European initiatives our members are contributing significantly to competitiveness, innovation and growth as well as helping to meet key societal challenges such as health, energy and the environment. EURAMET's major initiative towards European integration of research in metrology - EMRP (the European Metrology Research Programme) - jointly funded by the European Union and 22 Member States has been acknowledged to be a huge success by an independent Review Panel. Naturally there is more to do and so, we are working with our members and the European Commission to develop a follow-on programme for support under Horizon 2020. In this new programme - EMPIR (European Metrology Programme for Innovation and Research) - we plan to build on the current work and add new elements to support capacity building; to enhance innovation; to widen participation and to provide metrology support for pre-standards research. We would be pleased to hear from our stakeholders in industry, business, governments and regulators about their requirements which we will use to focus our future work.

As new Chairperson, it is very important to me that the Association serves the needs of all its members in a fully inclusive manner. Our ways of working must be open and transparent. Also, we need to do more to raise the visibility and awareness of metrology and the impact of our work. Metrology still remains an unsung hero. A priority for us is to intensify our interactions with our stakeholders and liaison organisations and strengthen EURAMET's profile as the gateway to Europe's integrated metrology community.

I would like to take this opportunity to express our gratitude and heartfelt thanks to Leslie Pendrill, my predecessor as Chairperson. During his term of office, he initiated numerous important developments to assure the evolution of the Association. We are very happy that we can still count on his valuable support as he remains on the board. Also, we welcome Michael Huch as the Joint Programme Co-ordinator and Anne Trumpfheller as our Communications Officer both of whom joined us recently and have already begun to make a difference.

Finally, I hope that you enjoy reading this issue of the EURAMET Newsletter and I look forward to your active engagement with EURAMET in the coming months.

LATEST NEWS

Support European Metrology Research!

Please spend 10 minutes of your time and take part in the Public Consultation of the European Commission on a "European Metrology Research Programme under Horizon 2020". The evaluation is a crucial factor for the support of the proposed EMRP-successor programme EMPIR (read more on page 3). Until December, 23rd 2012 individuals, companies and institutions are invited to give their opinion on metrology research in Europe in this online questionnaire. Feel free to invite your contacts in other research institutions, local companies and policy makers to answer the questionnaire.

http://ec.europa.eu/research/consultations/metrology/consultation_en.htm

16th International Congress of Metrology-Call for papers.

Preparations for the International Congress of Metrology – "Measure, Innovate, Perform" in October 2013 in Paris have already started. The call for papers has been launched with an award for the best contribution. Proposals will be accepted until December 15th 2012. The conference offers the opportunity to understand the latest technical developments in measurement, explore industrial challenges and develop solutions that will enhance innovation and performance.

For further information please visit www.metrologie2013.com

The last EMRP Call opens 2013

The aim of this Call is to advance measurement science and technology by providing funding for Joint Research Projects (JRP) and associated Researcher Grants (REG) in the fields of Energy and Environment. This Call for proposals will open on 31 January 2013. Please contact the EMRP Management Support Unit for further information. (Phone: +44 20 8943 6666 E-Mail: emrpA169@npl.co.uk Internet: <http://www.emrponline.eu/call2013/index.html>).

EMRP

European Metrology Research Programme
 Programme of EURAMET



The EMRP is jointly funded by the EMRP participating countries within EURAMET and the European Union

Five years with EMRP - Working together for greater impact

The European Metrology Research Programme (EMRP), implemented by EURAMET, enables European metrology institutes, industrial organizations and academia to collaborate on joint research projects within specific fields. Having grown over the last five years, the EMRP is reaching a peak of activity. The fourth of five calls closed in October 2012 and the last call will open on 31 January 2013. It's time to look at what the EMRP and all the people and institutions contributing have achieved so far.

The beginning

The story started in 2007 with iMERA-Plus (implementing Metrology in the European Research Area – Plus) as a pilot for implementation structure and processes of the EMRP under Article 169 of the European Treaty. This phase of EMRP was the first step towards switching metrology research from a broadly national-only activity, addressing essentially national issues, to a European activity bringing critical mass to bear and addressing major European socioeconomic issues. Examples of these research projects can be found in core metrology areas in the health sector or Electricity and Magnetism. iMERA-Plus formally ended in May 2012 with a total value of 63 million Euros and 21 collaborative Joint Research Projects having been funded. Co-funding of one third was provided by the European Union.

The present facts

The EMRP is jointly funded by 22 countries and the European Union with a value of 400 million Euros. The calls from 2009 to 2011 resulted in 86 projects with 659 participations by metrology institutes and 104 unfunded partners. The projects are supported by 167 Researcher Grants with a total value of 20 million Euros. This allows researchers from universities and research institutions to participate in EMRP projects. The programme is still running but has already produced almost 120 peer reviewed papers and 260 presentations. The topics chosen were sufficiently diverse to make best use of the wide expertise and capabilities within the metrology community and addressed projects prioritised by socioeconomic challenges like health, energy and environment. One example for the impact EMRP projects have, is described on page 2 in the paragraph about the first EURAMET Impact Prize.

The future

The independent mid-term review of the EMRP reported: "The overall opinion of the panel is that the EMRP is a well managed joint European research programme that has already achieved a relatively high level of scientific, management and financial integration." "There is evidence of continuous process improvement based on lessons learned in the initial calls." The process improvements have continued since the review team completed their review. The EMRP projects have impacted on metrology, industry and other fields of research. Building on the success of the EMRP, EURAMET is already working closely with the European Union and member states to prepare a follow on programme in alignment with the new RTD Framework Programme "Horizon 2020".

Support your career with an Early-Stage Researcher Mobility Grant

You've just started your career and would like to benefit from experience in metrology collaboration? Or a young scientist in your team could push knowledge transfer for example by taking part in a Joint Research Programme (JRP) abroad? This could be made possible with a researcher grant. Within the EMRP projects are already supported by 167 Researcher Grants with a total value of 20 million Euros. One type of grant is directed at young professionals: the Early-Stage Researcher Mobility Grant.

This grant provides financial support for a researcher with fewer than four years experience, employed by a National Metrology Institute (NMI) or Designated Institute (DI) from a European Union Member State or 7th Framework Programme associated country.

The grant supports research activities relevant to the JRP objectives. The research is undertaken at a guest working organisation located in a different country to the researcher's employer. The Early-Stage Researcher Mobility Grant aims at increasing the capability of the European metrology researcher community and ensuring sustainability of cooperation between the NMI and DI of the EMRP.

Proposals are welcome at

<http://www.emrponline.eu/adverts/index.html>.

This is an open call until 2017 with several cut off dates in between. If you have any questions about the process, contact the EMRP Helpline (E-Mail: emrpA169@npl.co.uk, Phone: +44 20 8943 6666).

First EURAMET Impact Prize

Oswin Kerkhof, Coordinator of the EMRP Joint Research Project (JRP) 'Metrology for Liquefied Natural Gas' (LNG), and deputy manager of R&D at VSL, the Dutch metrology institute, has been awarded the first EURAMET Impact Prize. The prize is awarded annually to the individual who has demonstrated the best impact from a JRP or associated Researcher Excellence Grant. Nomination and selection is carried out by the EMRP Committee and the Research Council. "Oswin Kerkhof has personally steered this project towards delivering impact. He has placed it in a broader economic context, related it to EU energy policy, and had numerous interactions with industrial partners and end users. I have been particularly impressed with the transparency to the worldwide LNG community and the dissemination of results directly to industry", stated Dr Duncan Jarvis, EURAMET's EMRP Programme Manager.



Oswin Kerkhof deputy manager of R&D at VSL and well-deserved winner of the EURAMET Impact Prize

The ENG03-LNG project sets a benchmark for all other JRPs with respect to impact. From the very start, the JRP-Coordinator has approached stakeholders, encouraging their interest in the JRP and inviting feedback on objectives and progress. For Oswin Kerkhof the prize has a motivating element: "I am very grateful to EURAMET for the award of this prize. As the project nears its end I hope to continue to deliver as much impact as possible and help improve the LNG landscape." The next nominations for the EURAMET Impact Prize will take place in March 2013.

The LNG project

The process of liquefaction reduces the volume of natural gas and so makes its trade between countries more economically viable. Improved infrastructure for LNG is a main priority of the integrated EU energy policy, which aims to provide a more diversified and secure energy supply for the future. This creates a need for a suitable measurement infrastructure that the LNG JRP aims to meet by providing metrology for LNG custody transfer measurements, leading to smaller uncertainties, reduction of financial risks of transactions and better transparency for trading partners.

More information can be found on http://www.euramet.org/index.php?id=emrp_call_2009#c8338

Engagement of international stakeholders in the LNG project

- Three companies from different countries were included as unfunded JRP partners and a further 14 industrial companies from ten countries provided letters of support.
- An international advisory group with 23 representatives from industry has met every six months to link the project outcomes to the needs of industrial end users.
- Two international workshops were organised, each attended by more than 70 representatives from the worldwide LNG community.
- A JRP website gives information about the project, industrial support and related material. It has an average of 400 unique visitors each month with peaks of up to 1400 visitors, and over 200 registered members.
- Papers have been published in key technical journals and the project has been presented at numerous conferences and events.
- Industrial collaborators have expressed their commitment by offering substantial input, free of charge, in the form of equipment and engineering work.

Get to know EMPIR - a possible successor of EMRP

One of EURAMET's success stories, the European Metrology Research Programme (EMRP), will launch its last call in 2013. The development of a possible successor is already in progress: The European Metrology Programme for Innovation and Research – called EMPIR. The initiative will be carried out by member institutions within EURAMET with substantial support from Europe's forthcoming Horizon 2020. To be implemented on the basis of Article 185 of the European Treaty, EMPIR must receive support from the European Commission and must pass a co-decision process of the European Parliament and the Council of the European Union.

Why is a programme for metrological innovation and research important?

Metrology, the science of measurement, plays a role in virtually all areas of human life: from consumer protection, trade, industrial production and processing to areas such as energy, environment, health, security, communications and transport. Metrology is a key enabling tool for fundamental research and innovation in other areas. The availability of accurate and reliable measurements is essential for industry, science, policy and everyday life.

What's in EMPIR and what's new?

EURAMET's EMPIR activities will comprise leading-edge research associated with the international measurement units and research that will address the so-called Grand Challenges in areas of energy, environment and health. The innovation related activities target industry's needs and foresee a faster uptake of metrology research results. The new pre- and co-normative research module aims at metrology R&D needed for the implementation of European legislation. To support the European vision of cohesion, a capacity building module faces the increasing demand for organisational and human resources development. EMPIR will open up further for collaborative research with organizations, industry and metrology institutes inside and outside Europe. The programme is EURAMET's contribution to achieving Europe's Horizon 2020's ambitious objectives and all other initiatives where they depend on metrology.



How could EMPIR become a reality?

As already mentioned, EMPIR needs the support of the European Commission, the European Parliament and the Council of the European Union. The way to the programme consists of three steps (see graphic). In the current preparatory phase the European Commission launched an ex-ante impact assessment and a public consultation. Therefore you are invited to state your opinion on EMPIR at the Public Consultation until 23 December 2012 (see also the title page of this newsletter).

EURAMET and CIPM MRA

A central element of EURAMET's activities is the coordination of matters for National Metrology Institutes (NMIs) with respect to the CIPM MRA, the Mutual Recognition Arrangement for national measurement standards and for calibration and measurement certificates issued by NMI's.

One of the latest examples is the new set of Calibration and Measurement Capabilities (CMCs) in Volume of Liquids declared by Serbia (DMDM) and Slovenia (MIRS) via EURAMET (EURAMET.M.27.2012). **The CMC files can be found in BIPM's Key Comparison Database (KCDB): http://kcdb.bipm.org/appendixC/KCDB_ApC_news.asp**

EURAMET and EA - a mutually beneficial partnership

With the speed of change and the ever growing and demanding societal challenges, strong cooperation between international organisations is vital. In this context EURAMET is happy to have an open and beneficial collaboration with EA, the European co-operation for Accreditation, and with National Accreditation Bodies. EA and EURAMET signed a bilateral Memorandum of Understanding in 2005. This MoU aimed to support continuous cooperation between the two organizations: For EURAMET it provides a vital technical link to the accredited laboratory sector and accreditation policy makers. For EA it provides metrological input to its activities.

In recent years, EURAMET representatives have attended many EA meetings like the General Assembly or the Advisory Board to contribute to developments related to metrology. EURAMET's particular input is at the level of national measurement standards, to ensure the provision of traceability to the SI and their dissemination to lower levels. Recently EURAMET has been supporting the new formulations of acceptable traceability paths as defined in the new version of the ILAC document P10, as well as work on the revision of the EA-3/09 on "Surveillance and Reassessment of Accredited Organisations".

How metrology helps solve a scientific dilemma

International time-keeping relies inter alia on the comparison of time scales in about 70 institutes collaborating with the BIPM in the realization of Coordinated Universal Time (UTC). The Real Instituto y Observatorio de la Armada in Spain initiated EURAMET project 1156, "GPS link calibrations in support of CCTF-K001.UTC". To contribute to this work, the Physikalisch-Technische Bundesanstalt (PTB, Germany) built a mobile GPS calibration station.

An unexpected request for a calibration arrived from CERN (Organisation européenne pour la recherche nucléaire, Switzerland). In 2011, the CERN "Neutrinos to Gran Sasso" project had announced a surprising result when measuring the time of flight of neutrinos generated at CERN to the OPERA detector (Oscillation Project with Emulsion Tracking Apparatus) in the Laboratori Nazionali del Gran Sasso in Italy. The evaluation indicated that the propagation speed of the neutrinos was about 25 parts in a million higher than the vacuum speed of light c . Of course this result and its cause immediately exercised the science community.

The project team searched meticulously for a malfunction in the complex experiment. They decided to ask for a repetition of the GPS link calibration by the mobile GPS calibration station. This calibration took place in Geneva and was accompanied by Thorsten Feldmann of PTB, who had assembled the device and written its operating software. The calibration revealed a difference between the actual and the assumed differential receiver delays of only 2.3ns (Nanoseconds). This proved that the GPS link calibration was accurate. The search for the cause of the approximately 60 ns early arrival of the neutrinos had to go on. Meanwhile other times-of-flight experiments confirmed that the neutrino propagation speed does not significantly deviate from c .

To read the whole story with scientific details please go to <http://www.euramet.org/index.php?id=tc-tf>

PEOPLE BEHIND EURAMET



Services to the Republic of Austria and to Metrology.

"Grand Decoration of Honour" for Arnold Leitner.

One of EURAMET's first Delegates, Dr Arnold Leitner, Austria, has received one of the highest decorations of the Alpine Republic: The Federal President awarded him with the "Grand Decoration of Honour for services to the Republic of Austria".

The decoration was presented by August Hochwartner, President of the Bundesamt für Eich- und Vermessungswesen (BEV). EURAMET congratulates Arnold on this deserved appreciation of his work. Dr Leitner was EURAMET Vice-Chairperson (GA) until 2010 and Chair of the Focus Group on Facilitating National Metrology Infrastructure Development until 2011. At the BEV he was Director of the Metrology Service and responsible for the tasks of the National Metrology Institute and legal metrology. EURAMET's Chairperson, Dr Kamal Hossain, expressed his appreciation of Dr Leitner's efforts: "We want to

thank Arnold for his great and valuable contribution to the development of EURAMET and the establishment of the Focus Group." As Chair of the Focus Group Arnold pleaded for his vision of achieving a clearly improved cooperation in the international development of the metrological infrastructure. But there were other reasons for his enthusiasm: "While working within EUROMET and EURAMET I always appreciated the positive collaboration and the almost familiar atmosphere. This was a strong motivation to contribute to this association."

Committed and visionary: EURAMET's Past Chairperson Leslie Pendrill



The position as EURAMET's Chairperson is crucial for the development and the sustainability of the whole association. In 2012 the position of EURAMET Chairperson changed hands. Professor Pendrill, Head of Research at the SP Technical Research Institute of Sweden, completed his mandate and Professor Kamal Hossain, Director of Research and International at the National Physical Laboratory, United Kingdom, commenced his three-year term. EURAMET would like to thank Leslie Pendrill for his leadership and contribution to the association. Even prior to taking up his position as Chairperson Leslie supported EURAMET as EMRP-Representative at the inaugural meeting in 2009. In his own unique way he greatly influenced EURAMET during this important development phase. During his term EURAMET was able to strengthen its profile in becoming a professional and powerful partner for its members.

As Chairperson he was responsible for leading activities that were coordinated by EURAMET and for encouraging cooperation throughout Europe and internationally, such as the launch of the EMRP. Unwavering yet balanced Leslie always made sure that the voices of all European National Metrology Institutes were heard. With his great diplomatic skills he represented EURAMET at many important and forward-looking events, including signing the Memoranda of Understanding with associations like WELMEC, CEN-CENELEC and AFRIMETS. As EURAMET's Past Chairperson Leslie remains in the Board of Directors for another year.

"I have had the pleasure and honour to work with many able people within the EURAMET family. I wish my successor as Chair, Kamal Hossain, and all organs of EURAMET the best of luck as we move forward as a major European institution to face the significant challenges of our time with better quality-assured measurement."

EURAMET welcomes new Delegates and Alternates

EURAMET is happy to announce that four new Delegates and three new Alternates joined the EURAMET community in 2012. We wish them all the best and look forward to collaborating with them. Get to know our new Delegates and Alternates today:

Robert Edelmaier – Austria

Robert Edelmaier is Director of the Metrology Service at the Bundesamt für Eich- und Vermessungswesen (BEV) in Austria. Robert has already gained EURAMET experience as Alternate before he became Delegate himself in September 2012. He is also the Representative at the EMRP Committee and Contact Person for the Technical Committee of Interdisciplinary Metrology (IM).

Jorge Marques dos Santos – Portugal

The president of the Instituto Portugues da Qualidade (IPQ) in Portugal, Jorge Marques dos Santos, took over the role as Delegate in April 2012. As Jorge states, "IPQ's participation in EURAMET is seen as strategically important as EURAMET plays an essential role in the dissemination of traceability and in the construction of the European metrology infrastructure and research".

Hugo Pirée – Belgium

Hugo Pirée works at the Metrology Division of DG Quality and Safety at FPS Economy (SMD) in Belgium. He is responsible for the division of dimensional metrology. In August he joined the EURAMET community as Delegate. Hugo has been Contact Person for the Technical Committee Length since 1994.

Daivis Zabulionis – Lithuania

Daivis Zabulionis is Director of the State Metrology Service (VMT) at Lithuania. He joined EURAMET as Delegate in April this year.

Gerda Krukoniene – Lithuania

The Head of the Metrology Department at the State Metrology Service (VMT) in Lithuania, Gerda Krukoniene, took over the office as Alternate in April 2012.

Michael Matus – Austria

Michael Matus gained EURAMET experience as Chair of the Technical Committee for Length from 2007 until 2011. Michael is Head of the Division for Dimensional Metrology, Frequency, Time at the Bundesamt für Eich- und Vermessungswesen (BEV) and joined as Alternate in September.

Miruna Dobre – Belgium

Miruna Dobre works at the Metrology Division of DG Quality and Safety at FPS Economy (SMD) in Belgium. She took over the office as Alternate in August. Miruna has significant EURAMET experience as she has been Contact Person for several Technical Committees since 2007.

New supporters for the EURAMET Community

EURAMET would like to extend a warm welcome to its most recent recruits.



Joint Programming Coordinator, Michael Huch

Michael Huch has recently joined as EURAMET's Joint Programming Coordinator. His tasks are to liaise between EURAMET member organisations and the European Commission, the European Parliament and the European Council, in accompanying the political decision-making process for EMPIR, the envisaged successor programme of EMRP.

Michael studied economics at the University of Heidelberg and worked in technical cooperation projects with countries from Asia. In 1998 he joined VDI/VDE Innovation + Technik GmbH, an agency that manages research and innovation programmes for German ministries. Michael worked on the European level in technology transfer, as a programme evaluator and as a German National Contact Person to the Framework Programmes. Between 2004 and 2009, Michael was responsible for setting-up and managing the Ambient Assisted Living Joint Programme, which is implemented as an article 185 initiative like the EMRP.

Communications Officer, Anne Trumpfheller

Anne Trumpfheller took over the position as EURAMET's Communications Officer. In her role Anne will develop an overall communications strategy to strengthen and extend the awareness of EURAMET and its achievements.

Anne studied political science, media and communication science and public law at the University of Mannheim, Germany. After her studies she worked as an Online Community Consultant and Communications Management Coordinator for different companies, such as SAP AG. There she gained broad experience in internal and external corporate communication and was responsible for customer communication and knowledge transfer. For more than ten years she has been working as a freelance journalist. As Communications Officer Anne will be contributing towards achieving EURAMET's 2020 Strategy.

ACTIVITIES & EVENTS

EURAMET General Assembly 2013 – Save the Date and get inspired by Iceland

The 7th EURAMET General Assembly will be held in Reykjavik, Iceland on 27th to 31st May 2013, hosted by the Icelandic National Metrology Institute Neytendastofa (NEST). The programme for the 2013 General Assembly will be presented on the EURAMET website as soon as it is available and the invitations will be sent out in due course. EURAMET Delegates should already earmark the date.



EURAMET General Assembly 2012 – Strategic decisions and exchange on metrology for energy

Lyngby in Denmark was the location for the 6th EURAMET General Assembly in May 2012, where Kamal Hossain (NPL, UK) took over the duties of EURAMET Chairperson. The Danish Fundamental Metrology (DFM) and EURAMET completed the General Assembly's operational and strategic debate by organising an International Scientific Metrology Symposium on "Metrology for Energy". The symposium had presentations from EURAMET members and representatives of research centres and addressed a wide range of related topics. The symposium was a great opportunity to strengthen the relationship between metrologists and to exchange ideas on metrology for energy.

EURAMET & WELMEC Focus Group - Engagement and Capacity Building

The Focus Group on Facilitating National Metrology Infrastructure Development (FG-FNMID) is jointly organised by EURAMET and WELMEC. Since 2008 the Focus Group and its 26 member countries have been dealing with facilitating cooperation and acceleration of the integration process of EURAMET members and associates into existing EURAMET and WELMEC structures. This means the members of the group benefit from active participation, knowledge transfer, exchange of experience, training and workshops in advance of comparisons. "The Focus Group plays a vital role in supporting the emerging EURAMET members and the relevance of the group increases steadily." This is the conviction of Janko Drnovsek, EURAMET's Vice-Chairperson with interim responsibility for the group.

Therefore the feedback of the Focus Group will be relevant for the development of the "Capacity Building" module of EMPIR, the possible successor of EMRP. The discussion on the EMPIR proposal was one of the main topics of the groups' last meeting and the EURAMET representatives in the Focus Group agreed broadly with it. The draft on "Capacity Building" was prepared with relevant input given by the Focus Group itself during the last year.

Upcoming EURAMET Events

EURAMET Events	EURAMET TC Meetings	External Events
26. – 27.11.2012 EMRP Committee Meeting, Paris, France	04. – 08.02.2013 TC-MC, PTB Braunschweig, Germany	25. – 30.11.2012 APMP General Assembly 2012, Wellington, New Zealand
13.12.2012 EURAMET Research Council Meeting, Berlin, Germany	07. – 08.03.2013 TC-IM, VSL Delft, Netherlands	18.03.2013 CMC Workshop by BIPM, Sèvres, France
31.01.2013 Launch of EMRP Call 2013 – Energy & Environment	14. – 15.03.2013 TC-Q, Sarajevo, Bosnia and Herzegovina	19. – 20.03.2013 30th JCRB Meeting by BIPM, Sèvres, France
04. – 06.03.2013 Joint BoD/TCC Meeting, VSL Delft, NL	20. – 22.03.2013 TC-M, Cavtat-Dubrovnik, Croatia	
	10. – 12.04.2013 TC-T, Prague, CZ	

ABOUT THIS NEWSLETTER

This Newsletter is here to tell your story!

Your EMRP-Project is at an interesting stage?

Your research was a success?

You are working on an important topic for the EURAMET community?

You attended a workshop or symposium with useful information on metrology?

Or you cooperated with another National Metrology Institute or industrial partners and want to share your experience with others?

Then please contact EURAMET's Communications Officer Anne Trumpfheller (E-Mail: anne.trumpfheller@euramet.org, Phone: +49 531 592 1965). We rely on your contribution and we are looking forward to telling your story. Many thanks go to those who contributed to this issue!

EURAMET Chairperson, Vice-Chairpersons and Secretariat

EURAMET Chairperson: *Prof Kamal Hossain*, National Physical Laboratory (NPL), Hampton Road, GB-TW11 0LW Teddington, Middlesex, United Kingdom. Phone: +44 20 8943 6024 Fax: +44 20 8614 0496
E-Mail: chairperson@euramet.org

EURAMET Vice-Chairperson (GA): *Prof Janko Drnovsek*, Metrology Institute of the Republic of Slovenia (MIRS), Tkalska ulica 15, SI-3000 Celje, Slovenia. Phone: +386 3 428 07 50 Fax: +386 3 428 07 60
E-Mail: vicechairperson@euramet.org

EURAMET Vice-Chairperson (EMRP): *Dr Jörn Stenger*, Physikalisch-Technische Bundesanstalt (PTB), Bundesallee 100, 38116 Braunschweig, Germany. Phone: +49 531 592 3000 Fax: +49 531 592 3002
E-Mail: empchair@euramet.org

EURAMET Secretariat: *Dr Wolfgang Schmid*, EURAMET e.V., Bundesallee 100, 38116 Braunschweig, Germany. Phone: +49 531 592 1960 Fax: +49 531 592 1969 E-Mail: secretariat@euramet.org

Board of Directors: www.euramet.org/bod **TC Chairs:** www.euramet.org/tcc

Edited by Paul Hetherington, NSAI Ireland. Phone: +353 1 8082604 E-Mail: paul.hetherington@nsai.ie and Anne Trumpfheller, EURAMET. Phone: +49 531 592 1965 E-Mail: anne.trumpfheller@euramet.org

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