

COOMET Report to the 15th EURAMET GA

Prof. Pavel NEYEZHMAKOV

COOMET Vice-President

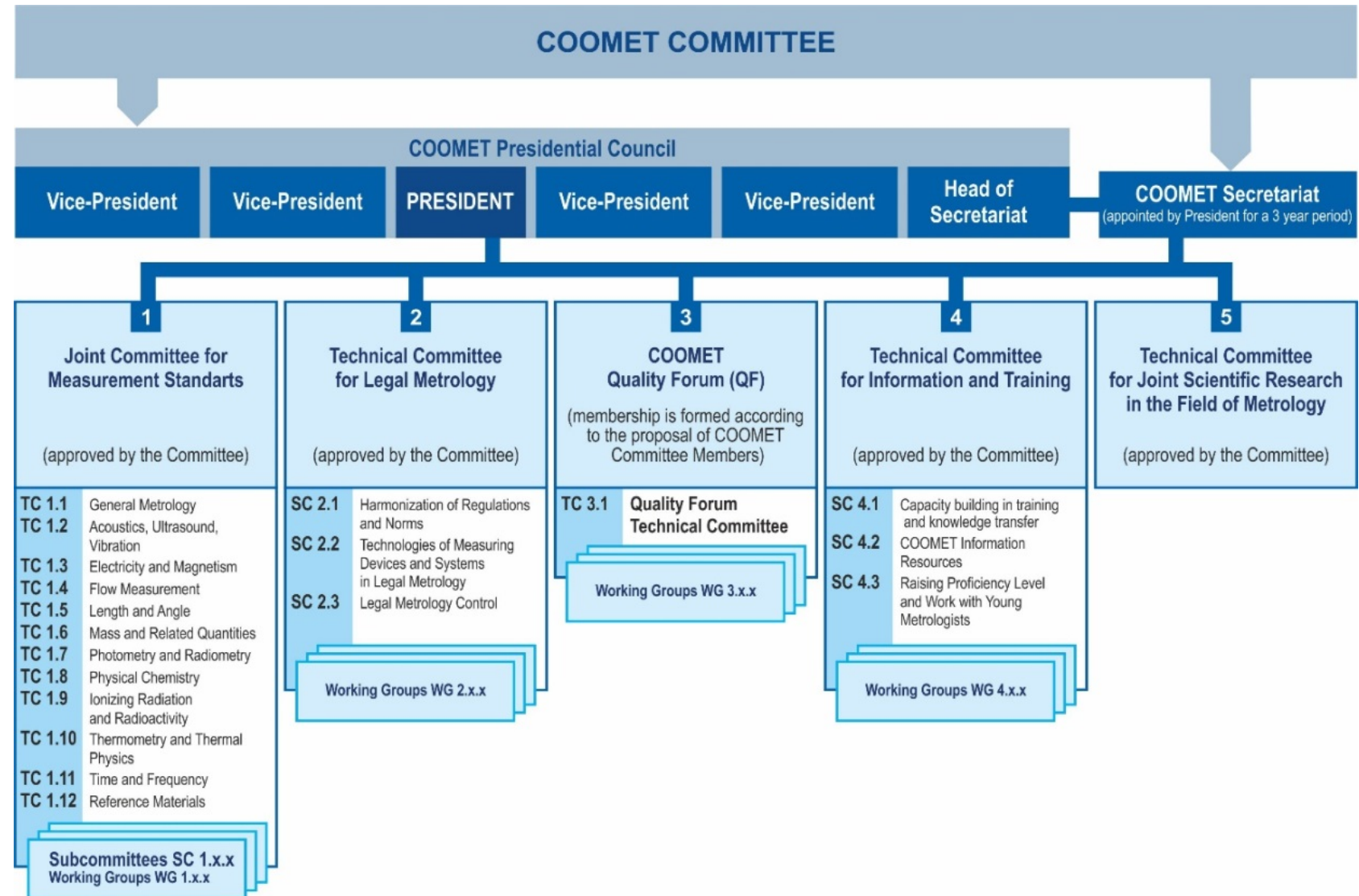
Country	Membership in COOMET	Relation to the Metre Convention
Belarus	Member, 1992	Member, 2020
Bulgaria	Member, 1991	Member, 1911
China	Associate, 2016	Member, 1977
Germany	Associate, 1991	Member, 1875
Kazakhstan	Member, 1998	Member, 2008
Lithuania	Member, 1995	Member, 2015
Romania	Member, 1991	Member, 1884
Russia	Member, 1991	Member, 1875
Slovakia	Member, 1993	Member, 1922
Turkey	Associate, 2014	Member, 1875
Ukraine	Member, 1992	Member, 2018

Country	Membership in COOMET	Relation to the CGPM
Azerbaijan	Member, 2007	CGPM Associate, 2015
Bosnia and Herzegovina	Associate, 2013	CGPM Associate, 2011
Cuba	Associate, 1991	CGPM Associate, 2000
Georgia	Member, 2006	CGPM Associate, 2008
Moldova	Member, 1997	CGPM Associate, 2007
Uzbekistan	Member, 2004	CGPM Associate, 2018

Country	Membership in COOMET	Relation to the Metre Convention/CGPM
Armenia	Member, 2007	NOT YET
DPR of Korea	Associate, 2002	NOT YET
Kyrgyzstan	Member, 2000	NOT YET
Tajikistan	Member, 2009	NOT YET



*In 2020-2021 there have been **no changes** in COOMET members*



COOMET member-countries cooperate in the following areas:

- ❖ **MEASUREMENT STANDARDS OF PHYSICAL UNITS**
- ❖ **LEGAL METROLOGY**
- ❖ **QUALITY MANAGEMENT SYSTEMS**
- ❖ **INFORMATION AND TRAINING**
- ❖ **JOINT RESEARCH IN METROLOGY**

JCMS		Anna CHUNOVKINA, VNIIM, RUSSIA
TC1.1	GM	Anna CHUNOVKINA, VNIIM, RUSSIA
TC1.2	AUV	Anatoly VOLODCHENKO, BelGIM, BELARUS new
TC1.3	EM	Maryna YARMOLOVICH, BelGIM, BELARUS Acting Chair from 01.04.2021
TC1.4	F	vacant
TC1.5	L	Aleksandr KOSTRIKOV, NSC "IM", UKRAINE
TC1.6	M	Iryna KOLOZINSKAYA, NSC "IM", UKRAINE new term
TC1.7	PR	Anatolii BESCUPSCHII, INM, MOLDOVA
TC1.8	QM	Leonid KONOPELKO, VNIIM, RUSSIA new term
TC1.9	RI	Nikolay MOISEEV, VNIIM, RUSSIA
TC1.10	T	Anatoly POKHODUN, VNIIM, RUSSIA new term
TC1.11	TF	Vitaliy PALCHIKOV, VNIIFTRI, RUSSIA
TC1.12	RM	Sergey MEDVEDEVSKIKH, VNIIM, RUSSIA new term
TC2	LM	Yuriy KUZMENKO, Ukrmetrteststandart, UKRAINE Acting Chair from 01.01.2021
QF		Nino MIKANADZE, GEOSTM, GEORGIA new
TC3.1 QF		Natalya MURAVSKAYA, VNIIOFI, RUSSIA
TC4	I&TR	Pavel NEYEZHMAKOV, NSC "IM", UKRAINE
TC5		-

2020-2021:

Online meetings of most COOMET Structural Bodies by the types of measurements (TC1.1-GM, TC1.2-AUV, TC1.3-EM, TC1.5-L, TC1.6-M, TC1.7-PR, TC1.9-IR, TC1.10-T, TC1.11-TF, TC1.12-RM), as well as meetings of TC2 "Legal metrology", Quality Forum & TC 3.1 "Quality Forum Technical Committee" and TC4 "Information and training" have been held

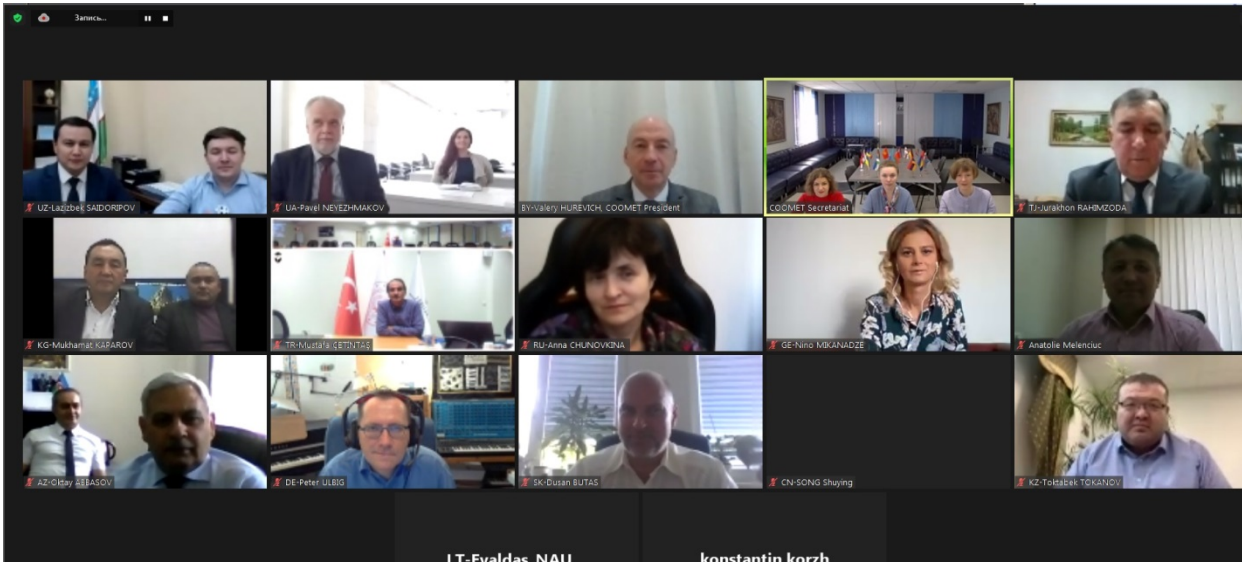
At the 30th COOMET Committee (2020) meeting it was decided **to extend the term of office of the current COOMET President Dr. Valery HUREVICH (Belarus) for the period from April 2021 to April 2024** (according to the COOMET Memorandum of Understanding).

The current members of the Presidential Council (for the period from year 2018 to year 2021)

Direction of activities	PC Member	Country	E-mail	Note
General coordination of COOMET activities. Coordination of cooperation between COOMET and international metrology organizations	Dr. Valery HUREVICH, President	Belarus	coomet@belgim.by	
Coordination of COOMET activities in the field of measurement standards, joint scientific research	Vacant since 25.05.2021			The duties are temporarily assumed by COOMET President
Cooperation in the field of legal metrology	Vacant since 01.01.2021			The duties are temporarily assumed by COOMET President
Development of QMS and cooperation in the field of accreditation	Ms. Nino MIKANADZE, Vice-President	Georgia	nino_mikanadze@yahoo.com	
Cooperation with regional metrology organizations, information and knowledge transfer	Prof. Pavel NEYEZHMAKOV, Vice-President	Ukraine	pavel.neyezhnikov@metrology.kharkov.ua	
	Ms. Nadezhda LIAKHOVA, Head of COOMET Secretariat	Belarus	coomet@belgim.by	

In view of a new term of office of COOMET President, a **new membership of the Council will be formed** - the issue will be discussed at the 31th COOMET Committee meeting (15-17 June 2021).

30th COOMET Committee meeting 24 September 2020, ONLINE



Mission of COOMET

Raising the level of metrology development, support and expansion of an integrated measurement infrastructure for countries in the Euro-Asian region and other interested countries that makes it possible for every national metrological institute to promote innovation, competitiveness, trade, consumer safety, sustainability and ensuring international recognition.

Vision of COOMET

Efficient, representative, competent regional metrology organization, recognized by the international community.

The following documents were approved:

- Mission and Vision of COOMET;
- COOMET Development Program for 2020-2022;
- COOMET Strategy for 2020-2025 and Roadmap for its implementation

STRATEGIC TASKS

- A.** Facilitation of international recognition of national measurement standards
- B.** Facilitation of recognition of QMS of NMIs/DIs of COOMET member countries
- C.** Support of COOMET member countries in gaining the status of membership in the Metre Convention
- D.** Facilitation of international practice in legal metrology
- E.** Facilitation of advanced training and knowledge transfer in COOMET member countries
- F.** Organization of innovative scientific research in the field of metrology
- G.** COOMET internal development and external representation



STRATEGIC TASKS

- A.** Facilitation of international recognition of national measurement standards
- B.** Facilitation of recognition of QMS of NMIs/DIs of COOMET member countries
- C.** Support of COOMET member countries in gaining the status of membership in the Metre Convention
- D.** Facilitation of international practice in legal metrology
- E.** Facilitation of advanced training and knowledge transfer in COOMET member countries
- F.** Organization of innovative scientific research in the field of metrology
- G.** COOMET internal development and external representation



The **activity of the WG for Strategy** in 2020-2021 has been focused on implementation of the following actions, provided for in the COOMET Development Program for 2020-2022:

- 64. (Ind-g.1.1)** Carrying out of an assessment regarding the possibility of establishment of COOMET as a legal entity and of the appropriateness of gaining for COOMET another institutional status
- 65. (Ind-g.1.2)** Carrying out of an assessment regarding the possibility of establishment of a permanent Secretariat
- 66. (Ind-g.1.3)** Carrying out of an assessment regarding financing options for COOMET activities

Two stages of the survey were conducted among COOMET member countries to select a country where COOMET can be registered as a legal entity. Based on the results of the survey the following countries were defined as possible host countries: **Azerbaijan, Belarus, Georgia, Kazakhstan, Lithuania, Russia, Slovakia.**

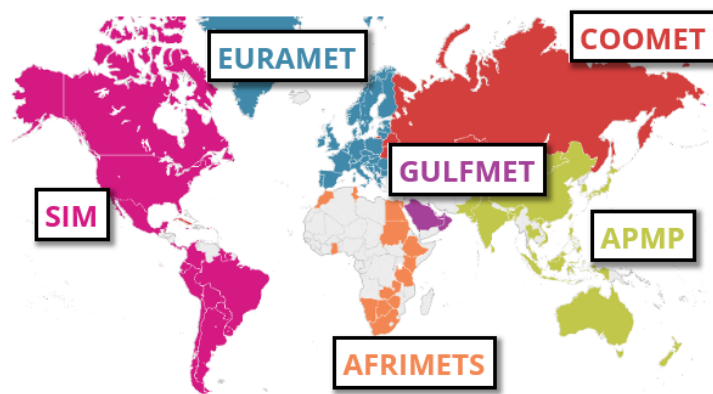
In view of a short timeframe and received preliminary results, **discussion on the selection of a possible host country for a legal entity for the needs of COOMET has not been completed.**

Members of the WG for Strategy suggest concentrating efforts on:

- ❖ elaboration of the issue of establishing the permanent COOMET Secretariat and its possible registration as a legal entity;
- ❖ consultations with COOMET Committee members to define the positions of COOMET member countries on the issues related to the institutional status of COOMET (June-September 2021);
- ❖ preparation of proposals of the WG for Strategy on setting the revenue and expenditure sides of the legal entity for the needs of COOMET on the whole and of the legal entity for the permanent COOMET Secretariat (June- September 2021).

NEXT STEP- holding of an extraordinary online COOMET Committee meeting in October 2021 for preliminary discussion of a set of issues on changing the institutional status of COOMET

Implementation of the Mutual Recognition Arrangement (CIPM MRA) (as of 31.05.2021)



Currently in the KCDB there are

259

CIPM MRA participants

1089

key comparisons

25785

CMCs

636

supplementary
comparisons

2687 – total number of CMCs from NMIs of the countries, which submit them through COOMET (Azerbaijan, Belarus, Georgia, Kazakhstan, Cuba, Russia, Uzbekistan, Ukraine)

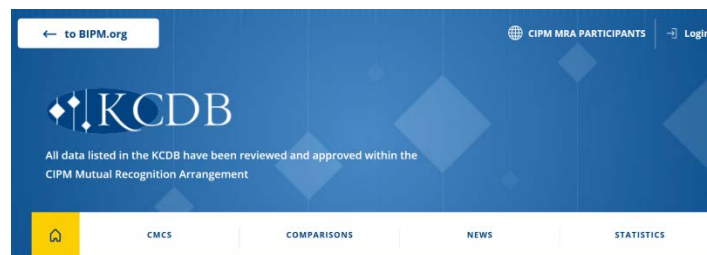
Number of CMCs:

Russia – 1800 (1st place in KCDB)

China – 1717 (2nd place in KCDB)

Germany – 1578 (3rd place in KCDB)

Total: 7536 CMC (for all COOMET member countries)



Implementation of the CIPM MRA

All COOMET comparisons are listed in **COOMET P2/2021** "COOMET Program of comparisons" (approved as of 25.11.2020):

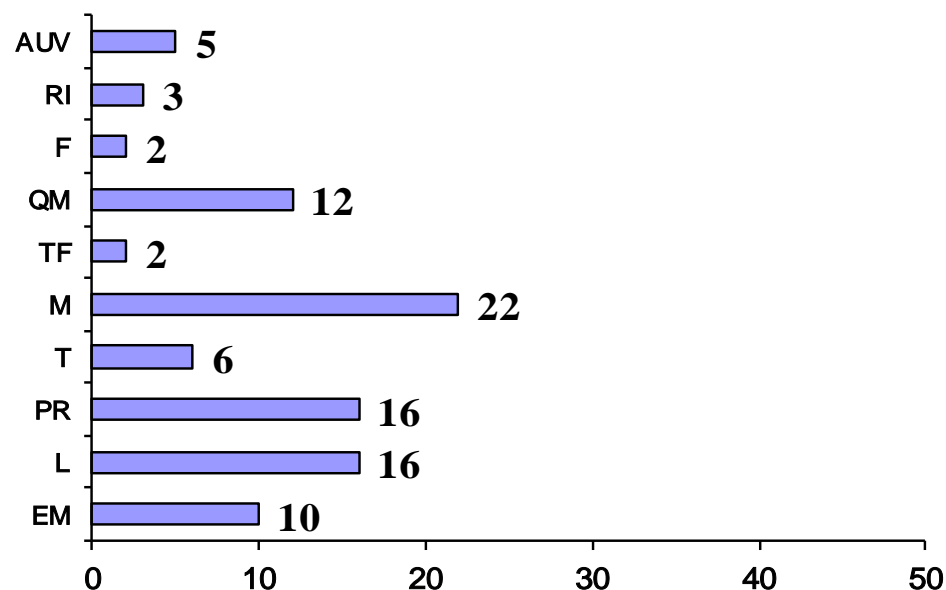
http://www.coomet.org/DB/isapi/cmt_docs/2020/12/SYBLL216.pdf


Besides, the interactive version of the Program is available at the following link

http://www.coomet.org/DB/com/index.htm?EN,PRJ_EN,EN/CMPR

http://www.coomet.org/tc_prj/2021/D9_EN.htm

There are currently **93 actual projects** on comparisons in the COOMET Program (as of 28.05.2021).



	COOMET Program	COOMET P2/2021
	COOMET PROGRAM OF COMPARISONS	
Approved at the 26th COOMET Presidential Council meeting (25 November 2020)		as of 28.05.2021

Total	99 projects	from 25.11.2020: 4 - proposed; 6 - agreed; 4 - completed; 2 - excluded;
AUV - Acoustics, Ultrasound and Vibrations	5 projects	from 25.11.2020: 1 - proposed; 0 - agreed; 0 - completed; 0 - excluded;
EM - Electricity And Magnetism	11 projects	from 25.11.2020: 0 - proposed; 4 - agreed; 2 - completed; 0 - excluded;
L - Length	16 projects	from 25.11.2020: 0 - proposed; 1 - agreed; 0 - completed; 0 - excluded;
M - Mass And Related Quantities	22 projects	from 25.11.2020: 0 - proposed; 0 - agreed; 0 - completed; 0 - excluded;

New COOMET comparisons (2020-2021)

824/RU/21	AQ	Pilot comparisons «Determination of sulfur in isooctane»
846/RU/21	AUV	Regional key comparisons in the field of ultrasound power measurement in water
813/RU/20	EM	Supplementary comparison of measuring current transformers (CTs)
821/RU/20	EM	Pilot comparisons of DC high voltage measuring reference instruments in the voltage range $\pm (1...100)$ kV
833/RU-a/21	IR	Supplementary comparisons of the national standards of radioactivity
810/RU-a/20	L	Supplementary comparisons of measurement standards of involute gears using a complex standard
822/GE/20	M	Pilot comparisons in the small volumes
826/MD/21	T	Supplementary comparisons of standards for the relative humidity unit

Implementation of the CIPM MRA

Status of recognition of QMS of COOMET
NMIs/DIs according to ISO/IEC 17025:2017

NMI/DI	Confirmation of recognition	Date of issue	Valid until	Metrological areas
VNIIM (Russia)	QSF-R79	04.03.2021	04.03.2026	AUV, EM, L, RI, T, M, QM
VNIIOFI (Russia)	QSF-R76	04.03.2021	04.03.2026	PR, QM
VNIIFTRI (Russia)	QSF-R78	04.03.2021	04.03.2026	AUV, EM, RI, T, M, QM, TF
VNIIMS (Russia)	QSF-R75	04.03.2021	04.03.2026	L, EM
BelGIM (Belarus)	QSF-R70	20.11.2020	10.05.2021	AUV, EM, RI, T, M, QM, TF, L, PR
NSC "Institute of Metrology" (Ukraine)	QSF-R68	27.02.2020	10.05.2021	EM, RI, T, M, TF, L, PR
SE "Ukrmetrteststandard" (Ukraine)	QSF-R69	27.02.2020	10.05.2021	AUV, EM, M, L, PR, QM
SE "NDI Systema" (Ukraine)	QSF-R72	20.11.2020	15.02.2022	AUV
INIMET (Cuba)	QSF-R67	20.11.2020	04.10.2023	M, L, QM, T, TF
CENTIS (Cuba)	QSF-R66	20.11.2020	04.10.2023	RI
CPHR (Cuba)	QSF-R65	20.11.2020	04.10.2023	RI
SE "Ivano-Frankivsktsndartmetrologia" (Ukraine)	QSF-R73	20.11.2020	04.10.2023	M
KazStandard (Kazakhstan) (former KazInMetr)	QSF-R81	15.04.2021	15.04.2026	M, L, QM, T
GEOSTM (Georgia)	QSF-R74	28.01.2021	04.10.2023	EM, M, T, RI, L
AzMI (Azerbaijan)	QSF-R71	20.11.2020	31.01.2023	T, RI, EM, M

Implementation of the CIPM MRA

Status of recognition of QMS of COOMET
NMIs/DIs according to ISO 17034:2016

NMI/DI	Confirmation of recognition	Date of issue	Valid until	Metrological areas
VNIIM (Russia)	QSF-R80	04.03.2021	04.03.2026	Gases Organic solutions Inorganic solutions Electrolytic conductivity, High purity chemicals, advanced materials; food products; coatings, films, and nanomaterials.
VNIIOFI (Russia)	QSF-R77	04.03.2021	04.03.2026	Inorganic solutions Metal and metal alloys Biological fluids and materials
BelGIM (Belarus)	QSF-R59	02.10.2019	10.05.2021	Gases pH Electrolytic conductivity
Ukrmetrteststandart (Ukraine)	QSF-R61	02.10.2019	10.05.2021	Gases pH Electrolytic conductivity
KazStandard (Kazakhstan) (former KazInMetr)	QSF-R60	02.10.2019	15.02.2022	Gases pH

COOMET Recommendation "Temporary rules and procedure for peer reviews of quality management systems of National metrology institutes/Designated institutes (QMS of NMIs/DIs) during the COVID-19 pandemic" will be submitted to the COOMET Committee for approval (15-17 June 2021).

Important projects of the Joint Committee for Measurement Standards

(along with coordination of activities of TCs by the types of measurements)



- ❖ realization of the Roadmap for implementation of resolutions, related to the redefinition of the SI base units (in view of the resolutions adopted at the 26th meeting of the CGPM);
- ❖ **drawing up and implementation of a Plan for preparation of COOMET Recommendations, containing requirements for calibration of various groups of measuring instruments;**
- ❖ preparation of a COOMET Recommendation on providing the traceability of measurement results/measurement standards in COOMET (project 812/RU/20, coordinator – VNIIM, Russia) etc.

Participation in the CIMP webinar (22–26 February 2021)

COOMET Vice-President, CIPM member, **Pavel Neyezhnikov (Ukraine)**, made a presentation **«COOMET vision of metrological e-infrastructure digital transformation»** under **TOPIC 3**.

COOMET JCMS Deputy Chair, **Nikita Zviagin (Russia)**, made a presentation **«Short analysis of F.A.I.Rness data in the KCDB»** under **TOPIC 2**.

COOMET representatives acted as the Chairs and Moderators of discussion for the following seminar topics:

COOMET Vice-President S.Golubev (Russia):

TOPIC 3 – REGIONAL METROLOGY ORGANISATION (Challenges of digital transformation in Regional Metrology Organizations and National Metrology Institutes)

TOPIC 4 –INDUSTRIAL DIGITAL INFRASTRUCTURE (Challenges of digital transformation in regards with units of measure in industries)

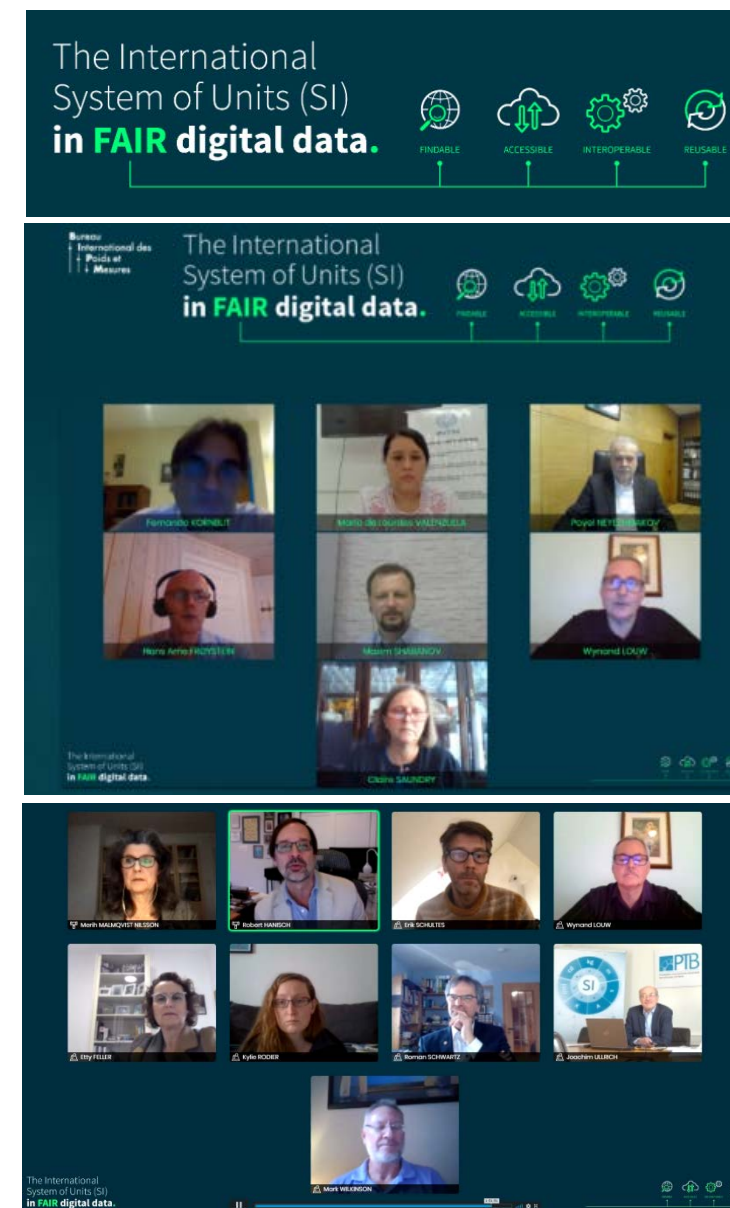
TOPIC 5 –DIGITAL REPRESENTATION OF UNITS (Challenges implied by digital transformation on the representation of units of measure)

COOMET JCMS Chair A.Chunovkina (Russia):

TOPIC 2 –MACHINE-ACTIONABLE METADATA AND DATA, FAIRNESS OF DATA

Representative of VNIIMS (Russia), CIPM member, Th.Bulygin:

TOPIC 3 –DIGITAL CALIBRATION CERTIFICATES (DCCS)



Digitalization in metrology

Under the auspices of the JCMS an innovative project **825/BY/21 "Development of a COOMET concept for digitalization in metrology"** was started.

In the implementation of this project it is suggested that a **concept** should be developed for **application of digital technologies in metrology within COOMET**, which covers the following aspects:

- ❖ use of digital calibration certificates;
- ❖ use of FAIR data;
- ❖ application of digital technologies in COOMET activities;
- ❖ use of cloud technologies in metrology in COOMET member countries;
- ❖ development of common approaches to the creation and maintenance of national information funds in the field of ensuring the uniformity of measurements in COOMET member countries.

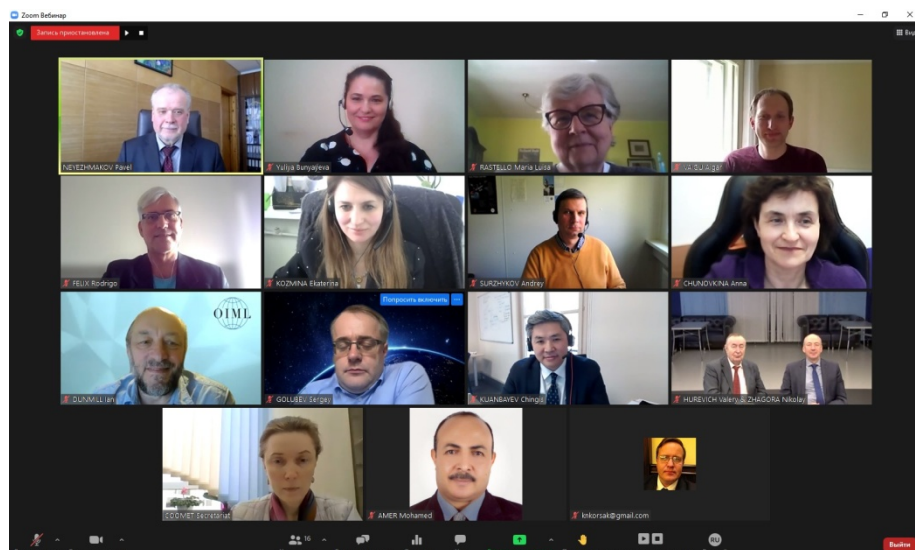
A Working Group is currently being formed from the representatives of the interested COOMET member countries.

During 2020-2021 COOMET has organized some webinars, involving a large number of interested specialists from member countries, namely:

- ❖ COOMET Webinar to discuss the draft COOMET Strategy for 2020-2025 (13 July 2020);
- ❖ COOMET Webinar on KCDB 2.0 for TC 1.7 "Photometry and Radiometry" (17 September 2020)
- ❖ COOMET Webinar to discuss the possible fields of joint scientific research (23 September 2020);
- ❖ COOMET Webinar on KCDB 2.0 for TC 1.6 "Mass and Related Quantities", TC 1.4 "Flow Measurement", TC 1.5 "Length and Angle", TC 1.3 "Electricity and Magnetism" (8 October 2020);
- ❖ COOMET Webinar on the exchange of working experience with KCDB 2.0 for the Chairs of COOMET TCs (26 January 2021);
- ❖ COOMET Webinar "Role of measurement uncertainty in conformity assessment decisions in legal metrology" (6 April 2021)



IX International Competition "The Best Young Metrologist of COOMET-2021" 21-22 April 2021



The members of Scientific Committee

Technical organizers – TC 4 "Information and Training"
and COOMET Secretariat.

The Scientific Committee of the competition included the representatives of International (BIPM, BML) and Regional (COOMET, AFRIMETS, EURAMET, SIM) metrology organizations.

Chair of the Scientific Committee:

Pavel NEYEZHMAKOV, COOMET Vice-President, Ukraine

Members of the Scientific Committee:

Valery HUREVICH,	COOMET President, Belarus
Sergey GOLUBEV,	COOMET Vice-President, Russia
Nino MIKANADZE,	COOMET Vice-President, Georgia
Nikolay ZHAGORA,	COOMET, Belarus
Anna CHUNOVKINA,	COOMET, JCMS Chair, Russia
Andrey SURZHYKOV,	COOMET, Germany
Chingis KUANBAYEV,	BIPM, France
Ian DUNMILL,	BIML, France
Mohamed AMER,	AFRIMETS, Egypt
Maria Luisa RASTELLO,	EURAMET, Italy
Aigar VAIGU,	EURAMET, Estonia
Rodrigo FELIX,	SIM, Brazil

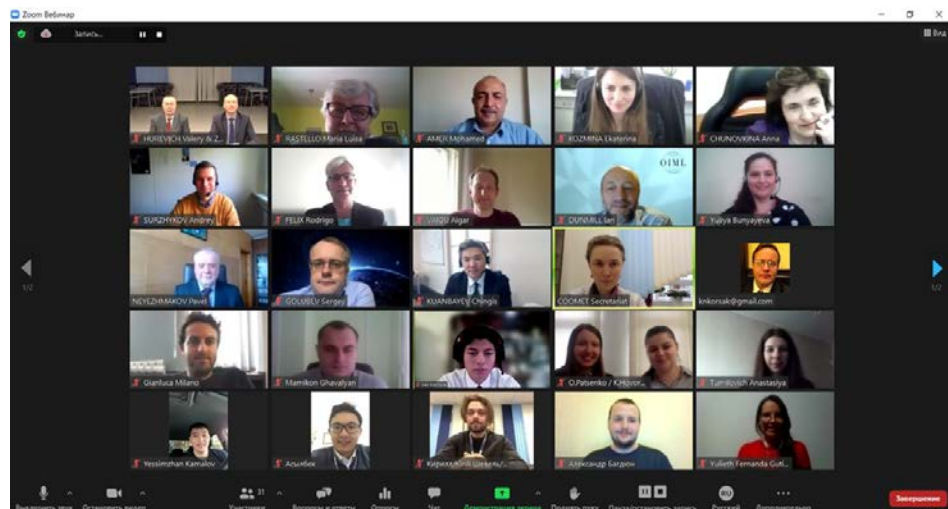
Secretary of the Scientific Committee:

KOZMINA Ekaterina, COOMET, Chair of SC 4.3, Russia

IX International Competition "The Best Young Metrologist of COOMET-2021" 21-22 April 2021

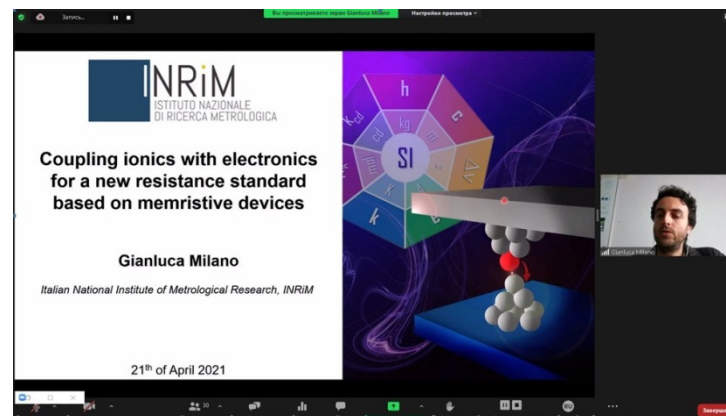
After careful and objective consideration the members of the Scientific Committee defined the winners of the competition:

❑ **Gianluca Milano (EURAMET, INRIM, Italy)**
for the **best report in the field of scientific and fundamental metrology**

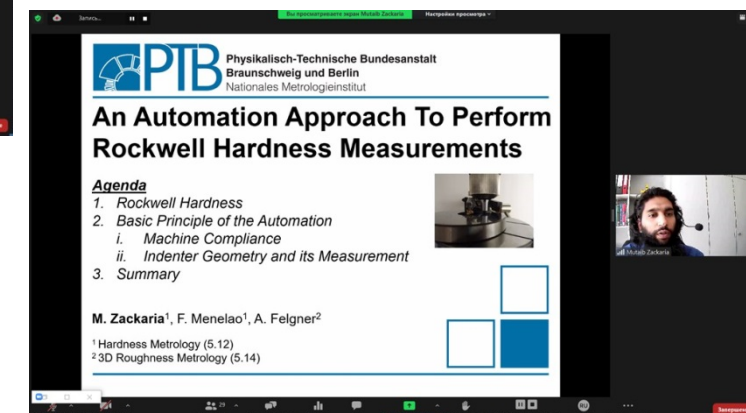


This year representatives of other Regional metrology organizations joined the competition.

In total, there were **18 papers** submitted from: COOMET (Belarus, Kazakhstan, Germany, Russia, Ukraine), EURAMET (Italy) and SIM (Colombia, Mexico).



❑ **Mutaib Zackaria (COOMET, PTB, Germany)**
for the **best report in the field of applied metrology**



EURAMET – COOMET Cooperation in 2020-2021

(according to the MoU between EURAMET and COOMET)

2020-2021: drawing up and agreeing on the Action Plan on Cooperation for 2021 between EURAMET and COOMET, as well as its implementation:

- participation of NMIs of COOMET and EURAMET member-countries in comparisons;
- participation of NMIs of COOMET member-countries in realized EMPIR projects.

2020: participation of EURAMET/COOMET TC Chairs/Representatives in COOMET/EURAMET TC meetings accordingly.

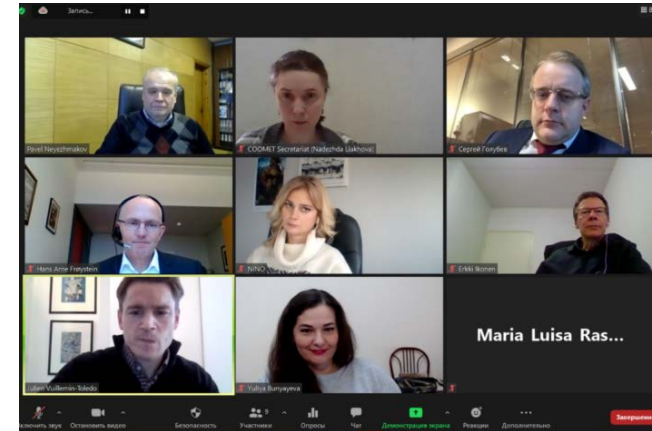
7–8 October 2020: participation of the COOMET Vice-President Pavel Neyezhmakov as an observer in the meeting of EURAMET Board of Directors' Working Group for Capacity Building (BoD-WGCB).

16 December 2020: annual meeting of EURAMET-COOMET representatives to discuss the issues of cooperation in 2021.

15 April 2021: meeting of EURAMET-COOMET representatives regarding e-learning.

April 2021: new format of cooperation – participation of COOMET representatives in a number of meetings under the auspices of EURAMET TC-T (technical organizer – COOMET Secretariat, Zoom platform, simultaneous interpretation):

- 26 April 2021 (EURAMET WG meeting "Best Practices");
- 26 April 2021 (EURAMET ATM Project meeting);
- 27 April 2021 (EURAMET WG meeting "Thermophysical quantities");
- 28 April 2021 (EURAMET TC-T + SC-H Plenary meeting).

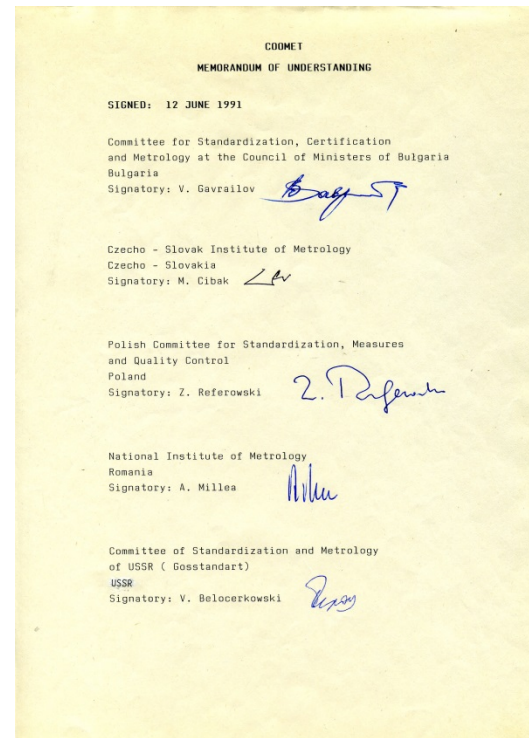


The following COOMET events will take place:

- 31th COOMET Committee meeting (15-17 June 2021, online);
- Seminar "30 years to COOMET" (15 June 2021, online);
- 20th meeting of the Joint Committee for Measurement Standards (3 June 2021, online).

Date of COOMET's establishment:

On 12 June 1991 in Warsaw representatives of national metrology organizations of five countries: **Bulgaria, Poland, Romania, the USSR and Czechoslovakia** signed the COOMET Memorandum of Understanding.

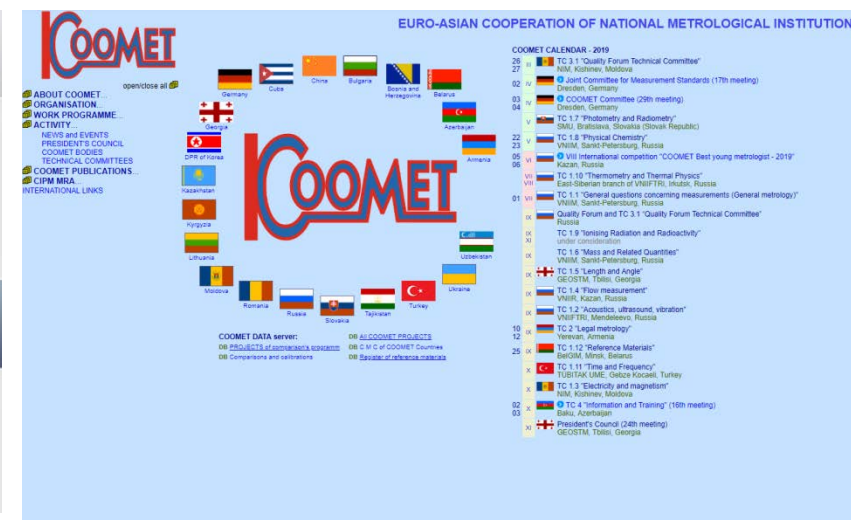
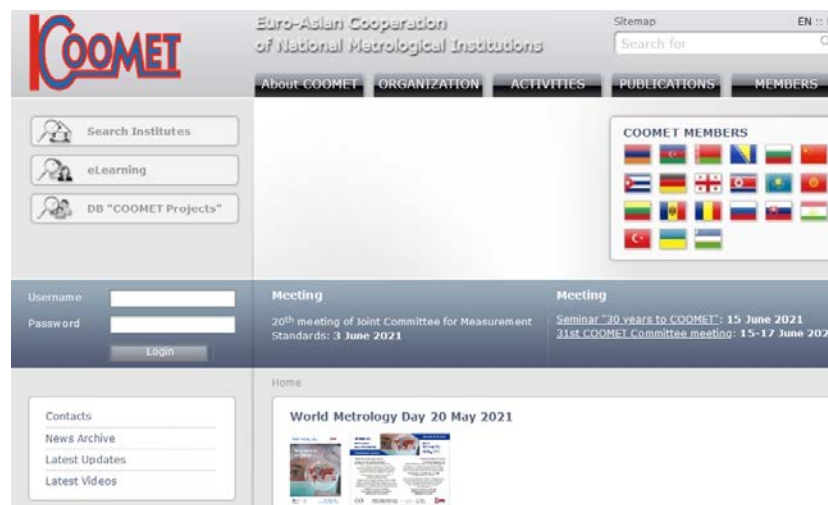


The building of the Polish Committee for standardization, measures and quality, where a COOMET Memorandum was signed

Thank you for your attention!

The COOMET web-portal (www.coomet.net) is maintained by the COOMET Secretariat and online editors of the pages of COOMET TCs.

The COOMET website (www.coomet.org) is maintained by the Administrator (A.Ivanov, VNIIFTRI, Russia).



COOMET Web-resources

COOMET YouTube channel:

https://www.youtube.com/channel/UCyqRp_86A8lQZXMNond11g