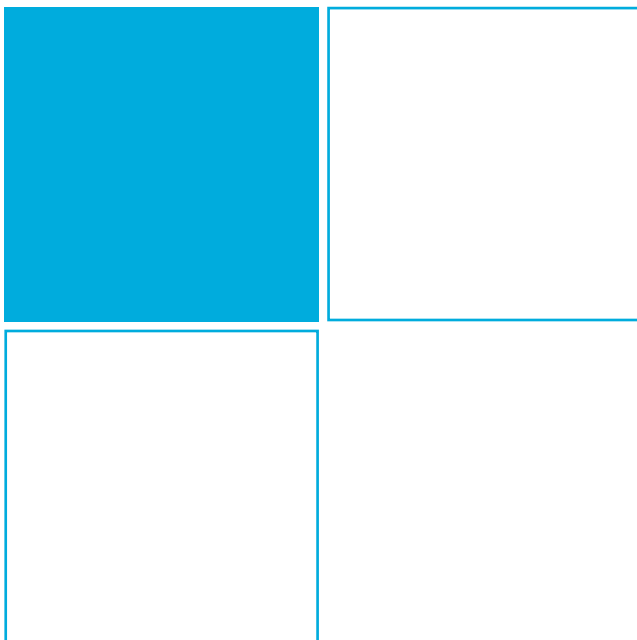


Programme

5th COOMET Competition for Young Metrologists

June 11th – 13th 2013, Braunschweig, Germany
Kohlrausch-Building, Seminar Centre, Foyer and Room A



Members of the Judging Panel

Vladimir Krutikov

Director of All-Russian Scientific Research Institute of Optical and Physical Measurements (VNIIOFI), Russia, President of COOMET

Nikolay Zhagora

Director of the Belorussian State Institute of Metrology (BelGIM), Belarus, Vice-President of COOMET

Pavel Neyezhnikov

Deputy Director of the National Scientific Centre „Institute of metrology“, Ukraine, Vice-President of COOMET

Klaus-Dieter Sommer

Head of Division 3 “Chemical Physics and Explosion Protection” of the Physikalisch-Technische Bundesanstalt (PTB), Germany, Vice-President of COOMET

Vladimir Lakhov

Deputy Director of the Research Institute for Metrological Services (VNIIMS), Russia

Anna Chunovkina

All-Russian Scientific Research Institute of Metrology “D. Mendeleev” (VNIIM), Russia, Chairperson of the Joint Committee for Measurement Standards of COOMET (JCMS)

Ernst-Otto Göbel

President of the Physikalisch-Technische Bundesanstalt (PTB), Germany, retired

Thorsten Dziomba

Physikalisch-Technische Bundesanstalt (PTB), Germany, Scientist in the Division 5“Precision Engineering”

Meinhard Schilling

Technical University of Braunschweig, International Graduate School of Metrology (IGSM), Germany

Laurie Besley

Chairperson of Asia Pacific Metrology Programme (APMP)

Luc Erard

Laboratoire national de métrologie et d'essais (LNE), France, Representative of European Association of National Metrology Institutes (EURAMET)

Jorge Torres

Centro Nacional de Metrologia (CENAM), Mexico

Candidate's presentations: max. 20 min + 5 min questions and discussion

Tuesday, 11th June 2013

9:00	Pick-up from Hotel “Arcadia” Olga Krasota
9:30	Registration of participants, welcome reception, display of posters Organisers and participants
10:30	Opening addresses Klaus-Dieter Sommer (Vicepresident of COOMET) Vladimir N. Krutikov (President of COOMET)
10:45	Opening session “Natural Constants and the new System of Units (SI) using the example of Kilogram and Ampere” Ernst-Otto Göbel, President of PTB (retired)
11:45	Taking the souvenir photo Stairs in front of the building
12:00	Lunch
13:00	Competition Session 1
15:00	Coffee Break and Poster session
15:45	Competition Session 2
17:15	Transfer to the city / hotel
18:30	Dinner

Wednesday, 12th June 2013

8:00	Transfer from Hotel to PTB
8:30	Opening Session of the 2 nd Day “PTB in Brief – An Introduction to the Hosting Institute” Klaus-Dieter Sommer, Vicepresident of COOMET and Head of PTB Div.3
9:15	Competition Session 3
10:45	Coffee Break
11:15	Ball and Chain of the Avogadroproject Guido Bartl, PTB Div.5, Interferometry on Spheres
12:15	Lunch
13:00	Competition Session 4
15:00	Coffee Break with Poster Session
16:45	Competition Session 5
17:30	Transfer to the city
18:00	Guided tour through Braunschweig all interested participants

Thursday, 13th June 2013

8:30	Transfer to PTB
9:00	Competition session 5
10:30	Coffee Break
11:00	Laboratory tour only competitors
12:30	Lunch PTB-Casino
13:30	Results of the Competition / Award of the Prices Vladimir N. Krutikov Klaus-Dieter Sommer
14:00	Closure of the Competition Vladimir N. Krutikov Klaus-Dieter Sommer
14:00	Excursion

Competition Session

1. General Metrology, Special Topics

- 1.1 Algorithm for obtaining metrological compatibility of measurement results for key comparison data. N. Burmistrova / N. Zviagin, St Petersburg, Russia, COOMET
- 1.2 Determination of temperature increase in tissue mimicking material induced by focussed ultrasound. R. Cuccaro / Ch. Magnetto, INRIM, Italy, EURAMET
- 1.3 Building a computerized system for calibration management and related processes. Tsvetomir A. Petkov, BIM, Bulgaria, COOMET
- 1.4 Energy saving lamps as a problem of photometric metrology. D.Scums, BelGIM, Belarus, COOMET

2. Chemical Medical Measurements

- 2.1 Traceability and uncertainty assessment in gas metrology based on the TILSAM methodology. J. Nwaboh, A. Pogany, O. Werhahn, V. Ebert, PTB, Germany, COOMET
- 2.2 Measurement of ammonia in biogas matrix. K. Hafner, IM, Bosnia and Herzegovina, EURAMET
- 2.3 Verification of medical devices in the health sector – aneroid sphygmomanometers for blood pressure measurements. R. Ofori, GSA, Ghana, Afrimet
- 2.4 Sensing the sound with light. A. Torras-Rosell / S. Barrera-Figueroa, DFM, Denmark, EURAMET

3. Electric and Optical Measurements

- 3.1 Research of national standard of the unit of electrical power and its calibration and measurement capabilities. S.R. Karpenko, UkrCSM, Kiev, UA, COOMET
- 3.2 Research of metrological characteristics of the national voltage standard. V. Popko, BelGIM, BY, COOMET
- 3.3 Characterization and time domain analysis of coaxial connections. Q.C. Zhu / Yu Ji, NMI, AU, APMP
- 3.4 Optical clock with a generalized Ramsey scheme. N. Huntemann, PTB, Germany, COOMET
- 3.5 Control unit for parameters of electric energy counters in the place of installation, G.A. Gaziev, “Uzstandart”, Uzbekistan, COOMET
- 3.6 The error of calculation of the electrical power loss, unaccounted by the measuring system, V. Guziy, VNIIMS, Russia, COOMET

4. Mechanical Measurements

- 4.1 Dynamic torque calibration – Necessity and outline for a model based approach. L. Klaus / Th. Bruns / M. Kobusch, PTB, Germany, COOMET
- 4.2 Automatic mass comparator with dual load alternator KMA-500 kg, S. Tsiporenko, UkrCSM, Kiev, UA, COOMET
- 4.3 Improving the competitiveness of pressure transducers using calibration in conformity with procedures for calibration of NMI A. Pianih / V. Iacuin / C. Bordianu, NISM, MD, COOMET
- 4.4 Uncertainty evaluation in natural gas flow measurements in operating conditions of measuring systems O. Mankevich, BelGIM, BY, COOMET
- 4.5 Using of the randomization method for displacement interferometers in nanometer range. O Liubzhin / S. Kovshov / V. Kupko / I. Lukin, NSC Institute of Metrology, Kharkov, UA; COOMET

5. Reference Materials

- 5.1 National Primary Standard Development for refractive index of liquid and solid substances and materials. A.V. Kovalenko / Y.N. Tymoshenko, UkrCSM, Kiev, UA
- 5.2 Creation of certified reference material of active chlorine mass concentration in water. M. Krasheninina, UNIIM, Russia, COOMET
- 5.3 Estimation of uncertainty characteristics for specific adsorption, specific surface area, specific volume and pore diameter in solid substances and materials. E.P. Sobina, UNIIM, Russia, COOMET
- 5.4 Improving the system of metrological assurance in bomb calorimetry. E. Ermakova, VNIIM, Russia, APMP