

**MINUTES No 1**  
of the meeting of Scientific Committee  
of VIII International Competition of COOMET  
“The Best Young Metrologist 2019”

Kazan, Russian Federation

5 June 2019

**Participants:**

*Chairperson of Scientific Committee:*

Valery HUREVICH, COOMET President, Belarus

*Members of Scientific Committee:*

Sergey GOLUBEV, COOMET Vice-President, Russia

Chingis KUANBAYEV, BIPM, France

Andrey SURZHYKOV, PTB, Germany

Victor FAFURIN, Chairperson of COOMET TC 1.4 “Flowmetry”, Russia

*Secretary of Scientific Committee:*

Ekaterina KOZMINA, Chairperson of COOMET SC 4.3, Russia

**Issues:**

1. Approving the list of the reports presented for the competition.
2. Approving the evaluation criteria of the reports presented for the competition.
3. Approving the amount of prizes for the winner and the 2<sup>nd</sup> and the 3<sup>rd</sup> place winners and for the best report in English.

**Decisions:**

1. Approve the list of the reports presented for the competition (Annex 1).
2. Approve the evaluation criteria of the reports presented for the competition (Annex 2).
3. When summarizing the results of the competition, to take into account the results of evaluations of competitive papers on criteria 1–5, received by e-mail from the member of the Scientific Committee, COOMET Vice-President P. Neyezhnikov, Ukraine.
4. Approve the following amount of prizes:
  - for the winner of the competition – 500 €;
  - for the 2<sup>nd</sup> place awardee – 300 €;
  - for the 3<sup>rd</sup> place awardee – 200 €;
  - for the best report in English – 200 €.

Chairperson of Scientific Committee  
COOMET President



V. Hurevich

Secretary of Scientific Committee

E. Kozmina

<b>№</b>	<b>Name</b>	<b>Country</b>	<b>Title of the paper</b>
1	Nikolay Anyutin	Russia	Fundamental studies of the microwave range electromagnetic field measurements in the near field zone
2	Ilya Aronov	Russia	Development of open porosity and rock gas permeability reference materials
3	Aleksandr Dunaev	Russia	Establishment of Wavelength and Wavenumber Scales in the Infrared Spectral Range
4	Aleksey Ivanov	Russia	Non-destructive testing of materials and structures manufactured using additive technologies
5	Ivan Fedorov	Russia	Metrological support of human body internal exposure control
6	Sergey Fedorov	Russia	Development and research of methods for measuring the absorbed dose in order to ensure the required level of accuracy in clinical neutron radiation dosimetry
7	Tatyana Groppa	Russia	Development of a secondary standard of unit of low-level laser radiation average power
8	Ekaterina Guskova	Russia	Diagnostically significant substances and pharmaceutical preparations mass spectra library
9	Roman Korneev	Russia	Impact assessment of flow switch on the metrological characteristics of the test outfit when reproducing units of mass and volume fluid in the flow, mass and volume fluid flow
10	Vasiliy Kyvyrzhhik	Russia	Digitization of the verification of mass measuring instruments
11	Yelena Matsepura	Kazakhstan	Development of the method of integrated assessment of fatigue stresses in the structure of the restored of the HPP turbines
12	Mikhail Mazanov	Russia	Investigation of the uncertainty components of the unit temperature realization by the primary thermometry method in the range from 961.84 °C to 3200 °C In accordance with its new definition
13	Aydar Mingaleev	Russia	Comparing method for critical flow nozzles calibration
14	Vadim Movlamov	Belarus	Examination of the measurement results validity using risk oriented approach with example of fire-resistant coating quality control
15	Murat Murzabekov	Russia	The problem of improving accuracy and efficiency of measurements of deflection of vertical and its solution based on new astrometric technologies
16	Denis Novikov	Russia	Reference installation for measuring the parameters of deviations of the shape of convex spherical and aspherical surfaces
17	Eduard Shavilkov	Belarus	Methods and hardware of control of metrological characteristics of measuring instruments of arterial blood pressure
18	Fedor Smirnov	Russia	Measurement procedure for time scales comparisons using new generation transported quantum clocks
19	Artem Sosnovskiy	Belarus	Creating a scanner to improve the accuracy of reproducing the unit luminous flux
20	Evgeniy Tishchenko	Russia	Standards of luminous intensity, luminous flux and chromaticity coordinates based on thermostabilized LEDs
21	Mikhail Tonkonog	Russia	Advanced method for reproduction and measurement of high pressure gas-liquid flow

### Evaluation Criteria

<b>Innovation</b>	1	<b>Is the paper's subject topical?</b> Weight coefficient 0.1 Marks from 1 to 5	The paper's subject is "hot" if it concerns a scientific direction actively developed by the world community (or directed to solve a problem acknowledged by the scientific community)
	2	<b>Scientific novelty and/or social and economic effect</b> Weight coefficient 0.3 Marks from 1 to 5	The paper is characterized by the scientific novelty if it presents new (unknown before) scientific results and/or the paper has a social and economic effect if it contains results which are practically useful for the country
	3	<b>Originality</b> Weight coefficient 0.1 Marks from 1 to 5	The paper is original if methods that were applied in the paper have not been used before for solving similar problems. In case of considering work, presented at CYM before, while evaluation the hugeness of progress of work in accordance with previous results presented on previous CYM
	4	<b>Potential for international cooperation</b> Weight coefficient 0.1 Marks from 1 to 5	The paper is important for international cooperation if which it can be used for cooperation projects within the COOMET region or on global scale
<b>Quality of the reports' presenting</b>	5	<b>Structure and scientific validity</b> Weight coefficient 0.1 Marks from 1 to 5	The content of the presentation is systematically structured and scientifically correct. The logical chain (approach, solution, correctness of results, validation of conclusions) clearly proves the correctness of the obtained results
	6	<b>Quality of the paper's adjusting</b> Weight coefficient 0.1 Marks from 1 to 5	The well-adjusted paper should be set out with clear and strict language with observance of general language forms and the commons standards of writing a papers scientific*. Font of presentation should be convenient for reading to everybody including listeners in the back rows. Visual presentation and oral explaining should be complement to each other in optimal way and provide best perception of report content by audience. The paper should contain necessary illustrative material. *including item of Annex 5 Recommendation COOMET R/GM/18
	7	<b>Quality of presenting the paper</b> Weight coefficient 0.2 Marks from 1 to 5	While evaluating the quality of presenting work the following criteria are taken into account: <ul style="list-style-type: none"> <li>• reporter realizes communication with the listeners</li> <li>• reporter observes the time limit</li> <li>• reporter speaks correctly, clear and comprehensible</li> <li>• reporter answers to the questions correctly and convincing</li> <li>• reporter uses an additional equipment for his presentation (flip chart, white board, etc.)</li> </ul>

According to these criteria:

maximum sum mark – 5

minimum sum mark – 1

(the rounding of the intermediate values to 0.01 mark)

The final mark is determined according to the formula

$$C = \sum_{i=1}^7 a_i \cdot b_i,$$

where  $a_i$  is the weight of criterion  $i$ ,  $b_i$  is the mark of criterion  $i$ .