# MINUTES No 1

of the Competition "The Best Young Metrologist of COOMET-2009"
Commission Meeting

Minsk                                              14th of April, 2009

**Heard on:**

1. Approving the list of the reports presented for the competition.

2. Approving the criteria for estimating the reports presented for the competition.

3. Approving the amount of prizes for the winner and the 2nd and the 3rd place winners.

4. Inviting specialists from BelGIM as expert-consultants on appropriate types of measurements.

**The commission agreed to**

1. Approve the list of the reports presented for the competition (Appendix 1).

2. Approve the criteria for estimating the reports presented for the competition (Appendix 2).

3. Approve the following amount of prizes

for the winner of the competition –500 €;

for the 2nd place winner – 300 €;

for the 3rd place winner – 200 €;

for the best report in English – an encouraging prize – the participation in the European metrological conference in 2009 paid by PTB.

4. Consider it possible to invite specialists from BelGIM as expert-consultants without any vote in order to impartially estimate the innovation of the reports presented.

Chairman of the competitive commission

COOMET Vice-president                                              Nikolay Zhagora

Secretary of the competitive commission                          Nadezda Lyakhova

| Name | Report |
|---|---|
| Belarus | |
| 1.  ATAMAS Tatiana | Researching of reflecting materials for reference standard of whiteness unit creatinon. Index of whiteness index measurement assuranse |
| 2.  KACHUR Svetlana | Interlaboratory comparisons as the tool of professional testing of calibration laboratories |
| 3.  KOZLOV Pavel | Modernization and researches of the national temperature standart of the Republic of Belarus |
| 4.  KROTOVA Olga | Coordinate measurements of nominally curvilinear surfaces of second order presented by limited patches |
| 5.  SMOTRITEL Svetlana | Metrological provision of electric energy quality monitoring |
| 6.  SOLOMAKHO Dmitry | *the report will be delivered in English* <br> The role of metrological modeling in the selection of measurement strategy |
| 7.  TYAVLOVSKY Andrey | *the report will be delivered in English* <br> Metrological assurance of measurements of physical and chemical parameters of technological media and materials |
| 8.  CHERVJAKOVSKAJA Nataliya | Use of the mechanism of errors accumulation in the verification schemes on the basis of the probability approach as the optimality criterion during analysis of the verification schemes |
| 9.  YARMOLOVICH Marina | The analysis of the standard unit error components and their influence on the accuracy of reproduction of electric power standard unit |
| Germany | |
| 10. Makram A. ZEBIAN | *the report will be delivered in English* <br> A finite element model of an average human earcanal to assess calibration errors of distortion product otoacoustic emission probes |
| DPR of Korea | |
| 11. KIM Hyon Chol | *the report will be delivered in English* <br> Study on the measurement system of the in-parallel belt conveyors |
| 12. PANG Chol Nam | *the report will be delivered in English* <br> Study on the characteristics of some factors affecting on the measurement accuracy of the dielectric grain moisture meters |
| Cuba | |
| 13. Augusto Maury Toledo | *the report will be delivered in English* <br> Least-square method to maintain a group standard |
| Russia | |
| 14. ABASOV Mikhail | Development of the system of metrological assurance of the thermographic instruments |

| Name | Report |
|---|---|
| 15. VITKOVSKIY Oleg | Development metrological maintenance means of measurements of pressure saturated vapors of petroleum |
| 16. GOGOLEV Dmitry | Development of scientific and technical bases for the assurance of uniformity of measurements of parameters of deviations of the form of complex structure surfaces |
| 17. GUZIY Vitaly | Assessment of the accuracy of the algorithm for calculating electric power losses at commercial metering |
| 18. ZOLOTAREVSKIY Sergey | *the report will be delivered in English*<br>Traceability creation of the linear 2d and 3d measurements in the nanometrical range with application of calibrated devices and nanostructures |
| 19. KULYABINA Tatiana | The metrological assurance of biomeasurement case study of DNA quantification |
| 20. MOSKALEV Audrey | Particularities of verification of joint-tool thread calibration |
| 21. OSINTSEVA Elena | Establishing traceability and estimating uncertainty of certified values of certified reference materials |
| 22. CHERNYSHENKO Alexander | A setup for measurement assurance in the field of molecular gas flows in vacuum |
| 23. Sherstobitov Sergey | Quantum digital ac waveform synthesizer based on Josephson array with pulse-with modulation |
| Uzbekistan | |
| 24. GAZIEV Gayratjon | Magnetic-electronic converter of power of an alternating current as an element of the portable meter of electric energy |
| 25. Kayumov Makhmud | Uncertainty of stationary methods of measuring of heat conductivity of textile materials |
| Ukraine | |
| 26. VLASOV Igor | Development of a test bench for determining the performance characteristics of professional digital photocameras |
| 27. ILNYTSKA Tatiana | Using of the information technology at designing the ultrasound power unit standard in water medium in conditions of limited resources |
| 28. SHCHUR Yevgeniy | About metrological aspect of chemical analysis using molecular absorption method |

# Estimation Criteria

| | | | |
|---|---|---|---|
| **Innovation** | 1 | **Is the paper's subject topical?**<br>Weight coefficient 0.1<br>Marks from 1 to 5 | The paper's subject is "hot" if it concerns a scientific direction actively developed by the world community (or has the purpose of solving a problem acknowledged by the scientific community) |
| | 2 | **Scientific novelty of the paper**<br>Weight coefficient 0.3<br>Marks from 1 to 5 | The paper is characterized by the scientific novelty if it presents new (unknown before) scientific results |
| | 3 | **Originality**<br>Weight coefficient 01<br>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 (or the result is presented from a new point of view not known before) |
| | 4 | **Potential for international cooperation**<br>Weight coefficient 0.1<br>Marks from 1 to 5 | The paper is important for international cooperation if there are international projects which it can be used in |
| **Quality of the reports' presenting** | 5 | **Scientific rigor and validity**<br>Weight coefficient 0.1<br>Marks from 1 to 5 | The paper is distinguished for scientific rigor and validity if proper approaches to solving the problem posed are used in it and the presented material clearly proves the correctness of the results obtained |
| | 6 | **Quality of the paper's adjusting**<br>Weight coefficient 0.1<br>Marks from 1 to 5 | The paper is well adjusted if it has an optimal structure and the necessary illustrative material, the language of the paper must be clear and strict and observe the common standards of writing a scientific paper |
| | 7 | **Quality of presenting the paper**<br>Weight coefficient 0.2<br>Marks from 1 to 5 | The quality of presenting the paper is high if the report has an optimal structure (including illustrative material), the time limit is observed, the style of speaking is clear and comprehensible, the answers to the questions are correct and convincing |

According to these criteria:
maximum sum mark – 5
minimum sum mark – 1
(the rounding of the intermediate values to 0.1 mark)

The final mark is determined according to the formula

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

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