

GENERAL INFORMATION

Workshop objectives

The public credibility of the scientific community's results and the quality of products & services on the European/international market depend critically on the ability to demonstrate the accuracy and integrity of measurements. **'Proficiency Testing'** plays a central role in this process as the *best tool* that can assure *Credibility* by proving *Competence* and *Testing Performance* .

The *first Workshop on Proficiency Testing (PT)* in the field of *Nuclear Applications* is primarily intended as a *'School in PT'*, since it will provide an opportunity for discussing / clarifying aspects concerning the criteria for evaluating performance and interpreting experimental results with experts who are intimately involved in the development of International and National Standards and the organization of international Inter-Laboratory Comparison (ILC) and Proficiency Testing (PT) exercises.

The main objective of our Workshop is to help people learn the basic aspects in theory and practice which should be born in mind when the laboratory is preparing to achieve and prove the quality of its analytical performance.

Researchers, analysts from nuclear laboratories involved in routine applications* and manufacturers involved in connected areas are invited...The **'Nuclear PT'** Workshop is a unique opportunity for learning how to prove performance & get excellence.

The **'Nuclear PT'** meeting is a unique opportunity for learning 'how to fit' the laboratory's performance objectives with **the rigor** of international **'Proficiency Testing'** evaluation, based on applications / illustrations from various fields (monitoring of environmental radioactivity in food, water, other types of samples; analysis/certification of materials by various nuclear techniques; ionizing radiation dosimetry and applications in medical physics), and how to get the **'Excellence'**.

As the results obtained from nuclear experiments usually rely on the 'reference standards' provided by metrology laboratories (as regarding radionuclide activity, or elemental composition, or reference indications of a measuring equipment based on ionizing radiation), we decided to assure an opportunity - also for the first time - for specialists in applications and specialists in radionuclide metrology to get together. So, special talks will focus on **C**ertified **R**eference **M**aterials, and other talks will address the issue of personnel competence, which Standard **17025** regards as a crucial factor for assuring the high quality of results.

The **Workshop on 'Nuclear PT'** will also provide a framework for participants to present their latest results and developments related to proving performance in the earlier mentioned fields, and to discuss basic aspects of method validation, the use of reference radioactive sources and materials, the traceability of nuclear physical quantities involved in measurements, the use of statistical criteria, the evaluation procedures applied in **ILC /PT** exercises, and the support provided to analytical Laboratories by the National Accreditation and Metrology bodies.

**radionuclide metrology, gamma and alpha, beta- ray spectrometry , NAA, ionizing radiation dosimetry, applications in other nuclear techniques and XRF spectrometry.*

*The time for learning how to assure and prove Performance is **NOW !**
Later, it will be the time to prove it*

Topics

- ◆ **Theory : Principles & requirements for Testing Performance.**
 - Approaches according to the ISO standards and guides (applications in analytical laboratories)
 - Fitness-for- purpose statistical quantities & criteria for evaluating results from ILC/ PT exercises
- ◆ **Radionuclide metrology** supporting high quality performance in applications of the Ionising Radiation (**IR**) and Nuclear Analytical Techniques (**NAT**)
- ◆ **Use of CRMs** to prove Laboratory performance
- ◆ **Experimental results from ILC /PT** exercises in **IR** and **NAT** applications
{Fields: environmental, water & food analysis, materials analysis, radiation Dosimetry }
- ◆ **Performance based on PT of methods, equipment and personnel** in nuclear analytical laboratories
- ◆ **New methods /techniques and instruments** envisaging performance and evaluation
- ◆ **New information stemming from ILC /PT exercises** in the nuclear field
- ◆ **Support of National and International Accreditation Services and Metrology Institutes** in improving performance

Scientific Advisory /Program Committee – Invited lecturers

- Mike Woods** - **President** (UK, ICRM and IRMC)
- Steve Ellison** (EURACHEM, LGC, United Kingdom)
- Uwe Waetjen** (JRC – IRMM, Radioisotope Div., Belgium)
- Peter Bode** (TU Delft, The Netherlands)
- Brian Brookman** (EURACHEM, LGC, United Kingdom)
- Peter Vermaercke** (SCK- CEN, Belgium)
- Tony H.L. Aalbers** (EUROMET, The Netherlands)
- Fanel Iacobescu** (RENAR - Accreditation Association & Bureau of Legal Metrology, Romania)
- Daniela Cucu** (RENAR, Romania)
- Halina Polkowska -Motrenko** (EURACHEM, INCT- Poland)
- Em. Cincu** (IFIN-HH, Romania)
- Maria Sahagia** (IFIN-HH, Romania)
- Octavian Sima** (University of Bucharest, Romania)
- Kaj Heydorn** (TU, Denmark)
- Zeev Alfassi** (Ben Gurion University, Dept Bio-medical Engineering, Israel)

Scientific Program

The Workshop Program will include: invited lectures, oral presentations, poster sessions; the official opening might take place on **6 October** in the afternoon. *The official language is English.*

Provisional Agenda of Invited lectures

1. The Int. Framework for Maintaining Equivalence and Traceability in Radionuclide Metrology. BIPM inter-comparisons and Key Comparison Data Base - **Mike Woods & Maria Sahagia**
2. Role and evaluation of intercomparison results in laboratory accreditation - **Peter Bode**
3. The 2006 IUPAC Harmonized Protocol for Proficiency Testing - **Steve Ellison**
4. The National Dissemination of International Measurement Standards (Romania) - Talk about Support of the national metrology in assuring performance of the labs. for the environment and food control - **Maria Sahagia & Mike Woods**
5. Certification principles of reference materials - **Uwe Waetjen**
6. Using trueness and reproducibility data, obtained from CRM's and PT's to calculate the measurement uncertainty in k0-NAA" - **Peter Vermaercke**
7. Assuring the quality of test results. The practical implementation of Section 5.9 of the EN ISO /IEC 17025 Standard - **D. Cucu & M. Woods**
8. Establishing a proficiency testing scheme for drinking water radiochemistry - **Brian Brookman**
9. Use of the validation method applied in elemental analysis by INAA for neutron data evaluation - **Em. Cincu**
10. A National Accreditation Body view on the utility /necessity for PT Exercises. The RENAR QS infrastructure - a support for getting conformity with the EU requirements - **Fanel Iacobescu**
11. PT in Radiation Dosimetry - **Tony H.L. Aalbers**
12. Preparation and use of PT-RM for testing performance of trace analysis and radionuclides in Polish mushroom material - **Halina Polkowska- Motrenko & Matthias Rossbach**
13. European measurement comparisons of environmental radioactivity - **Uwe Waetjen**
14. Experimental results from the Inter-Lab. Comparison exercise on Stainless steels & biomaterials by INAA (Enlarged European NAA network) - **Em. Cincu, Daniela Cucu, P. Bode, O. Sima, Ioana Manea, D.Barbos, P. Vermaercke, Halina Polkowska-Motrenko, N.Vajda, Z.Molnar, Z.Alfassi, S. Mitrea**
15. A new role of Proficiency Testing in Nuclear Analytical Work - **Kaj Heydorn**
16. The localization of a radioactive point source in a large medium - **Zeev Alfassi**
17. Towards an European Nuclear Research Area through ENEN-European Nuclear Education Network - **Olivia Comsa**

Important Dates

Abstract submission and Registration*	July 30, 2007	Participants
Acceptance of works (oral or poster presentation) and recommendations of the Scientific Advisory Committee	August 15, 2007	Organizers
2nd Circular and Notification to Authors	August 25, 2007	Organizers
Preliminary Agenda	September 1, 2007	Organizers
3rd Circular – Final announcements	September 10 - 15, 2007	Organizers
Accommodation forms**	(recommended) before September 1st, 2007	Participants
Request for visa Invitation letter	(recommended) before August 20, 2007	Participants
Message comprising the Invitation letter	Sent in: 3 days by e-mail (Invitation letter signed & scanned), and/or in 5 days by fax	Organizers
*Withdraw conditions : if request received - before August 5, 2007 - before September 5, 2007 - after September 5, 2007	- Integral refund minus Bank commission - 50 % refund minus Bank commission - No refund	Organizers

Visa

If participants are from countries for which the Visa is required, the Organizing Committee will provide the necessary Invitation letter, and some useful information, if necessary.

Registration fee: ask for details by e-mail or phone !

	Before May 20, 2007	After May 20, 2007
Regular participant	320 EUR	420 EUR
Student*	170	270
Accompanying person	150	250
* An official recommendation of the University leadership is <u>obligatory</u>		

The fee includes:

- Admission to all sessions; the opening session will take place on October 6 in the afternoon { Authors must attend the Workshop and present the accepted paper to receive a copy of the Workshop Program and Book of Abstracts }
- Morning and afternoon coffee breaks
- Participation to the 'Welcome Party'
- Workshop Dinner
- Participation Diploma
- Some social Program events
- Workshop Proceedings

Venue

The **International Workshop 'Nuclear PT'** will be held in the I. L.Caragiale Conference Hall of the new Hotel '**Ramada Majestic**' (2003). The modern building is located in the heart of the city, with an entrance close to the old University (founded in 1864) and with the other one in the nice small square of the ODEON theatre, close to the Calea Victoriei Street. It is located in the center of the business and cultural area of Bucharest, close to the Royal Palace, Athenaeum, Revolution Square, the National Theatre, but also close to shops, cafés, restaurants with a cozy and pleasant atmosphere.

Our partner '**DOMINO Travel Agency**' will offer special, advantageous rates for participants to the Workshop; in this regard it is necessary to send your request to the address: www.nuclearpt2007.dominotravel.ro , or to the Agency e-mail address < nuclearpt2007@dominotravel.ro>, both since March 1, 2007.

*Meanwhile, you are invited to access the link to '**DOMINO**' Agency*

Local Organizing Committee (Full team)

Phys. Olivia Comsa	EURATOM Counsellor, National Authority for Scientific Research, Department of European Integration & International Cooperation
Dr. Ioan Ursu	Scientific Secretary of IFIN-HH
Dr. Emanuela Cincu	Workshop Director (IFIN-HH, Applied Nuclear Physics Department ,ACTIVA-N' Laboratory)
Drd. Ioana Manea	Workshop Secretary (IFIN-HH, Applied Nuclear Physics Department ,ACTIVA-N' Laboratory)
Ec. Alexandra Olteanu	Financial Manager of IFIN-HH
Eng. Sibila Brancovici	(IFIN-HH, Head, QA Department)
As. Mariana Cristofan	(IFIN-HH, Applied Nuclear Physics Department ,ACTIVA-N' Laboratory)
Eng. Ioan Lucian Cazan	(IFIN-HH, Applied Nuclear Physics Department ,ACTIVA-N' Laboratory)
Liviu Craciun	(IFIN-HH, Applied Nuclear Physics Department)
Ec. Mihaela Zodila	(IFIN-HH, Marketing)
Drd. Carmen Cristache	(IFIN-HH, Radioactive Waste Management Department)
Drd. Magdalena Toma	(IFIN-HH, Radioactive Waste Management Department)
Webmaster Laurentiu Serban	(IFIN-HH, Dept. of Information Technology & Communications)
Designer Adrian Socolov	(IFIN-HH, Editorial Department)
Editor Margareta Oancea	(IFIN-HH, Editorial Department)

Accommodation

The Bucharest' history starts in the middle of the fifteen century, but it claimed to be the capital of Wallachia - the southpart of the country - in 1659. Many palaces and churches had been built on the main streets at that time, streets surfaced with timber baulks, known as bridges. The primary influence was Turkish, and later, after the Independence War (1877) the city was rebuilt or remodelled in French style. With its own Triumphal Arch and wide, tree-lined avenues, and with a permanent updated fashion ,like in Paris' the capital got the surname "Paris of the East".

Nowadays Bucharest is the commercial and governmental capital of Romania and with a population of over 2.5 millions is the largest city between Berlin and Athens.

Participants will have several possibilities for accommodation, at hotels of 2-5 stars, with various rates for single and double rooms. For the participants to our Workshop special rates will be arranged by our Partner '**Domino Travel Agency**'. In this regard, the requests for accommodation should be sent to the address that will be opened for our Workshop since March 1st: www.nuclearpt2007.dominotravel.ro, or to the address: nuclearpt2007@dominotravel.ro; the same way for special trips/excursions. We recommend to book rooms by May 30, since the capital receives in September - October many guests for exhibitions.

*Please, access the link to '**DOMINO**' !*

Abstracts and Papers Instructions

The Abstract must be submitted electronically in PDF format or Word format, according to the Model given below (**Abstract Instructions**).

Persons submitting an Abstract must accept the deadline conditions, and decisions of the 'Nuclear PT' Program Committee.

All submitters of Abstracts are to attend the meeting. If an emergency arises and the presenter is unable to attend, he/she should notify the 'Nuclear PT' Secretariat in writing prior to the meeting that he/she is withdrawing the abstract or naming a substitute presenter, who must be a co-author.

All participants are highly advised and encouraged to use the on-line Abstract submission procedure is opened on this web-site at the address <activa-n@nipne.ro> .

Proceedings

The Workshop Proceedings will be published by the experienced American Institute of Physics {<http://proceedings.aip.org>} which has a long tradition in publishing Proceedings of many, various Scientific Conferences, Symposia, Workshops. By consequence, the papers have to comply with the ethical standards of AIP, as described at <http://www.aip.org/pubservs/ethics.html>, and with the specific Instructions for Authors, which may be found at the mentioned address.

The authors instructions for publication may be found at: www.aip.org/proceedings/

Abstract Instructions for Authors Presenting Lectures / Communications

Ion Neculescu¹ and Paul Obede², and others...

¹*Institute for Atomic Physics, Bucharest,* ²*University of Bucharest, Romania*

The Abstract will be prepared/ presented according to the following conditions: 3cm to the upper, left and bottom margins, and 2.5 cm to the right margin (gutter 0).

Title: Arial 14, bolded and first letter of the important words will be capitalized.

After a single free line, the Authors names will be indicated in Arial 12 bolded, and the name of the main author will be underlined and his e-mail address will be indicated as a footnote.

After another free line spacing the Affiliation will be detailed using the italic Times New Roman 11. The Abstract body will start at 4 cm length and will be written as 12 Times New Roman normal font, single spaced.

The text body will be restricted to 400 words, or at the 20 cm length on page.

The Abstract content will comprise (as a guide) the following items: **Objective(s)**, **Experimental Method(s)** employed, **Results**, **Conclusions**, and **References**.

Every paragraph will be marked by **3** free spaces before the first letter.

In case the Abstract includes figures / pictures, one may use the entire page in the same format. Finally, the body text will be justified.

References

- 1..
- 2..

NETWORK – Participant Laboratories (by countries)

◆ **Belgium**

SCK – CEN Belgian Nuclear Research Centre
Neutron Activation Analysis Laboratory

Dr. Peter Vermaercke – Head Laboratory

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◆ **Hungary**

Institute of Nuclear Techniques, Budapest
University of Technology and Economics
Radioanalytical Laboratory

Dr. Nóra Vajda – Head NAA Laboratory

Dr. Zsuzsanna Molnár – Quality Manager

.....

◆ **Poland**

Institute of Nuclear Chemistry and Technology
Department of Analytical Chemistry

Dr. Halina Polkowska – **Motrenko** – Head NAA Laboratory

.....

◆ **ROMANIA**

- ‘Horia Hulubei’ National Institute for Nuclear Physics & Engineering
‘ACTIVA-N’ Laboratory

Bucharest - Magurele

Dr. Emanuela Cincu – Head Laboratory

- National Institute for Nuclear Research

Mioveni - Pitesti

NAA Laboratory

Dr. Barbos Dumitru – Head Laboratory

At present, other 2 Laboratories Israel and Romania, was joined to our initial Network:

◆ **Israel**

Ben Gurion University

Department of Nuclear Engineering

Neutron Activation Analysis Laboratory

Prof. Zeev Alfassi – Chairman Bio-medical Engineering Dept.

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- **Romania**

ICPE – CA - Bucharest

Materials Analysis Laboratory

Eng. Sorina Mitrea – Head Laboratory

Social Program and trips

As well as the Workshop welcome Party and Dinner, an interesting social program will be arranged for participants and companions, that will include guided visits to historical attractions of Bucharest and to the new building of the Parliament .

Also, several variants of trips in the mountain region (1 full day), mostly visited by tourists (Prahova Valley), as well as to old castles, including the Bran / Dracula castle and others nice places (3 days) are proposed.

For all trips attractive rates are offered due to our collaboration with the experienced 'DOMINO Tour Agency' (www.dominotravel.ro)

Sponsors

- IFIN-HH
- Romanian Authority for Scientific Research

Contact:

If you have any questions, please do not hesitate to contact us using: activa-n@nipne.ro

PAYMENT

The registration fee may be paid upon arrival, if it was not possible otherwise, at the registration desk, on condition to be announced in advance.

The Registration fee should be sent to the **Romanian Commercial Bank from Bucharest, BCR Unirii, RON ACCOUNT : IBAN RO80 RNCB008 2044 1736 10007, for IFIN-HH (HORIA HULUBEI NATIONAL INSTITUTE R&D FOR PHYSICS AND NUCLEAR ENGINEERING).**

For EURO:

Romanian Commercial Bank from Bucharest, BCR Unirii, EURO ACCOUNT: IBAN RO 91 RNCB 0082044 1736 10003, for IFIN-HH (HORIA HULUBEI National Institute R&D for Physics and Nuclear Engineering)
CUI: 3321234
RNCBROBU

Please mention: for Workshop 'Nuclear PT' !!

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