European Radiation Protection Week 2022



Programme and Book of Abstracts

Committees

Local Organizing Committee

Pedro Vaz (IST, Chairperson) Ana Belchior (IST) Jorge Borbinha (IST) Filomena Botelho (U.Coimbra) José Corisco (IST) António Falcão (IST) Joana Lourenço (U. Aveiro)

Octávia Monteiro Gil (IST) Salvatore di Maria (IST)

João Oliveira Martins (APA)

Luís Neves (SPPCR)
Paulo Nunes (APA)
Isabel Paiva (IST)
Graciano Paulo (ESTeSC)
Ruth Pereira (U. Porto)
Mário Reis (IST)
Yuriy Romanets (IST)
Ana Cravo Sá (IST)
Joana Santos (ESTeSC)
Pedro Teles (U. Porto)

Scientific Committee

Pedro Vaz (IST, Portugal, Chairperson) Liz Ainsbury (PHE, UK, RENEB)

Pedro Almeida (FCUL, IBEB, Portugal)

Klaus Bacher (U.Gent, Belgium, EURAMED)

Christophe Badie (PHE, UK, MELODI)

Ana Belchior (IST, Portugal)

Marc Benderitter (IRSN, France, EURAMED)

Jorge Borbinha (IST, Portugal)

Filomena Botelho (Fac. Medicina, U. Coimbra, Portugal)

Bastian Breustedt (KIT, Germany, EURADOS)

Johan Camps (SCK•CEN, Belgium, NERIS)

Zhanat Carr (WHO)

Chris Clement (ICRP)

Susana Constantino (Fac. Medicina, U. Lisboa, Portugal)

José Corisco (IST Portugal, ALLIANCE)

Emile Van Deventer (WHO)

António Falcão (IST, Portugal)

Umberto Galderisi (U. Campania, Italy, MELODI)

Eduardo Medina Gironzini (LAPRAM)

Octávia Monteiro Gil (IST, Portugal)

Christoph Hoeschen (OVGU, Germany, EURAMED)

Nathalie Impens (SCK+CEN, Belgium, MELODI)

Olivier Isnard (IRSN, France, NERIS)

Ulrike Kulka (BfS, Germany, RENEB)

Ted Lazo (OECD/NEA)

Liudmila Liutsko (IS Global, Spain, SHARE)

Maria Lopez (CIEMAT, Spain, EURADOS)

Joana Lourenço (Dep. Biologia, U. Aveiro, Portugal)

Salvatore di Maria (IST, Portugal)

João Oliveira Martins (APA, Portugal)

Luís Neves (SPPCR, U. Coimbra, Portugal)

Pedro Nogueira (Thünen Inst., Germany, ALLIANCE)

Paulo Nunes (APA, Portugal, NERIS)

Ursula Oestreicher (BfS, Germany, RENEB) Deborah Oughton (NMBU, Norway, NERIS)

Isabel Paiva (IST, Portugal)

Graciano Paulo (ESTeSC-IPC, Portugal)

Ruth Pereira (Fac. Ciências, U. Porto, Portugal)

Maria Perez (WHO)

Ivica Prlić (IMROH, Croatia, ALLIANCE)

Hans Rabus (PTB, Germany, EURADOS)

Wolfgang Raskob (KIT, Germany, NERIS)

Madan Rehani (MGH, USA)

Mário Reis (IST, Portugal)

Yuriy Romanets (IST, Portugal)

Ana Cravo Sá (IST, Portugal)

Joana Santos (ESTeSC-IPC, Portugal)

Pedro Teles (U. Porto, Portugal)

Yevgeniya Tomkiv (NMBU, Norway, SHARE)

Eliseo Vaño (UCM, Spain)

Jenia Vassileva (IAEA)

José Venâncio (IPOLFG, Portugal)

Lina Vieira (ESTeSL, Portugal, SHARE)

Andrzej Wojcik (U. Stockholm, Sweden, MELODI)

Conference Programme Poster Session 2



Radionuclide dispersion in the Canadian Great Lakes and Aquatic Radiological Monitoring for Accident Conditions Comparative study of nuclear post-accident management doctrines in Europe and North America The International RENEB 2021 INTER-LABORATORY COMPARISON FOR BIODOSIMETRY AND RETROSPECTIVE PHYSICAL DOS Awareness-raising actions for the populations living in the vicinity of a nuclear power plan Evaluating radiation risks to non-monitored professionals following a terminal event in a nuclear medicine dept Towards the identification of new decorporating agents able to decrease pulmonary retention of radioactive cobalt oxide particles Individual monitoring after radiological emergency: pros and cons of active and passive dosimetry Towards the identification of new decorporating agents able to decrease pulmonary retention of radioactive cobalt oxide particles M. Beserra P3.23 P3.25 Common challenges and research issues for fostering preparedness and response to health and environment crises and nuclear accident			
The International RENEB 2021 INTER-LABORATORY COMPARISON FOR BIODOSIMETRY AND RETROSPECTIVE PHYSICAL DOS Awareness-raising actions for the populations living in the vicinity of a nuclear power plan J. Bertho P3.21 Evaluating radiation risks to non-monitored professionals following a terminal event in a nuclear medicine dept Towards the identification of new decorporating agents able to decrease pulmonary retention of radioactive cobalt oxide particles Individual monitoring after radiological emergency: pros and cons of active and passive dosimetry V. Chumak P3.24 From Three Miles Island to Fukushima: an evaluation of communication management in responding to radiological and nuclear emergencies Common challenges and research issues for fostering preparedness and response to health T. Schneider P3.26		L. Lebel	P3.18
AND RETROSPECTIVE PHYSICAL DOS Awareness-raising actions for the populations living in the vicinity of a nuclear power plan J. Bertho P3.21 Evaluating radiation risks to non-monitored professionals following a terminal event in a nuclear medicine dept Towards the identification of new decorporating agents able to decrease pulmonary retention of radioactive cobalt oxide particles Individual monitoring after radiological emergency: pros and cons of active and passive dosimetry V. Chumak P3.24 P3.24 Common challenges and research issues for fostering preparedness and response to health T. Schneider P3.26		J. Bertho	P3.19
Evaluating radiation risks to non-monitored professionals following a terminal event in a P. Almeida P3.22 Towards the identification of new decorporating agents able to decrease pulmonary retention of radioactive cobalt oxide particles Individual monitoring after radiological emergency: pros and cons of active and passive V. Chumak P3.24 From Three Miles Island to Fukushima: an evaluation of communication management in responding to radiological and nuclear emergencies Common challenges and research issues for fostering preparedness and response to health T. Schneider P3.26		M. PORT	P3.20
nuclear medicine dept Towards the identification of new decorporating agents able to decrease pulmonary retention of radioactive cobalt oxide particles Individual monitoring after radiological emergency: pros and cons of active and passive dosimetry V. Chumak P3.24 From Three Miles Island to Fukushima: an evaluation of communication management in responding to radiological and nuclear emergencies Common challenges and research issues for fostering preparedness and response to health T. Schneider P3.26	Awareness-raising actions for the populations living in the vicinity of a nuclear power plan	J. Bertho	P3.21
of radioactive cobalt oxide particles Individual monitoring after radiological emergency: pros and cons of active and passive V. Chumak P3.24 From Three Miles Island to Fukushima: an evaluation of communication management in responding to radiological and nuclear emergencies Common challenges and research issues for fostering preparedness and response to health T. Schneider P3.26		P. Almeida	P3.22
dosimetry From Three Miles Island to Fukushima: an evaluation of communication management in responding to radiological and nuclear emergencies Common challenges and research issues for fostering preparedness and response to health T. Schneider P3.26		C. Berthomieu	P3.23
responding to radiological and nuclear emergencies Common challenges and research issues for fostering preparedness and response to health T. Schneider P3.26		V. Chumak	P3.24
	-	M. Beserra	P3.25
		T. Schneider	P3.26

Big projects / platforms / E&T	Author	Poster Number
Patient dose monitoring systems as education and training tools in radiation protection	A. Figueira	P4.1

Conference Programme Poster Session 2



Advancing continuous education in the radiology department: case example through a novel software that quantifies repeated scans in CT	N. Fitousi	P4.2
EMN for radiation protection - an evolving European metrology network	O. Hupe	P4.3

EMN for radiation protection - an evolving European metrology network

O. HUPE', B. KHANBABAEE', A. RÖTTGER', H. ZUTZ', T. SIISKONEN', R. NYLUND', A. VERES', V. SOCHOR', M. PINTO', M. DERLACINSKI', R. IOAN', A. SABETA', R. BERNAT', C. ADAM-GUILLERMIN'O, J.G. ALVES', M. CALDEIRA', D. GLAVIČ-CINDRO'', S. BELL'', B. WENS'', L. PERSSON'', M. ŽIVANOVIĆ'

oliver.Hupe@ptb.de

The European Council DIRECTIVE 2013/59/EURATOM laying down the basic safety standards for protection against the dangers arising from exposure to ionizing radiation is currently the main European regulation on ionizing radiation. The practical implementation of the European basic safety standards has become more complex due to the lack of consideration of the metrological implications and the adaptation to new technological developments, which lead to new standards, technological innovations, and improved capabilities. It was considered by EURAMET to be of a vital importance to have a metrology network that acts as a focal point between the metrology communities and the relevant radiation protection stakeholders, including regulators, standardization bodies, manufacturers, users of radiation sources and international organizations and radiation protection platforms.

One of the most important tasks of this European Metrology Network (EMN) for Radiation Protection is to give a strong voice to the field of radiation protection metrology in Europe, so that it can provide responsible guidance and support to future technological developments. Additionally, metrological competence and capacity are essential to determine ambient or occupational exposures and urgent metrological needs exist in case of emergency situations.

The EMN for Radiation Protection is in operation since 2021. The first Chair, Annette Röttger (PTB, Germany), Vice-Chair, Teemu Siiskonen (STUK, Finland) and Secretary Behnam Khanbabaee (PTB, Germany) have been elected. At the second meeting in 2022, first actions have been identified. In this contribution, the planned actions and next steps will be presented.

https://www.euramet.org/european-metrology-networks/radiation-protection/

The supporting project 19NET03 supportBSS has received funding from the EMPIR programme co-financed by the Participating States and from the European Union's

¹ Physikalisch-Technische Bundesanstalt (PTB), Braunschweig, Germany

² Radiation and Nuclear Safety Authority (STUK), Finland

³ Commissariat à l'Énergie Atomique et aux Énergies Alternatives (CEA), France

⁴ Czech Metrology Institute (CMI), Czech Republic

⁵ Italian National Institute of Ionising Radiation Metrology (ENEA-INMRI), Italy

⁶ Central Office of Measures (GUM), Poland

⁷ INCD pentru Fizica si Inginerie Nucleara "Horia Hulubei" (IFIN-HH), Romania

⁸ Institute of Metrology of Bosnia and Herzegovina (IMBiH), Bosnia and Herzegovina

⁹ Ruđer Bošković Institute (IRB), Croatia

¹⁰ Institut de Radioprotection et de Sureté Nucléaire (IRSN), France

¹¹ Instituto Superior Técnico, LPSR-LMRI, (IST), Portugal

¹² Jožef Stefan Institute (JSI), Slovenia

¹³ National Physical Laboratory (NPL), United Kingdom

¹⁴ Belgian Nuclear Research Centre (SCK CEN), Belgium

¹⁵ Swedish Radiation Safety Authority (SSM), Sweden

¹⁶ Vinca Institute of Nuclear Sciences (VINS), Serbia

Horizon 2020 research and innovation programme.