



ERPW2024

European Radiation Protection Week 2024

11th-15th November 2024 | ROME

Organized by



In collaboration with



Conference Programme Outline

TUESDAY - November 12, 2024			
08:30 - 09:30	Registration (Foyer)		
09:30 - 09:45	Welcome (Auditorium)		
09:45 - 10:15	Plenary lecture - <i>Cristina NUCCETELLI</i> (Auditorium)		
10:15 - 11:15	Session 1 (Auditorium)		
11:15 – 11:45	Coffee break		
11:45 – 12:41	Session 1 (Auditorium)		
12:45 – 13:15	MELODI Awards (Auditorium)		
13:15 – 14:15	Lunch		
14:15 – 16:20	Session 2A Auditorium 14:15 – 15:35	Session 2B Sirio 14:15 – 15:27	Session 2C Vega 14:15 – 15.59
	Poster session P1 and Tech Sharing Corner Foyer 15:40 – 16:20		
16:20 – 16:50	Coffee break		
16:50 – 18:22	Session 3A Auditorium 16:50 – 18:22	Session 3B Sirio 16:50 – 18:18	Session 3C Vega 16:50 – 18:02
19:00 – 22:00	Welcome party		

WEDNESDAY - November 13, 2024			
09:00- 09:30	Plenary Lecture - <i>Christophe BADIE</i> (Auditorium)		
09:30 - 11:00	Session 4 (Auditorium)		
11:00 - 11:30	Coffee break		
11:30 -13:00	Session 5A Auditorium 11:30 – 12:30	Session 5B Sirio 11:30 – 12:22	Tech Sharing Corner Foyer 11:30 – 12:30
	Poster session P2 Foyer 12:30 – 13:00		
13:00 – 14:00	Lunch		
14:00 – 16:00	Session 6A Auditorium 14:00 – 15:16	Session 6B Sirio 14:00 – 15:32	Session 6C Vega 14:00 – 15:16
	Poster session P3 Foyer 15:16 – 16:00		
16:00 – 16:30	Coffee break		
16:30 – 18:30	Session 7A Auditorium 16:30 – 18:18	Session 7B Sirio 16:30 – 18:30	Session 7C Vega 16:30 – 17:58
20:30	Gala dinner		

THURSDAY - November 14, 2024			
09:20 - 09:50	Plenary Lecture – <i>Vincenzo VALENTINI</i> (Auditorium)		
09:50 - 11:00	Session 8 (Auditorium)		
11:00 - 11:30	Coffee break		
11:30 – 13:00	Session 9 (Auditorium)		
13:00 – 14:00	Lunch		
14:00 – 15:30	Session 10A Auditorium 14:00 – 15:00	Session 10B Sirio 14:00 – 14:52	Session 10C Vega 14:00 – 14:40
	Poster session P4 and Tech Sharing Corner Foyer 15:00 – 15:30		
15:30 – 16:00	Coffee break		
16:00 - 16:25	EURAMED Awards (Auditorium)		
16:25 – 18:09	Session 11 (Auditorium)		
18:09 – 18:30	Closing remarks (Auditorium)		

Main Conference Programme

TUESDAY - November 12, 2024

- 08:30 **Registration**
09:30 **Opening session**
09:45 **Facing the Challenges of NORM: Strategies for Radiological Protection**
 ID 222
 Plenary Lecture *Cristina Nuccetelli* (introduced by *Paola Fattibene*)

10:15 - 12:41

SESSION 1: CURRENT SCIENTIFIC DEVELOPMENTS AND CHALLENGES FOR THE APPLICATION OF ENVIRONMENTAL RADIOLOGICAL PROTECTION

Room: Auditorium

Chairpersons: Almudena Real Gallego

- 10:15 **Science-based evolution of the ICRP reference animals and plants approach**
 ID 72
 Jacqueline Garnier-Laplace - Invited speaker
- 10:35 **Current status of ICRP Task Group review of the potential role of ecosystem services in environmental radiological protection**
 ID 85
 Marie Simon Cornu - Invited speaker
- 10:55 **Considering the environment when applying the system of radiological protection**
 ID 185
 Christelle Adam-Guillermin - Invited speaker

11:15 – 11:45

Coffee break

- 11:45 **Addressing environmental radiological protection in the framework of reasonableness and tolerability**
 ID 39
 Thierry Schneider - Invited speaker

- 12:05 **Atmospheric Be-7: its importance in radioprotection, environmental physics, and space weather. Data collected and preliminary analysis**
ID 104
Alessandro Rizzo - Oral
- 12:17 **Analysis and prediction of radionuclides effects in ecosystems at multiple scales**
ID 144
Frédéric Alonzo - Oral
- 12:29 **AOP in the context of radioecology: challenges and insights**
ID 183
Sandrine Frelon - Oral
-

12:45 – 13:15

Room: Auditorium

12:45 **MELODI Awards**

13:15 -14:15

Lunch

14:15 – 15:35

SESSION 2A: RADIATION PROTECTION IN MEDICAL APPLICATIONS (I)

Room: Auditorium

Chairpersons: Marie Davídková, John Damilakis

- 14:15 **Streamlining the determination of Diagnostic Reference Levels per clinical indication (DRLsci) for computed tomography at hospital CUF Santarém, Portugal**
ID 150
Madaleno Diogo - Oral
- 14:27 **Context-aware software for education and training**
ID 168
Mahta Mazloumi - Oral

- 14:39 **Assessment of patient's awareness and knowledge of radiation dose and risks associated with dental radiography and computed tomography: a questionnaire based study**
ID 69
Salome Kiparoidze - Oral
- 14:51 **A validated, vendor-independent, automatic tool for patient size-specific-dose-estimate calculation in adult abdomino-pelvic CT**
ID 50
Eric Pace - Oral
- 15:03 **Automatic reconstruction of patient-specific whole-body CT**
ID 79
Isidora Sofía Muñoz Hernández - Oral
- 15:15 **The IRIDE project for personalized retinoblastoma treatment with brachytherapy**
ID 170
Micol De Simoni - Oral
- 15:27 **Virtual training helps radiation protection: a free tool for interventional staff**
ID 13
Hugo de las Heras Gala - Flash
- 15:31 **Investigation and feasibility study of a new compact X-ray dark-field imaging setup and corresponding image analysis and optimization**
ID 196
Xiaolei Yan - Flash

14:15 – 15:27

SESSION 2B: PLANNED AND EXISTING EXPOSURE OF WORKERS DUE TO ARTIFICIAL RADIATION IN NORMAL OPERATIONAL CONDITIONS

Room: Sirio

Chairpersons: Riccardo Di Liberto, Michael Discher

- 14:15 **What do we need to use the full range of ICRU Report 95?**
ID 102
Rick Tanner - Invited speaker
- 14:35 **An artificially intelligent system for defect detection in leaded personal protective equipment**
ID 177
Niamh Belton - Oral

- 14:47 **Fitness-to-work and occupational exposure to ionizing radiation: criteria for the evaluation in workers with neoplastic diseases**
ID 26
Giulia Castellani - Oral
- 14:59 **A different method for assessing electric field exposure in hospital environments**
ID 105
Riccardo Di Liberto - Flash
- 15:03 **Occupational radiation received by orthopaedic surgeons and risk to workers**
ID 34
Stephen Barnard - Flash
- 15:07 **Design of environments dedicated to the handling of unsealed sources and the production of radiopharmaceuticals**
ID 139
Gian Marco Contessa - Oral
- 15:19 **An estimation of the value of a man Sievert**
ID 19
Andreas Engström - Flash
- 15:23 **Multifunction air-radiation monitoring system suited for early warning as well for environmental surveillance**
ID 2
Maurizio Salmi - Flash

14:15 – 16:03

SESSION 2C: ADVANCES IN PREVENTING AND MANAGING EXPOSURE TO RADON AND NORM

Room: Vega

Chairpersons: Yevgeniya Tomkin, Warren John

- 14:15 **Radon risk communication: lessons for radiation protection**
ID 137
Tanja Perko – Invited speaker
- 14:35 **Comparative analysis of end-users' perceptions of the reuse of NORM-contained by-products in building materials**
ID 60
Love Nazanin - Oral

- 14:47 **NORM database in the Regulatory Italian framework**
ID 121
Sonia Fontani - Oral
- 14:59 **Considerations of necessary modification of existing waste disposal and recovery options when applied towards NORM**
ID 135
Hubert Makuła - Oral
- 15:11 **Characterization of the FYCDY-P30 electrostatic collection chamber for measurements of Rn-220 and Rn-222 at ENEA INMRI laboratories**
ID 57
Antonio De Donato – Luca Carrarelli - Oral
- 15:23 **Radon exhalation campaign to estimate greenhouse gas emissions using the ‘Radon Tracer Method’ – JRC-Ispra**
ID 36
Serena Mancini - Oral
- 15:35 **Evaluating the impact of citizen science projects in the field of radiation protection: the radon case**
ID 78
Mabel Akosua Hoedoafia - Oral
- 15:47 **Perceptions, performances and presentations of radon in health spas**
ID 122
Robbe Geysmans - Oral

15:40 – 16:20

Tech Sharing Corner (for the list, go to page 35)

15:40 – 16:20

Poster session P1 (poster lists are from page 31)

16:20– 16:50

Coffee break

16:50 – 18:22

SESSION 3A: RADIATION PROTECTION IN MEDICAL APPLICATIONS (II)

Room: Auditorium

Chairpersons: Christoph Hoeschen, Osvaldo Rampado

- 16:50 **Foetal dose estimation in pregnant patients undergoing CT examinations using different dose calculators**
ID 179
Eszter Kolozsi - Oral
- 17:02 **Therapeutic ¹³¹I dose for hyperthyroidism treatment of unifocal autonomy in compliance with Council Directive 2013/59/Euratom optimization principle**
ID 190
Cristina Canzi - Oral
- 17:14 **Development of an AI-powered virtual assistant for radiation dose management in pregnant patients undergoing CT and X-ray guided interventional procedures**
ID 12
John Damilakis - Oral
- 17:26 **Main achievements of the HARMONIC Project - Health effects of cardiac fluoroScopy and MODerN radiotherapy in paediatricCs**
ID 41
Isabelle Thierry-Chef - Oral
- 17:38 **Comparative analysis of effective doses for children undergoing chest CT examinations: photon-counting vs energy integrating detector CT**
ID 40
Patrizia Kunert - Oral
- 17:50 **A national pilot project for the implementation of clinical audit indicators in interventional radiology**
ID 127
Monica Cavallari - Oral
- 18:02 **Radiobiological kidney protection: assessing the effect of different coadministration schedules with human recombinant antioxidant rA1M and ¹⁷⁷Lu-octreotide**
ID 164
Nishte Rassol - Flash

- 18:06 **Proposal of a new approach for molecular radiotherapy dosimetry**
ID 199
Elena Solfaroli Camillocci - Flash
- 18:10 **Assessment of the current CT protocols in use for oncological imaging in Slovenian hospitals: iViolin project**
ID 92
Nadin Abualroos - Flash
- 18:14 **Assessment of dental radiography quality assurance practices among dental offices equipped with intraoral X-ray devices in Georgia**
ID 131
Davit Nadareishvili - Flash
- 18:18 **A free and open-source semi-automated quality control workflow for planar X-ray images designed for integration into QATRACK+**
ID 5
Clarissa Attard - Flash

16:50 – 18:18

SESSION 3B: DOSIMETRY IN EXTREME SITUATIONS: HIGH DOSE RATES, MIXED FIELD, LOW DOSE RATES, UNKNOWN RADIATION FIELDS

Room: Sirio

Chairpersons: Sebastian Trinkl, Thierry Schneider

- 16:50 **Dosimetry in extreme situations: radiological emergencies and armed conflicts**
ID 223
Clemens Woda - Invited speaker
- 17:10 **Radiation protection in the experimental hall of the Elettra storage ring**
ID 130
Arianna D'Angelo - Oral
- 17:22 **RENEB interlaboratory comparison – biological dosimetry for doses higher than 2.5 Gy**
ID 24
Martin Bucher - Oral
- 17:34 **Radiation protection and safety for the EuPraxia@SPARC_LAB project**
ID 21
Raffaella Donghia - Oral

- 17:46 **Calibration of dosimetric instruments in Poland**
ID 149
Alicja Jakubowska - Oral
- 17:58 **Preliminary beam dump design related to the Frascati Laser for Acceleration and Multidisciplinary Experiments (FLAME) installation upgrade**
ID 158
Federico Chiarelli - Oral
- 18:10 **Testing different luminescence measurement protocols for display glass as an accident dosimeter**
ID 81
Michael Discher - Flash
- 18:14 **An interlaboratory comparison on EPR on tooth enamel within the EURADOS WG10**
ID 184
Sara Della Monaca - Flash
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16:50 –18:02

SESSION 3C: DOSIMETRY OF MEDICAL OPERATORS

Room: Vega

Chairpersons: Francesco Rossi, Rick Tanner

- 16:50 **Proton therapy – specific radiation protection issues**
ID 3
Agnieszka Szumska - Oral
- 17:02 **Impact of clinical workloads on shielding evaluation in interventional radiology**
ID 125
Michelangelo Biondi - Oral
- 17:14 **Development of a spreadsheet for calculating barrier thickness for radiotherapy bunker**
ID 128
Andrea Guasti - Oral
- 17:26 **Radiation dose monitoring data analysis to estimate radiological risk allowance for interventional radiology staff**
ID 124
Eleonora Bortoli - Oral
- 17:38 **Exposure to activated air and walls of clinical staff in proton therapy centers**
ID 181
Gonzalo García-Fernández - Oral



17:50

Occupational radiation exposure of medical staff involved in ERCP

ID 49

Satoru Matsuzaki - Oral

WEDNESDAY - November 13, 2024

09:00 **New insights in leukaemogenesis**
ID 101
Plenary Lecture *Christophe Badie* (introduced by *Katalin Lumniczky*)

9:30 – 11:00

SESSION 4: FUTURE APPROACHES FOR LOW DOSE RESEARCH

Room: Auditorium

Chairpersons: Simon Bouffler

09:30 **Low Dose Research; the challenges and how to progress**
ID 221
Niwa Ohtsura - Invited speaker

09:40 **Exploiting sequencing technology for low dose research**
ID 213
Uchimura Arikuni - Invited speaker

10:00 **Exploiting tissue stem cell technology for low dose research**
ID 212
Otsuka Kensuke - Invited speaker

10:20 **Round table and open discussion**

11:00 - 11:30

Coffee break

11:30 – 12:30

SESSION 5A: BIOLOGICAL AND HEALTH EFFECTS OF LOW DOSE EXPOSURE (I)

Room: Auditorium

Chairpersons: Katalin Lumniczky, Giorgio Baiocco

11:30 **Investigating persistence of radiation damage in haematopoietic stem cell subpopulations induced by direct irradiation or by bystander signals**
ID 154
Katalin Lumniczky - Oral

- 11:42 **Sex driven effects of osteoimmunogenic cells after low-dose irradiation**
ID 67
Lena Winterling - Oral
- 11:54 **Biologically-based assessment of minimum latency time between radiation exposure and cancer**
ID 32
Markus Eidemüller - Oral
- 12:06 **Effects of low-dose radiation on senescence in the context of aging and associated risks disease**
ID 61
Dmitry Klokov - Oral
- 12:18 **PLEASE MIND THE GAPS! How AOP approach for radiation-induced CVD strengthen the role of biology in radiation protection?**
ID 73
Omid Azimzadeh – Oral

11:30 – 12:22

SESSION 5B: EXPOSURE OF MEMBERS OF THE PUBLIC AND ENVIRONMENT WITH REGARDS TO LEGACY, WASTE MANAGEMENT AND DECOMMISSIONING ISSUES

Room: Sirio

Chairpersons: Gian Marco Contessa, Esposito Alfonso Maria

- 11:30 **Estimation of nearfield inhalation doses from decommissioning of contaminated buildings**
ID 43
Sreeyuth Lal - Oral
- 11:42 **Clearance levels bureaucracy and radiation protection**
ID 47
Alfonso Maria Esposito - Oral
- 11:54 **Drone-gamma: unmanned airborne vehicle for remote detection of gamma-emitting radionuclides**
ID 17
Javier Guillén - Oral

- 12:06 **Evidence of contamination of the Urdzhar district of Abai, Kazakhstan, from the Chinese nuclear weapons testing program at Lop Nor**
ID 110
Richard Harbron - Oral
- 12:18 **Statistical analysis of the sampling grid for the radiological characterization of a site**
ID 166
Carlo Sabbarese – Flash

11:30 – 12:30

Tech Sharing Corner (for the list, go to page 35)

12:30 – 13:00

Poster session P2 (poster lists are from page 31)

13:00 – 14:00

Lunch

14:00 – 15:16

SESSION 6A: BIOLOGICAL AND HEALTH EFFECTS OF LOW DOSE EXPOSURE (II)

Room: Auditorium

Chairpersons: Katalin Lumniczky, Simonetta Pazzaglia

- 14:00 **Exploring the systemic impact of ionizing radiation: miRNA changes in blood-derived extracellular vesicles and their cell-specific effects**
ID 87
Simone Moertl - Oral
- 14:12 **Effects of acute and chronic irradiation on the hippocampus in apolipoprotein E deficient mice**
ID 112
Francesca Antonelli - Oral

- 14:24 **Neutron biological effectiveness: tackling variations as a function of incident energy and depth in a human-sized phantom**
ID 172
Giorgio Baiocco - Oral
- 14:36 **Transcriptional radiation response signature of human skin**
ID 55
Lourdes Cruz-Garcia - Oral
- 14:48 **Implementation of the cytokinesis block micronucleus assay for biodosimetry purposes at NRPI**
ID 156
Jakub Vávra - Flash
- 14:52 **Low dose radiation bystander effects through IGFBP5, a component of the senescent cell secretome**
ID 126
Domenico Aprile - Flash
- 14:56 **Tritiated micro-particles: computational dosimetry and analysis of radiobiological in-vitro data**
ID 176
Alice Mentana - Flash
- 15:00 **Evaluation of DNA damage and genetic instability in interventional radiologists**
ID 162
Dominika Kochanová - Flash
- 15:04 **Cytogenetic analysis in peripheral blood lymphocytes of patients exposed to low dose ionizing radiation in fluoroscopically guided interventional procedures**
ID 152
Dimka Georgieva - Flash
- 15:08 **Radiation signature in plasma metabolome of total-body Irradiated nonhuman primates and clinical patients**
ID 115
Ales Tichy - Flash
- 15:12 **Dose-effect relationships of dicentric formation determined by fully- & semi-automated dicentric evaluation using different DCSScore classifiers after 3 h or 24 h colcemid treatment**
ID 22
Christina Beinke - Flash

14:00 – 15:32

**SESSION 6B: EXPOSURE OF MEMBERS OF THE PUBLIC, WORKERS AND ENVIRONMENT
FOLLOWING A MAJOR NUCLEAR OR RADIOLOGICAL ACCIDENT OR INCIDENT (I)**

Room: Sirio

Chairpersons: Andrea Malizia, Benjamin Zorko

- | | |
|-------|--|
| 14:00 | Strengthening Ukraine's health sector capacity to respond to nuclear emergencies
ID 226
<i>Kenbayeva Zhanat - Invited speaker</i> |
| 14:20 | Balancing small modular reactor emergency preparedness with the importance of traditional food consumption in the Canadian north
ID 86
<i>Luke Lebel – Oral</i> |
| 14:32 | Inter-comparison exercise within the NATO Project BIOPHYMETRE
ID 202
<i>Antonella Testa - Oral</i> |
| 14:44 | Thyroid cancer incidence risk in the residents around the Semipalatinsk nuclear test site, Kazakhstan
ID 114
<i>Evgenia Ostroumova - Oral</i> |
| 14.56 | Assessment of uncertainties and errors in post-Chernobyl dosimetry
ID 204
<i>Vladimir Drozdovitch - Oral</i> |
| 15:08 | Risk of haematological malignancies in Gomel and Mogilev regions of Belarus after Chernobyl fallout
ID 11
<i>Ljubica Zupunski - Oral</i> |
| 15.20 | Atmospheric transport and deposition of radon-222 and its progeny using flexpart
ID 38
<i>Jens Peter Frankemölle – Oral</i> |

14:00 – 15:16

SESSION 6C: PATIENT MEDICAL DOSIMETRY

Room: Vega

Chairpersons: Stefania Delle Canne, Michael Laßmann

- 14:00 **Improving out-of-field dosimetry in modern radiotherapy: insights from EURADOS WG9**
ID 220
Marie Davidková - Invited speaker
- 14:20 **Feasibility of a novel video frame interpolation algorithm for radiation dose reduction in the catheterisation laboratory using AI-generated synthetic angiographic images**
ID 157
Paddy Gilligan - Oral
- 14:32 **EURADOS roadmap for internal dosimetry in radiopharmaceutical therapy: vision towards dosimetry-based prescription**
ID 27
Ramona Wilhelmina Bouwman - Oral
- 14:44 **Assessment of effective dose conversion coefficients for categories of radiological and nuclear medicine examinations: an Italian MoH-ISS project**
ID 134
Oswaldo Rampado - Oral
- 15:56 **Age and biological sex influences the biodistribution and dosimetry of ¹³¹I in Sprague Dawley rats**
ID 165
Anja Schroff - Oral
- 15:08 **A Monte Carlo calculation of cumulative radiation dose from multiple imaging modalities in paediatric interventional cardiology**
ID 54
Angelo Giannone - Flash
- 15:12 **A dosimetric evaluation of gynaecological cancer patients undergoing HDR brachytherapy using a cobalt-60 source**
ID 82
Chris Doudoo - Flash

15:16 – 16:00

Poster session P3 (poster lists are from page 31)

15:16 – 16:00

Tech Sharing corner (for the list, please go to page 35)

16:00 – 16:30

Coffee break

16:30– 18:10

SESSION 7A: PIANOFORTE - BUILDING A COLLABORATIVE FUTURE FOR RP: INTEGRATING COMMUNITY EFFORTS AND OPEN CALL SUCCESSES

Room: Auditorium

Chairpersons: Jacquelin Garnier-Laplace, Sara Della Monaca

- 16:30 **PIANOFORTE - Building a collaborative future for radiation protection integrating community efforts and open call successes**
ID 209
Jean-Christoph Gariel - Invited speaker
- 16:50 **How the processes of prioritisation, selection of call topics and review of proposals are developing and evolving**
ID 225
Filip Vanhavere - Invited speaker
- 17:10 **The SONORA Project: toward safe optimized and personalized radiology and radiotherapy procedures for pregnant patients (PIANOFORTE 2013-15)**
ID 195
Francesca De Monte - Oral
- 17:18 **DISCOVER: Dissecting radiation effects into the Cerebellum microEnvironment driving tumour promotion**
ID 206
Simonetta Pazzaglia - Oral
- 17:26 **Synergy between IMMPRINT and IMAGEOMICS projects to improve breast cancer patient health and safety**
ID 205
Géza Sáfrány - Oral
- 17:34 **Improvements in atmospheric dispersion modelling and protective action strategies in case of nuclear detonations – The PREDICT Project**
ID 48
Clemens Woda - Oral
- 17:42 **LuTADose: Personalized dosimetry to improve the clinical outcome of prostate cancer patients treated with ¹⁷⁷Lu/²²⁵Ac-PSMA targeted therapies**
ID 216
Michel Koole - Oral
- 17:50 **Preliminary results from the first year of the research project PIANOFORTE: CITISTRA**
ID 99
Jan Helebrant – Oral

- 17:58 **In vivo patient-specific real-time dosimetry for adaptive radiotherapy (VERIFIED). WP1 - Development of Anthropomorphic Phantoms (PIANOFORTE)**
ID 191
Luana de Freitas Nascimento - Oral
- 18:06 **A vision for “FAIR” data and infrastructures in radiation protection**
ID 108
Liz Ainsbury – Oral

16:30 – 18:42

SESSION 7B: EXPOSURE OF MEMBERS OF THE PUBLIC, WORKERS AND ENVIRONMENT FOLLOWING A MAJOR NUCLEAR OR RADIOLOGICAL ACCIDENT OR INCIDENT OR MALEVOLENT NUCLEAR OR RADIOLOGICAL ACT (II)

Room: Sirio

Chairpersons: Olivier Isnard, Florian Gering

- 16:30 **Evaluate the radiological dispersion devices consequences through numerical simulations**
ID 96
Andrea Malizia - Oral
- 16:42 **Modelling the effect of counter-measures on radiological assessment**
ID 29
Mario Gaspar Quarenta - Oral
- 16:54 **Framework for localization of atmospheric contamination source with neural networks**
ID 148
Anna Wawrzyńczak-Szaban - Oral
- 17:06 **Characterization of using a portable OSL/IRSL reader for in situ dose assessments of NaCl pellets**
ID 4
Maria Karampiperi - Oral
- 17:18 **Enhancing EPR through comprehensive theoretical and practical training programs**
ID 109
Benjamin Zorko - Oral

- 17:30 **The hazard assessment for the Italian national plan for the management of nuclear and radiological emergencies**
ID 140
Silvia Scarpato - Oral
- 17:42 **RescEU CBRN strategic reserve in Finland**
ID 11
Maarit Muikku - Oral
- 17:54 **Methodology for evaluating radiological consequences from attacks on spent fuel dry casks**
ID 42
Luke Lebel - Oral
- 18:06 **Theoretical study on physiochemical properties and dispersion of radioactive particles/aerosols and their effect on minimum detectable dose in exposed humans for European spallation source releases**
ID 107
Belikse Ramljak - Flash
- 18:10 **Mapping radiation in Italy – An innovative model for monitoring and alarm**
ID 123
Riccardo Quaranta - Flash
- 18:14 **Efficiency analysis and detection limits of HPGe detectors in drinking water monitoring**
ID 161
Jonathan Sundström - Flash
- 18:18 **OpenRadiation: a collaborative project for radioactivity measurements in the environment by the public**
ID 64
Jean-Marc Bertho - Flash
- 18:22 **Strengthening the EU capability in CBRN protection with the design of novel laboratories for RN identification.**
ID 97
Giada Gandolfo - Flash
- 18:30 **Novel approach to mitigate the scanning orientation effects in radiochromic film dosimetry**
ID 117
Hassna Bantan – Flash

16:30 – 17:58

SESSION 7C: REDUCING SCIENTIFIC AND SOCIETAL UNCERTAINTIES RELATED TO RADON AND NORM

Room: Vega

Chairpersons: Tanja Perko, Balázs Madas

- 16:30 **Advances in risk management of radon & NORM through the RadoNorm Project**
ID 15
Warren John - Invited speaker
- 16:50 **Radon biology – past, present and future**
ID 208
Maria Gomolka - Invited speaker
- 17:10 **Lung cancer mortality attributable to residential radon in Germany**
ID 14
Felix Heinzl - Oral
- 17:22 **Pathogenic timeline and radiation risk in radon-exposed rats for lung cancer and its histological types from multi-stage clonal expansion models**
ID 25
Stefania Trentin - Oral
- 17:34 **The effect of asthma and COPD on the radiation burden of the bronchial airways**
ID 53
Peter Fűri - Oral
- 17:46 **Parameter uncertainty analysis of the effective dose for intake of Radon progeny in underground mines using INTDOSKIT tool**
ID 56
Thomas Makumbi - Oral

THURSDAY - November 14, 2024

09:20 **From protection to participation: the role of ART in radiation protection and oncology**
ID 218
Plenary Lecture *Vincenzo Valentini* (introduced by *Antonella Rosi*)

9:50 – 11:00

SESSION 8: SITUATION IN UKRAINE (ROUND TABLE)

Room: Auditorium

Chairpersons: Vadim Chumak, Rodolphe Gilbin

09:50 **Disinformation as the major threat in nuclear and radiation research: Ukrainian experience during the full-scale invasion of Russia**
ID 215
Olena Pareniuk - Invited speaker

10:10 **How the war in Ukraine has affected the ALLIANCE Platform field of research**
ALLIANCE (Rodolphe Gilbin)

10:15 **How the war in Ukraine has affected the EURADOS Platform field of research**
EURADOS (Vadim Chumak)

10:20 **How the war in Ukraine has affected the EURAMED Platform field of research**
EURAMED (François Paris)

10:25 **How the war in Ukraine has affected the MELODI Platform field of research**
MELODI (Balázs Madas)

10:30 **How the war in Ukraine has affected the NERIS Platform field of research**
NERIS (Paulo Nunes)

10:35 **How the war in Ukraine has affected the SHARE Platform field of research**
SHARE (Yevgeniya Tomkiv)

10:40 **Discussion**

11:00 - 11:30

Coffee break

11:30 – 13:00

SESSION 9: BEYOND THE SILO: UNION PROGRAMMES AND PRIORITIES THAT INTERSECT WITH RADIATION PROTECTION RESEARCH AND HOW TO PUT SYNERGIES INTO PRACTICE

Room: Auditorium

Chairpersons: Florian Rauser

11:30

Introduction

Florian Rauser

Domenico Rossetti di Valdalbero

(DG Research and Innovation, EURATOM Research)

Input from *Stefan Mundigl*

(DG Energy, Radiation Protection and Nuclear Safety), presentation given on-site by Florian Rauser

Ida Cosentino

(DG European Civil Protection and Humanitarian Aid Operations, rescEU CBRN and medical capabilities)

Daria Julkowska

(EJP Rare Diseases, INSERM) – remote talk

João H. Garcia Alves

(European Metrology Network Radiation Protection, Instituto Superior Técnico)

Gianni D'Errico

(European Partnership on Personalised Medicine, Fondazione Toscana Life Sciences)

12:15

Panel discussion with speakers and questions from the session

13:00 – 14:00

Lunch

14:00 – 15:00

SESSION 10A: DEBATE ON SKIN DOSIMETRY

Room: Auditorium

Chairpersons: Liz Ainsbury

-
- 14:00 **Towards an improved computational phantom for skin dosimetry: current status and future directions of EURADOS Task Group 6.3**
ID 207
Jonathan Eakins - Invited speaker
- 14:25 **Panel of discussion**
Osvaldo Rampado
- 14:35 **Q&A session**
-

14:00 – 14:56

SESSION 10B: BIOLOGICAL EFFECTS OF LOW DOSE EXPOSURE DURING MEDICAL APPLICATIONS

Room: Sirio

Chairpersons: Simone Moertl, Georgia Terzoudi

- 14:00 **Molecular markers for biological dosimetry in radiation protection, cancer risk assessment and optimization radiotherapy**
ID 155
Kosik Pavol - Oral
- 14:12 **Biological effects of radiation exposure in patients treated with X-ray-guided endovascular aortic repair**
ID 119
Tian Yeong - Oral
- 14:24 **Evaluation of oncogenic risk and cumulative dose from radiological investigations in intensive care unit patients: variability between BEIR VII vs RADRAT vs ICRP 103 vs US EPA model risks**
ID 51
Chiara Zanon - Oral
- 14:36 **Development of novel piperazine derivatives as enhanced radioprotective agents**
ID 90
Vojtěch Chmil - Flash
- 14:40 **Individual radiosensitivity of breast cancer patients**
ID 163
Katarína Vigašová - Flash
- 14:44 **Implementation of theranostic system for nuclear medicine application: preliminary biological data**
ID 94
Ludovica Binelli - Flash

14:48 **In vitro study of radiosensitivity in colorectal cancer cell lines associated with Lynch syndrome**
ID 16
Jayne Moquet – Flash

14:00 – 14:44

SESSION 10C: COSMIC RADIATION

Room: Vega

Chairpersons: Francesca Antonelli, Jean-Marc Bertho

14:00 **Long-term radiation signal persistence in urine and blood: a two-year analysis in non-human primates exposed to an acute 4 Gy total body gamma radiation dose**
ID 188
Evagelia Laiakis - Oral

14:12 **Biological effects of chronic low dose rate exposures of neutrons on plants**
ID 143
Carla Sandri - Oral

14:24 **Space radiation dosimetry in aerospace**
ID 187
Patrycja Baldyga - Oral

14:36 **Radiobiological effects of protons or gamma rays and UVB radiation on human cells: implications for radiation protection**
ID 153
Angeliki Gkikoudi - Flash

15:00 15:30

Poster session P4 (poster lists are from page 31)

15:00 15:30

Tech Sharing Corner (for the list, go to page 35)

15:30 – 16:00

Coffee break

16:00 –16.25

Room: Auditorium

16:00 **EURAMED Awards**

16:25 – 18:09

SESSION 11: REVOLUTIONIZING RADIATION PROTECTION WITH AI

Room: Auditorium

Chairpersons: Anja Almén, Evaristo Cisbani

- 16:25 **AI in dosimetry**
ID-224
Filip Vanhavere - Invited speaker
- 16:45 **AI-driven dosimetry: personalizing patient radiation safety**
ID 214
John Damilakis - Invited speaker
- 17:05 **AI-enhanced image reconstruction and image quality in medical imaging**
ID 219
Christoph Hoeschen - Invited speaker
- 17:25 **Ethical and regulatory considerations for AI in medical applications**
ID 211
Hugo de las Heras Gala - Invited speaker
- 17:45 **AI-driven framework for Internal dose assessment in radiological emergencies: integration of multiphysics, biokinetics, dose reconstruction, and in-vivo analysis**
ID 182
Shaheen Dewji - Oral
- 17:57 **Evaluating the robustness of AI-based models for patient dose optimization in medical imaging**
ID 194
Giorgia Stendardo - Oral

18:09-18:30

CLOSING REMARKS

Room: Auditorium

Poster sessions

Poster session 1

Foyer

Tuesday 15:55 – 16:20

An end-to-end Italian dosimetry audit for IMRT and VMAT: results of the OPRORA project

ID 197

Cinzia De Angelis

Development of self-assessment indicators for the implementation of a pilot clinical audit in interventional radiology

ID 129

Sveva Grande

Radioprotective and radiosensitizing effects of ginkgo biloba on the human lymphocytes against ionizing radiation as used in radiotherapy

ID 106

Sachin Gulati

FISH analysis of apparently simple translocations frequency in peripheral lymphocytes of victims of radiation accident in Bulgaria

ID 147

Ljubomira Hadjiiska

Focusing optics for high-resolution x-ray fluorescence imaging applications

ID 198

Kunal Kumar

Using Deep Learning Denoising Techniques for Low-Dose In Vivo Benchtop X-ray Fluorescence Computed Tomography

ID 193

Mahmoodian Naghmeh

CT Optimization for stroke diagnosis: is it only a protocol review?

ID 217

Eleonora Paulicelli

Effects of ionizing radiation and gold nanorods combined treatment on glioblastoma cells studied by Magnetic Resonance Spectroscopy: a possible Nuclear Medicine theragnostic tool

ID 95

Marco Ranaldi

Poster session 2

Foyer

Wednesday 12:30 – 13:00

Interventional radiologists have a higher rate of chromosomal damages in South Korea

ID 83

Seongjae Jang

Evaluation of spatial dose rates for work area of the steam generator primary side

ID 45

Kwangpyo Kim

Survey of physicians' perceptions of occupational exposure management: differences in perceptions by gender

ID 141

Tomoko Kuriyama

Implications of the realization of characterized reference radiation field in a Primary Standards Dosimetry Laboratory

ID 80

Luigi Rinaldi

Effect of furnishing on Monte Carlo dose estimation in nuclear medicine therapy protected rooms

ID 192

Claudio Andenna

Preliminary discussions on improving occupational radiation protection for pregnant female workers

ID 10

Yukie Izumoto

Standards and Quality: Laboratory for Calibration of Dosimetric and Radon Instruments in Poland

ID 151

Paulina Esa-Puchata

Radiation monitoring systems for the Top-Implart Proton Accelerator

ID 118

Claudio Poggi

Radiobiologic irradiation setups emulating medical, natural and occupational radiation conditions

ID 37

Tom Unterleiter

Poster session 3

Foyer

Wednesday 15:16 – 16:00

Characterization And Remediation Of 8 Underground Tanks Containing Waste Potentially Contaminated With ^3H And ^{14}C

ID 30

Federica Russo

TL and OSL dosimetry with both sintered and unsintered salt detectors

ID 201

Daniela Ekendahl

A digital incident reporting system for nuclear medicine therapy departments

ID 200

Tiziana Falcone

Interlaboratory Comparisons in Biological Dosimetry: National and International Collaborative Efforts

ID 89

Marcela Milanová

Improved data exchange in emergency preparedness applications

ID 160

Tuomas Peltonen

Emergency situations: safety and REMEDIATION

ID 138

Mattia Taroni

SRA and Roadmaps for Radiation Protection Metrology

ID 62

João Alves

The contribution of the ionising radiation Metrology Laboratory to legal metrology in Portugal

ID 68

João Alves

Poster session 4

Foyer

Thursday 15:00 – 15:30

Opuntia ficus-indica extract as potential natural radioprotector

ID 203

Clarice Patrono

Dicentrics and interphase cell survival dose response curves for cytogenetic biodosimetry of therapeutic exposure

ID 33

Volodymyr Vinnikov

Interlaboratory comparison of the dicentric chromosome assay within the medirabi project

ID 173

Johana Alaverdyan

Confounding influence of inter- and intra-individual variation in Gamma-H2AX foci for biological dosimetry estimates

ID 84

Danny Freestone

Construction of the first calibration curve "dose - response" in Kazakhstan for assessing individual quantitative dose by biodosimetry methods

ID 175

Laura Kenzhina

Cancer mortality and occupational exposure among Korean radiation workers

ID 63

Dalnim Lee

Bone marrow-derived extracellular vesicles from irradiated mice are able to induce senescence in the hematopoietic microenvironment

ID 113

Martina Forgács

Heritability of transcriptional response to ionizing radiation

ID 70

Morvay Petruta

Cellular response variations after X-ray irradiation with different energies

ID 59

Laura Ruspeckhofer

Immunofluorescent visualization of centromeres in metaphase chromosomes of lymphocytes: potential improvement in dose estimation accuracy of dicentric assay

ID 178

Oldrich Zahradnicek

Characteristics of cancer incidence among workers in the Korean aviation industry

ID 31

Soojin Park

Tech Sharing Corner

Foyer

Tuesday 15:55 – 16:20

Wednesday 11:30 – 12:30; 15:30 – 16:00

Thursday 15 – 15:30

Open Radiation

Jean-Marc Bertho

VR-application for medical radiation protection training (MediTrain VR)

Hugo de las Heras Gala

SIREN. Realtime System for reporting and collecting data in abnormal events in Nuclear medicine therapy.

Tiziana Falcone

Radonorm Aerosol Pilot Project Toolkit

Veronika Groma

RadoThor

Hubert Makuła

Development of an online dosimetry system for workers in Nuclear Medicine.

Giorgia Stendardo



Welcome Message

On behalf of the Organizing Committee, we wish to welcome you to the 2024 European Radiation Protection Week (ERPW).

European Radiation Protection Week (ERPW) is an annual, multidisciplinary event, which, under the Consortium of European Radiation Research Platforms (MEENAS), brings together experts and addresses topics related to radiation protection.

The ERPW meeting series was initiated in 2016 in Oxford (UK) and is supported by the European Radiation Research Platforms: MELODI (Multidisciplinary European Low Dose Initiative), EURADOS (European Radiation Dosimetry Group), EURAMED (European Alliance for Medical Radiation Protection Research), NERIS (European Platform on Preparedness for Nuclear and Radiological Emergency Response and Recovery), ALLIANCE (European Radioecology Alliance), and SHARE (European Platform for Social Sciences and Humanities in Ionising Radiation Research).

ERPW 2024 is being organized by Istituto Superiore di Sanità (ISS), Rome, and by the Italian Association of Radiation Protection (AIRP).

The conference aims to create a context for the presentation of scientific results aspiring to knowledge, sharing and discussion of current and emerging issues related to radiation protection research, and to provide a space for the exchange of ideas and the establishment of collaborative links.

We would like to express our sincere thanks to all the sponsors and patrons who have made this event possible.

The ERPW 2024 is about to start, enjoy the conference!

November 2024

ERPW 2024 Chair

For updates, visit the conference website:



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ERPW 2024 Venue

The ERPW 2024 conference will be held at the **Aurelia Auditorium Congress Center**, Via Aurelia 796, Rome



You can reach the conference venue by taxi or metro.

- From **Termini station** take the A Line towards Battistini and get off at Cornelia metro station (Piazza Irnerio exit). Then take bus 246 (Malagrotta direction) or, at the beginning of Via Aurelia, take bus 247 and get off at Aurelia Marvasi bus stop. At about 150 meters away, you will find the congress centre. Consider about 40 minutes to reach the venue.
- **Leonardo da Vinci International Airport** (Fiumicino) is 20 km away from the conference venue. From there you can take a taxi or the direct 'Leonardo Express' train to Termini Station. Consider about 80 minutes to reach the venue.
- From **Ciampino Airport** take the direct bus connection to Termini Station. Consider about 80 minutes to reach the venue.
- For more information, visit the conference venue website:





ERPW 2024 Social Events

WELCOME PARTY

Tuesday, November 12, 2024 at 19:00

The ERPW 2024 Welcome Party will be held at **Aurelia Auditorium Congress Center**, Via Aurelia 796, Rome

GALA DINNER

Wednesday, November 13, 2024 at 20:30

The ERPW 2024 Gala Dinner will be held at **Scuderie San Carlo**, Via Portuense, 959, 00148, Rome



The ERPW 2024 Sponsors

