



# ERPW2024

European Radiation Protection Week 2024

**11th-15th November 2024 | ROME**

**Organized by**



**In collaboration with**



## Conference Programme Outline

<b>TUESDAY - November 12, 2024</b>			
08:30 - 09:30	Registration (Foyer)		
09:30 - 10:00	Welcome (Auditorium)		
10:00 - 10:30	Plenary lecture - <i>Cristina NUCCETELLI</i> (Auditorium)		
10:30 - 11:10	Session 1 (Auditorium)		
<b>11:10 – 11:40</b>	<b>Coffee break</b>		
11:40 – 12:56	Session 1 (Auditorium)		
<b>13:00 – 14:00</b>	<b>Lunch</b>		
14:00 - 15:40	Session 2A Auditorium 14:00 – 15:20	Session 2B Sirio 14:00 – 15:20	Session 2C Vega 14:00 – 15:40
	Poster session P1 Foyer 15:20– 15:40		
<b>15:40 – 16:10</b>	<b>Coffee break</b>		
16:10 – 18:10	Session 3A Auditorium 16:10 – 18:10	Session 3B Sirio 16:10 – 17:38	Session 3C Vega 16:10 – 17:46
		Poster session P2 and Tech Sharing Corner Foyer 17:40-18:10	
18:10 – 18:40	MELODI Awards (Auditorium)		
<b>19:00 – 22:00</b>	<b>Welcome party</b>		

<b>WEDNESDAY - November 13, 2024</b>			
09:00- 09:30	Plenary Lecture - <i>Christophe BADIE</i> (Auditorium)		
09:30 - 11:00	Session 4 (Auditorium)		
<b>11:00 - 11:30</b>	<b>Coffee break</b>		
11:30 -13:00	Session 5A Auditorium 11:30 – 12:26	Session 5B Sirio 11:30 – 12:22	
	Poster session P3 Foyer 12:25– 13:00		
<b>13:00 – 14:00</b>	<b>Lunch</b>		
14:00 – 15:40	Session 6A Auditorium 14:00 – 15:40	Session 6B Sirio 14:00 – 15:24	Tech Sharing Corner Foyer 14:00 – 15:40
<b>15:40 – 16:10</b>	<b>Coffee break</b>		
16:10 – 18:23	Session 7A Auditorium 16:10 – 16:46	Session 7C Sirio 16:10 – 18:14	Session 7D Vega 16:10 – 18:22
	Session 7B Auditorium 16:50– 18:30		
<b>20:30</b>	<b>Gala dinner</b>		

<b>THURSDAY - November 14, 2024</b>			
09:00 - 09:30	Plenary Lecture – <i>Vincenzo VALENTINI</i> (Auditorium)		
09:30 - 11:00	Session 8 (Auditorium)		
<b>11:00 - 11:30</b>	<b>Coffee break</b>		
11:30 – 13:00	Session 9 (Auditorium)		
<b>13:00 – 14:00</b>	<b>Lunch</b>		
14:00 – 15:30	Session 10A Auditorium 14:00 – 15:00	Session 10B Sirio 14:00 – 15:08	Session 10C Vega 14:00 – 14:56
	Poster session P4 and Tech Sharing Corner Foyer 15:00 – 15:30		
<b>15:30 – 16:00</b>	<b>Coffee break</b>		
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**
- 10:00      **Facing the Challenges of NORM: Strategies for Radiological Protection**  
ID 222  
**Plenary Lecture** *Cristina Nuccetelli*

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**10:30 - 12:56**

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

**Room: Auditorium**

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- 10:30      **Science-based evolution of the ICRP reference animals and plants approach**  
ID 72  
*Jacqueline Garnier-Laplace* - Invited speaker
- 10:50      **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

**11:10 – 11:40**

**Coffee break**

- 11:40      **Considering the environment when applying the system of radiological protection**  
ID 185  
*Christelle Adam-Guillermin* - Invited speaker

- 12:00 **Addressing environmental radiological protection in the framework of reasonableness and tolerability**  
ID 39  
*Thierry Schneider* - Invited speaker
- 12:20 **Atmospheric Be-7: its importance in radioprotection, environmental physics, and space weather. Data collected and preliminary analysis**  
ID 104  
*Alessandro Rizzo* - Oral
- 12:32 **Analysis and prediction of radionuclides effects in ecosystems at multiple scales**  
ID 144  
*Frédéric Alonzo* - Oral
- 12:44 **AOP in the context of radioecology: challenges and insights**  
ID 183  
*Sandrine Frelon* - Oral

13:00 -14:00

Lunch

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14:00 – 15:20

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

**Room: Auditorium**

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- 14:00 **In vivo patient-specific real-time dosimetry for adaptive radiotherapy (VERIFIED). WP1 - Development of Anthropomorphic Phantoms (PIANOFORTE)**  
ID 191  
*Luana de Freitas Nascimento* - Oral
- 14:12 **Streamlining the determination of Diagnostic Reference Levels per clinical indication (DRLsci) for computed tomography at hospital CUF Santarém, Portugal**  
ID 150  
*Madaleno Diogo* - Oral
- 14:24 **Inter-comparison exercise within the NATO Project BIOPHYMETRE**  
ID 202  
*Antonella Testa* - Oral

- 14:36 **A validated, vendor-independent, automatic tool for patient size-specific-dose-estimate calculation in adult abdomino-pelvic CT**  
ID 50  
*Eric Pace* - Oral
- 14:48 **Automatic reconstruction of patient-specific whole-body CT**  
ID 79  
*Isidora Sofía Muñoz Hernández* - Oral
- 15:00 **A national pilot project for the implementation of clinical audit indicators in interventional radiology**  
ID 127  
*Giacomo Serra* - Oral
- 15:12 **Occupational radiation received by orthopaedic surgeons and risk to workers**  
ID 34  
*Stephen Barnard* - Flash
- 15:16 **A dosimetric evaluation of gynaecological cancer patients undergoing HDR brachytherapy using a Cobalt-60 source**  
ID 82  
*Chris Doudoo* - Flash

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**14:00 – 15:20**

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

**Room: Sirio**

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- 14:00 **What do we need to use the full range of ICRU Report 95?**  
ID 102  
*Rick Tanner* - Invited speaker
- 14:20 **An artificially intelligent system for defect detection in leaded personal protective equipment**  
ID 177  
*Niamh Belton* - Oral
- 14:32 **Fitness-to-work and occupational exposure to ionizing radiation: criteria for the evaluation in workers with neoplastic diseases**  
ID 26  
*Giulia Castellani* - Oral

- 14:44 **Design of environments dedicated to the handling of unsealed sources and the production of radiopharmaceuticals**  
ID 139  
*Gian Marco Contessa* - Oral
- 14:56 **Actinium-225 as an example for monitoring of internal exposure of occupational intakes in face of new nuclear-medical applications for short-lived alpha-emitting radionuclides**  
ID 23  
*Sven Hartmann* - Oral
- 15:08 **A different method for assessing electric field exposure in hospital environments**  
ID 105  
*Riccardo Di Liberto* - Flash
- 15:12 **An estimation of the value of a man Sievert**  
ID 19  
*Andreas Engström* - Flash
- 15:16 **Multifunction air-radiation monitoring system suited for early warning as well for environmental surveillance**  
ID 2  
*Maurizio Salmi* - Flash

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**14:00 – 15:40**

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

**Room: Vega**

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- 14:00 **Radon risk communication: lessons for radiation protection**  
ID 137  
*Tanja Perko*– Invited speaker
- 14:20 **Comparative analysis of end-users' perceptions of the reuse of NORM-contained by-products in building materials**  
ID 60  
*Love Nazanin* - Oral
- 14:32 **NORM database in the Regulatory Italian framework**  
ID 121  
*Sonia Fontani* - Oral



- 14:44      **Considerations of necessary modification of existing waste disposal and recovery options when applied towards NORM**  
ID 135  
*Hubert Makuła - Oral*
- 14:56      **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 - Oral*
- 15:08      **Risk assessment and correlation study of Radon in water and primordial radionuclide present in the soil samples of Himalayan region, India**  
ID 66  
*Ahamad Taufiq - Oral*
- 15:20      **Radon exhalation campaign to estimate greenhouse gas emissions using the 'Radon Tracer Method' – JRC-Ispra**  
ID 36  
*Serena Mancini - Oral*
- 15:32      **Radiation doses received by the Irish population 2024**  
ID 93  
*Kilian Smith - Flash*
- 15:36      **A comprehensive study of NORM in the vicinity of the MCT line in the higher Himalayas, India**  
ID 65  
*Singh Sajwan Rohit - Flash*

**15:20 – 15:40**

**Poster session P1 (poster lists are from page 31)**

**15:40 – 16:10**

**Coffee break**

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**16:10 – 18:10**

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

**Room: Auditorium**

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- 16:10 **The IRIDE project for personalized retinoblastoma treatment with brachytherapy**  
ID 170  
*Micol De Simoni - Oral*
- 16:22 **Foetal dose estimation in pregnant patients undergoing CT examinations using different dose calculators**  
ID 179  
*Eszter Kolozsi - Oral*
- 16:34 **Therapeutic <sup>131</sup>I dose for hyperthyroidism treatment of unifocal autonomy in compliance with Council Directive 2013/59/Euratom optimization principle**  
ID 190  
*Cristina Canzi - Oral*
- 16:46 **Attracting the future radiation protection researchers: outreach activities of the SCK CEN Academy**  
ID 186  
*Tom Clarijs - Oral*
- 16:58 **Thyroid cancer incidence risk in the residents around the Semipalatinsk nuclear test site, Kazakhstan**  
ID 114  
*Evgenia Ostroumova - Oral*
- 17:10 **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*
- 17:22 **Main achievements of the HARMONIC Project - Health effects of cardiac fluoroscopy and Modern radiotherapy in paediatrics**  
ID 41  
*Isabelle Thierry-Chef - Oral*
- 17:34 **Comparative analysis of effective doses for children undergoing chest CT examinations: photon-counting vs energy integrating detector CT**  
ID 40  
*Patrizia Kunert - Oral*
- 17:46 **New developments and AI applications of Radiation Biology Ontology (RBO)**  
ID 44  
*Paul Schofield - Oral*

- 17:58      **Radiobiological kidney protection: assessing the effect of different coadministration schedules with human recombinant antioxidant rA1M and 177LU-octreotide**  
ID 164  
*Nishte Rassol* - Flash
- 18:02      **Proposal of a new approach for molecular radiotherapy dosimetry**  
ID 199  
*Elena Solfaroli Camillocci* - Flash
- 18:06      **Assessment of the current CT protocols in use for oncological imaging in Slovenian hospitals: iViolin project**  
ID 92  
*Nadin Abualroos* - Flash
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**16:10 – 17:38**

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

**Room: Sirio**

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- 16:10      **Dosimetry in extreme situations: radiological emergencies and armed conflicts**  
ID 223  
*Clemens Woda*– Invited speaker
- 16:30      **Radiation protection in the experimental hall of the Elettra storage ring**  
ID 130  
*Arianna D'Angelo* - Oral
- 16:42      **RENEB Interlaboratory comparison – biological dosimetry for doses higher than 2.5 Gy**  
ID 24  
*Martin Bucher*– Oral
- 16:54      **Radiation protection and safety for the EuPraxia@SPARC\_LAB project**  
ID 21  
*Raffaella Donghia* - Oral
- 17:06      **Calibration of dosimetric instruments in Poland**  
ID 149  
*Alicja Jakubowska* - Oral

- 17:18 **Preliminary beam dump design related to the Frascati Laser for Acceleration and Multidisciplinary Experiments (FLAME) installation upgrade**  
ID 158  
*Federico Chiarelli* - Oral
- 17:30 **Testing different luminescence measurement protocols for display glass as an accident dosimeter**  
ID 81  
*Michael Discher* - Flash
- 17:34 **An interlaboratory comparison on EPR on tooth enamel within the EURADOS WG10**  
ID 184  
*Sara Della Monaca* - Flash

**17:40– 18:10**

**Poster session P2 (poster lists are from page 31)**

**17:40 – 18:10**

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

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**16:10 –17:46**

**SESSION 3C: DOSIMETRY OF MEDICAL OPERATORS**

**Room: Vega**

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- 16:10 **Proton Therapy – Specific radiation protection issues**  
ID 3  
*Agnieszka Szumska* - Oral
- 16:22 **Assessment of uncertainties and errors in post-Chernobyl dosimetry**  
ID 204  
*Vladimir Drozdovitch* - Oral
- 16:34 **Risk of haematological malignancies in Gomel and Mogilev regions of Belarus after Chernobyl fallout**  
ID 11  
*Ljubica Zupunski* - Oral

- 16:46 **Impact of clinical workloads on shielding evaluation in interventional radiology**  
ID 125  
*Michelangelo Biondi* - Oral
- 16:58 **Development of a spreadsheet for calculating barrier thickness for radiotherapy bunker**  
ID 128  
*Andrea Guasti* - Oral
- 17:10 **Radiation dose monitoring data analysis to estimate radiological risk allowance for interventional radiology staff**  
ID 124  
*Eleonora Bortoli* - Oral
- 17:22 **Exposure to activated air and walls of clinical staff in proton therapy centers**  
ID 181  
*Gonzalo García-Fernández*– Oral
- 17:34 **Occupational Radiation Exposure of medical staff involved in ERCP**  
ID 49  
*Satoru Matsuzaki*– Oral

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**18:10 –18:40**

**Room: Auditorium**

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18:10 **MELODI Awards**

**WEDNESDAY - November 13, 2024**

09:00      **New insights in leukaemogenesis**  
ID 101  
**Plenary Lecture** *Christophe Badie*

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**9:30 – 11:00**

**SESSION 4: FUTURE APPROACHES FOR LOW DOSE RESEARCH**

**Room: Auditorium**

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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**

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**11:30 – 12:26**

**SESSION 5A: RADIATION PROTECTION IN MEDICAL APPLICATIONS (III)**

**Room: Auditorium**

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- 11:30      **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*
- 11:42      **AUDITORY EVENT-Related potentials P300 in the elderly Chernobyl clean-up workers**  
ID 8  
*Kostiantyn Kuts - Oral*
- 11:54      **Context-aware software for education and training**  
ID 168  
*Mahta Mazlouni - Oral*
- 12:06      **Virtual training helps radiation protection: a free tool for interventional staff**  
ID 13  
*Hugo de las Heras Gala - Flash*
- 12:10      **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*
- 12:14      **A Monte Carlo calculation of cumulative radiation dose from multiple imaging modalities in paediatric interventional cardiology**  
ID 54  
*Angelo Giannone - Flash*
- 12:18      **Assessment of dental radiography quality assurance practices among dental offices equipped with intraoral X-ray devices in Georgia**  
ID 131  
*Davit Nadareishvili - Flash*
- 12:22      **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*

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**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**

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| 11:30 | <b>Estimation of nearfield inhalation doses from decommissioning of contaminated buildings</b><br>ID 43<br><i>Sreeyuth Lal</i> - Oral  |
| 11:42 | <b>Clearance levels bureaucracy and radiation protection</b><br>ID 47<br><i>Alfonso Maria Esposito</i> - Oral  |
| 11:54 | <b>Drone-gamma: unmanned airborne vehicle for remote detection of gamma-emitting radionuclides</b><br>ID 17<br><i>Javier Guillén</i> - Oral  |
| 12:06 | <b>Evidence of contamination of the Urdzhar district of Abai, Kazakhstan, from the Chinese nuclear weapons testing program at Lop Nor</b><br>ID 110<br><i>Richard Harbron</i> - Oral |
| 12:18 | <b>Statistical analysis of the sampling grid for the radiological characterization of a site</b><br>ID 166<br><i>Antonio Petraglia</i> - Flash                                       |

**12:25 – 13:00**

**Poster session P3 (poster lists are from page 31)**

**13:00 – 14:00**

**Lunch**



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14:00 – 15:40

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

**Room: Auditorium**

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- 14:00      **Investigating persistence of radiation damage in haematopoietic stem cell subpopulations induced by direct irradiation or by bystander signals**  
ID 154  
*Katalin Lumniczky - Oral*
- 14:12      **Sex driven effects of osteoimmunogenic cells after low-dose irradiation**  
ID 67  
*Lena Winterling - Oral*
- 14:24      **Biologically-based assessment of minimum latency time between radiation exposure and cancer**  
ID 32  
*Markus Eidemüller - Oral*
- 14:36      **Effects of low-dose radiation on senescence in the context of aging and associated risks disease**  
ID 61  
*Dmitry Klokov - Oral*
- 14:48      **PLEASE MIND THE GAPS! How AOP approach for radiation-induced CVD strengthen the role of biology in radiation protection?**  
ID 73  
*Omid Azimzadeh - Oral*
- 15:00      **Exploring the systemic impact of ionizing radiation: miRNA changes in blood-derived extracellular vesicles and their cell-specific effects**  
ID 87  
*Simone Moertl - Oral*
- 15:12      **Effects of acute and chronic irradiation on the hippocampus in apolipoprotein e deficient mice**  
ID 112  
*Francesca Antonelli - Oral*
- 15:24      **Evaluation of DNA damage and genetic instability in interventional radiologists**  
ID 162  
*Dominika Kochanová - Flash*

- 15:28 **Cytogenetic analysis in peripheral blood lymphocytes of patients exposed to low dose ionizing radiation in fluoroscopically guided interventional procedures**  
ID 152  
*Dimka Georgieva - Flash*
- 15:32 **Radiation signature in plasma metabolome of total-body irradiated nonhuman primates and clinical patients**  
ID 115  
*Ales Tichy - Flash*
- 15:36 **Dose-effect relationships of dicentric formation determined by fully- & semi-automated dicentric evaluation using different DCScore classifiers after 3 h or 24 h colcemid treatment**  
ID 22  
*Christina Beinke - Flash*

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**14:00 – 15:24**

**SESSION 6B: PATIENT MEDICAL DOSIMETRY**

**Room: Sirio**

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- 14:00 **Improving Out-of-Field Dosimetry in Modern Radiotherapy: Insights from EURADOS WG9**  
ID 220  
*Liliana Stolarczyk - 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 Bouwman - Oral*
- 14:44 **Assessment of radiation dose to newborns in neonatal intensive care units**  
ID 76  
*Nada Alomairy - Oral*

- 14:56 **Assessment of effective dose conversion coefficients for categories of radiological and nuclear medicine examinations: an Italian MoH-ISS project**  
ID 134  
*Osvaldo Rampado* - Oral
- 15:08 **Age and biological sex influences the biodistribution and dosimetry of <sup>131</sup>I in Sprague Dawley rats**  
ID 165  
*Anja Schroff* - Oral
- 15:20 **Tissue reactions follow up in patients significantly exposed to ionizing radiation after fluoroscopy guided interventional procedures**  
ID 133  
*Andrea Pimenta* - Flash

**14:00 – 15:40**

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

**15:40 – 16:10**

**Coffee break**

**16:10 – 16:46**

**SESSION 7A: BIOLOGICAL AND HEALTH EFFECTS OF LOW DOSE EXPOSURE (II)**

**Room: Auditorium**

- 16:10 **Neutron biological effectiveness: tackling variations as a function of incident energy and depth in a human-sized phantom**  
ID 172  
*Giorgio Baiocco* - Oral
- 16:22 **Transcriptional radiation response signature of human skin**  
ID 55  
*Lourdes Cruz-Garcia* - Oral
- 16:34 **Implementation of the cytokinesis block micronucleus assay for biodosimetry purposes at NRPI**  
ID 156  
*Jakub Vávra* - Flash

- 16:38 **Low dose radiation bystander effects through IGFBP5, a component of the senescent cell secretome**  
ID 126  
*Domenico Aprile* - Flash
- 16:42 **Tritiated micro-particles: computational dosimetry and analysis of radiobiological in-vitro data**  
ID 176  
*Alice Mentana* - Flash

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**16:50– 18:30**

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

**Room: Auditorium**

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- 16:50 **PIANOFORTE - Building a collaborative future for radiation Protection Integrating community efforts and open call successes**  
ID 209  
*Jean-Christoph Gariel* – Invited speaker
- 17:10 **How the processes of prioritisation, selection of call topics and review of proposals are developing and evolving**  
ID 225  
*Filip Vanhavere* - Invited speaker
- 17:30 **The SONORA Project: toward safe optimized and personalized radiology and radiotherapy procedures for pregnant patients (PIANOFORTE 2013-15)**  
ID 195  
*Francesca De Monte* - Oral
- 17:38 **DISCOVER: Dissecting radlation effectS into the Cerebellum micrOenVironmEnt driving tumour pRomotion**  
ID 206  
*Simonetta Pazzaglia* - Oral
- 17:46 **Synergy between IMMPRINT and IMAGEOMICS projects to improve breast cancer patient health and safety**  
ID 205  
*Géza Sáfrány* - Oral

- 17:54 **ImPRovements in atmospheric dispErsion moDElling and proteCTive action strategies in case of nuclear detonations – The PREDICT Project**  
ID 48  
*Clemens Woda - Oral*
- 18:02 **LuTADose: Personalized dosimetry to improve the clinical outcome of prostate cancer patients treated with 177Lu/225Ac-PSMA targeted therapies**  
ID 216  
*Michel Koole - Oral*
- 18:10 **Preliminary results from the first year of the research project PIANOFORTE: CITISTRA**  
ID 99  
*Jan Helebrant - Oral*
- 18:18 **A vision for “FAIR” data and infrastructures in radiation protection**  
ID 108  
*Liz Ainsbury - Oral*

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**16:10 – 18:14**

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

**Room: Sirio**

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- 16:10 **Advances in risk management of Radon & NORM through the RADONORM project**  
ID 15  
*Warren John -Invited speaker*
- 16:30 **Radon Biology – past, present and future**  
ID 208  
*Maria Gomolka -Invited speaker*
- 16:50 **Lung cancer mortality attributable to residential radon in Germany**  
ID 14  
*Felix Heinzl - Oral*
- 17:02 **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*

- 17:14 **The effect of asthma and COPD on the radiation burden of the bronchial airways**  
ID 53  
*Peter Fűri - Oral*
- 17:26 **Parameter uncertainty analysis of the effective dose for intake of Radon progeny in underground mines using INTDOSKIT tool**  
ID 56  
*Thomas Makumbi - Oral*
- 17:38 **Atmospheric transport and deposition of Radon-222 and its progeny using flexpart**  
ID 38  
*Jens Peter Frankemölle - Oral*
- 17:50 **Perceptions, performances and presentations of Radon in health spas**  
ID 122  
*Robbe Geysmans - Oral*
- 18:02 **Evaluating the impact of citizen science projects in the field of radiation protection: the Radon case**  
ID 78  
*Mabel Akosua Hoedoafia - Oral*

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**16:10 – 18:22**

**SESSION 7D: EXPOSURE OF MEMBERS OF THE PUBLIC, WORKERS AND ENVIRONMENT FOLLOWING A MAJOR NUCLEAR OR RADIOLOGICAL ACCIDENT OR INCIDENT OR MALEVOLENT NUCLEAR OR RADIOLOGICAL ACT**

**Room: Vega**

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- 16:10 **Evaluate the radiological dispersion devices consequences through numerical simulations**  
ID 96  
*Andrea Malizia - Oral*
- 16:22 **Modelling the effect of counter-measures on radiological assessment**  
ID 29  
*Mario Gaspar Quarenta - Oral*
- 16:34 **Framework for localization of atmospheric contamination source with neural networks**  
ID 148  
*Anna Wawrzyńczak-Szaban - Oral*

- 16:46      **Characterization of using a portable OSL/IRSL reader for in situ dose assessments of NaCl pellets**  
ID 4  
*Maria Karamiperi - Oral*
- 16:58      **Balancing small modular reactor emergency preparedness with the importance of traditional food consumption in the Canadian north**  
ID 86  
*Marta Kocemba - Oral*
- 17:10      **Enhancing EPR through comprehensive theoretical and practical training programs**  
ID 109  
*Benjamin Zorko - Oral*
- 17:22      **The hazard assessment for the italian national plan for the management of nuclear and radiological emergencies**  
ID 140  
*Silvia Scarpato - Oral*
- 17:34      **RescEU CBRN strategic reserve in Finland**  
ID 11  
*Maarit Muikku - Oral*
- 17:46      **Methodology for evaluating radiological consequences from attacks on spent fuel dry casks**  
ID 42  
*Luke Lebel - Oral*
- 17:58      **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*
- 18:02      **Mapping radiation in Italy – An innovative model for monitoring and alarm**  
ID 123  
*Riccardo Quaranta - Flash*
- 18:06      **Efficiency analysis and detection limits of HPGe detectors in drinking water monitoring**  
ID 161  
*Jonathan Sundström - Flash*
- 18:10      **OpenRadiation: a collaborative project for radioactivity measurements in the environment by the public**  
ID 64  
*Jean-Marc Bertho - Flash*



- 18:14      **Strengthening the EU capability in CBRN protection with the design of novel laboratories for RN identification.**  
ID 97  
*Giada Gandolfo* - Flash
- 18:18      **Novel approach to mitigate the scanning orientation effects in radiochromic film dosimetry**  
ID 117  
*Hassna Bantan* - Flash



**THURSDAY - November 14, 2024**

09:00 **From Protection to Participation: The Role of ART in Radioprotection and Oncology**  
ID 218  
**Plenary Lecture** *Vincenzo Valentini*

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**9:30 – 11:00**

**SESSION 8: ROUND TABLE: SITUATION IN UKRAINE**

**Room: Auditorium**

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09:30 **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

09:50 **To be defined**  
*Zhanat Kenbayeva* - Invited speaker

10:10 **How the war in Ukraine has affected the ALLIANCE Platform field of research**  
*ALLIANCE*

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

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

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

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

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

10:40 **Discussion**

**11:00 - 11:30**

**Coffee break**

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**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**

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**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**

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**13:00 – 14:00**

**Lunch**

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14:00 – 15:00

**SESSION 10A: DEBATE ON SKIN DOSIMETRY**

Room: Auditorium

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- 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**  
*Olivera Ciraj Bjelac, Jérémie Dabin*
- 14:35      **Q&A session**
- 

14:00 – 15:08

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

Room: Sirio

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- 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      **Epigenetic effects of exposure to <sup>131</sup>I in mouse thyroid tissue**  
ID 20  
*Klara Insulander Björk* - Oral

- 14:48      **Development of novel piperazine derivatives as enhanced radioprotective agents**  
ID 90  
*Vojtěch Chmil* - Flash
- 14:52      **Individual radiosensitivity of breast cancer patients**  
ID 163  
*Katarína Vigašová* - Flash
- 14:56      **Radiobiological response of AR suppression in combination with radium-223**  
ID 100  
*Ali Alshehri* - Flash
- 15:00      **Implementation of theranostic system for nuclear medicine application: preliminary biological data**  
ID 94  
*Ludovica Binelli* - Flash
- 15:04      **In vitro study of radiosensitivity in colorectal cancer cell lines associated with Lynch syndrome**  
ID 16  
*Jayne Moquet* - Flash

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**14:00 – 14:56**

**SESSION 10C: COSMIC RADIATION**

**Room: Vega**

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- 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      **Advancing space radiobiology and radio protection using AMS data: Insights from the AMS INRN Roma Sapienza Groups**  
ID 189  
*Alessandro Bartoloni* - Oral

- 14:36 **Space radiation dosimetry in aerospace**  
ID 187  
*Patrycja Baldyga* - Oral
- 14:48 **Radiobiological effects of protons or gamma rays and UVB radiation on human cells: implications for radiation protection**  
ID 153  
*Angeliki Gkikoudi* - Flash
- 14:52 **Why humans can handle high levels of terrestrial natural radiation better than space radiation: insights from evolution**  
ID 171  
*Alireza Mortazavi* - 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**

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**16:00 – 16.25**

**Room: Auditorium**

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16:00 **EURAMED Awards**

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**16:25 – 18:09**

**SESSION 11: REVOLUTIONIZING RADIATION PROTECTION WITH AI**

**Room: Auditorium**

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- 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

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**18:09-18:30**

**CLOSING REMARKS**

**Room: Auditorium**

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## Poster sessions

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### Poster session 1

#### Foyer

Tuesday 15:20 - 15:40

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**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*

**Dose rate monitoring during  $^{177}\text{Lu}$  patient therapy with PADOS system: our experience**

ID 167

*Valentina Pirozzi Palmese*

**Mean glandular dose survey on the population in Aosta Valley**

ID 35

*Alex Ponzetti*

**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*

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**Poster session 2**

**Foyer**

**17:40 – 18:10**

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**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-Implant Proton Accelerator**

ID 118

*Claudio Poggi*

**Radiobiologic irradiation setups emulating medical, natural and occupational radiation conditions**

ID 37

*Tom Unterleiter*

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**Poster session 3**

**Foyer**

**Wednesday 12:25 – 13:00**

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

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*

**Contaminated Trauma Victim management in Hospital: Field Technical Exercise**

ID 142

*Andrea Fidanzio*

**Incident source term reconstruction with JRODOS decision support system: a JRC-Ispra use case in preparedness and response to a potential nuclear emergency**

ID 58

*Antonio Guglielmelli*

**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*

**The collaborative efforts for joint-response in biological dosimetry to large-scale radiation accidents in Korea**

ID 103

*Moon Seong Ki*

**Emergency situations: safety and REMEDIATION**

ID 138

*Mattia Taroni*

**SRA and Roadmaps for Radiation Protection Metrology**

ID 62

*Joao Alves*

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

ID 68

*Ana Fernandes*

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**Poster session 4**

**Foyer**

**Thursday 15:00 – 15:30**

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**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*

**Biological effects of low dose radiation exposition**

ID 180

*Sónia Rodrigues*

**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*

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**Tech Sharing Corner**

**Foyer**

**Tuesday 17:40 -18:10**

**Wednesday 14:00 – 15:40**

**Thursday 15 – 15:30**

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**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**

*Krystian Skubacz*

**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

