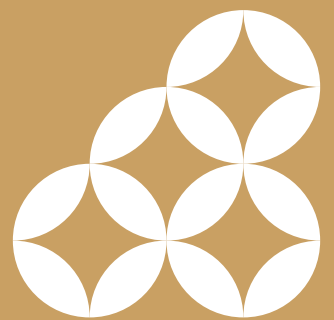
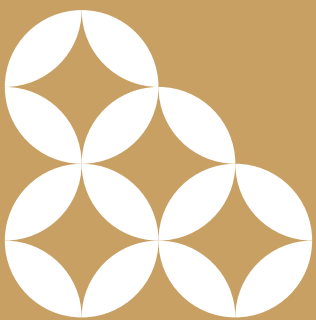


# Poster Programme

ICRP 2023



**ICRP**  **2023**

7th International Symposium on the System of Radiological Protection  
**6-9 NOVEMBER 2023 • TOKYO, JAPAN**

# POSTER (ON-SITE & ONLINE)

[On-site Poster Session: 8 November from 15:30 to 16:00, Palais Royal A]

## Session 1: Going Beyond Dose: Wellbeing in Radiological Protection

- 2001 Development and Demonstration of VIR: A Real-Time Dose Monitoring System for Interventional Radiology**  
Gahee SON<sup>1</sup>, Haegin HAN<sup>1</sup>, Sungho MOON<sup>1</sup>, Bangho SHIN<sup>1</sup>, Hyeonil KIM<sup>1</sup>, Suhyeon KIM<sup>1</sup>, Jaehyo KIM<sup>1</sup>, Soon Young SONG<sup>2</sup>, Chan Hyeong KIM<sup>1</sup>  
<sup>1</sup>Hanyang University, South Korea, <sup>2</sup>Hanyang University Seoul Hospital, South Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/e2391b22-abb0-494c-b9f7-85c35e7820e6>
- 2002 Dose Limits to Protect Maternal and Fetal Health: Legislation in Japan**  
Tomoko KATO<sup>1</sup>, Aya GOTO<sup>2</sup>, Kenji SUGAI<sup>3</sup>, Tomoko KUSAMA<sup>4</sup>  
<sup>1</sup>Toho University, Japan, <sup>2</sup>Fukushima Medical University, Japan, <sup>3</sup>REA, Japan, <sup>4</sup>Tokyo Healthcare University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/55cd7e9f-af04-46c9-a7dd-57d989c5b530>
- 2003 Overview of Dose Distribution Models and Effects of Individual Protection Satisfaction**  
Shigeru KUMAZAWA<sup>1</sup>  
<sup>1</sup>Former JAEA, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/0511970f-a902-4b73-9547-35f7021f76dd>
- 2004 Radiation Protection in Pediatric Radiology**  
Tamador HAJ<sup>1</sup>, Manal ALRAEESI<sup>1</sup>  
<sup>1</sup>Aljalila Children's Hospital, UAE  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/bd8d624f-2f53-4407-946a-432c64be19cf>
- 2005 Radiation Safety Regulation: A New Era with Regular Inspections in Remote**  
Minkyung KIM<sup>1</sup>, Jiyoung LEE<sup>1</sup>, Jiseungwoo JI<sup>1</sup>  
<sup>1</sup>KINS, Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/6069c556-2021-42d0-a207-e481e034e5bd>
- 2006 Regulatory Experience and Improvement Efforts for High-risk Radiation Sources**  
Ji Young LEE<sup>1</sup>, Min Kyung KIM<sup>1</sup>  
<sup>1</sup>KINS, Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/5b751557-13e7-48e6-ac1c-9491e2db15d1>

## **Session 2: Dosimetry for the Next General Recommendations**

- 2007 A Biokinetic Model to Assess Radon Uptake by the Fetus in Pregnant Women**  
Ämilie DEGENHARDT<sup>1</sup>, Vladmir SPIELMANN<sup>1</sup>, Augusto GIUSSANI<sup>1</sup>  
<sup>1</sup>BfS, Germany  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/3d1d0185-ac6b-4878-9684-05aa890955da>
- 2008 Advancing Fetal Radiation Dosimetry: Development of ICRP Reference Pregnant-female MRCPs**  
Bangho SHIN<sup>1</sup>, Chan Hyeong KIM<sup>2</sup>, Suhyeon KIM<sup>1</sup>, Chansoo CHOI<sup>3</sup>, Yeon Soo YEOM<sup>4</sup>, Beom Sun CHUNG<sup>5</sup>, Nguyen Tat THANG<sup>6</sup>, Wesley E. BOLCH<sup>3</sup>, Choonsik LEE<sup>7</sup>, Nina PETOUSSI-HENSS<sup>8</sup>, Maria ZANKL<sup>8</sup>, Keith ECKERMAN<sup>9</sup>, Rui QIU<sup>10</sup>, Haegin HAN<sup>1</sup>, Franklin EZE<sup>11</sup>, Hyeonil KIM<sup>1</sup>, Sugho MOON<sup>1</sup>, Gahee SON<sup>1</sup>  
<sup>1</sup>Hanyang University, South Korea, <sup>2</sup>Hanyang University, Korea, <sup>3</sup>University of Florida, USA, <sup>4</sup>Yonsei University, South Korea, <sup>5</sup>Yonsei University Wonju College of Medicine, South Korea, <sup>6</sup>Hanoi University of Science and Technology, Vietnam, <sup>7</sup>National Cancer Institute, USA, <sup>8</sup>Federal Office for Radiation Protection, Germany, <sup>9</sup>Oak Ridge National Laboratory, USA, <sup>10</sup>Tsinghua University, China, <sup>11</sup>Cyclomedical International, Nigeria  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a3cc8477-f46d-426f-a3c3-f16a6f0d99cd>
- 2009 Advancing the Virtual Dose Monitoring System for Interventional Radiology: Enabling Multi-Person Body Tracking and Identification**  
Sunggho MOON<sup>1</sup>, Haegin HAN<sup>1</sup>, Gahee SON<sup>1</sup>, Bangho SHIN<sup>1</sup>, Hyeonil KIM<sup>1</sup>, Suhyeon KIM<sup>1</sup>, Soon Young SONG<sup>2</sup>, Chan Hyeong KIM<sup>1</sup>  
<sup>1</sup>Hanyang University, South Korea, <sup>2</sup>Hanyang University Hospital, South Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/993dc188-72b8-41f5-9621-0be0145e8e32>
- 2011 A Macroscale Model of the Adult Human Kidney with Arterial and Venous Cortical Vasculature for Applications in Radiopharmaceutical**  
[Spanish Title] Un modelo a macro escala del riñón humano adulto con vasos sanguíneos cortico arterial y venosa para aplicaciones en dosimetría radio farmacéutica  
Carlos COLON-ORTIZ<sup>1</sup>, Abdul DOZIC-VEHAB<sup>1</sup>, Camilo CORREA-ALFONSO<sup>1</sup>, Sean DOMAL<sup>1</sup>, Julia WITHROW<sup>1</sup>, John ARIS<sup>1</sup>, Harold PAGANETTI<sup>1</sup>, Wesley BOLCH<sup>1</sup>  
<sup>1</sup>University of Florida  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a462ab3e-0719-40c7-8856-b788a7507115>
- 2012 Analysis of MCNP - CAD Converting Program for Worker Radiation Exposure Dose Assessment**  
Min Seong KIM<sup>1</sup>, Ju Young KIM<sup>1</sup>, Shin Dong LEE<sup>1</sup>, Kwang Pyo KIM<sup>1</sup>  
<sup>1</sup>Kyung Hee University, South Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/43160e7e-2272-4c79-84de-97adcf3a8e21>
- 2013 Bleaching Mechanism of Thermoluminescence Signal in BeO Dosimeters**  
Elif KARA<sup>1</sup>, Clemens WODA<sup>1</sup>  
<sup>1</sup>Helmholtz Zentrum München, Germany  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/ac47e21e-179f-4488-a4b3-e32caca18040>
- 2014 Detection of Radioactive Strontium-90 From Small Bio-Samples Using TIMS**  
Hiroko ISHINIWA<sup>1</sup>, Jo AOKI<sup>1,2</sup>, Mahiro GOTO<sup>1</sup>, Yoshitaka TAKAGAI<sup>1</sup>  
<sup>1</sup>Fukushima University, Japan, <sup>2</sup>Faculty of Symbiotic systems Science, Fukushima University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/27eafe7f-f127-4c8b-b379-38891aeacbd>

- 2015 Development of AR Application for Radiation Protection Optimization Education of Medical Staff in X-ray Fluoroscopy**  
Toshioh FUJIBUCHI<sup>1</sup>, Hiroyuki ARAKAWA<sup>1</sup>, Takashi YOSHINAGA<sup>2</sup>  
<sup>1</sup>Department of Health Sciences, Faculty of Medical Sciences, Kyushu University, Japan, <sup>2</sup>Steampunk Digital, Co. Ltd., Japan  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/39924af7-0b3a-4aa5-922f-b3cbb955c19a>
- 2016 Dose Evaluation of Worker According to Maximum Throughput of Spent Resin Mixture Treatment Facility**  
Jaehoon BYUN<sup>1</sup>, Hee Reyoung KIM<sup>1</sup>  
<sup>1</sup>Ulsan National Institute of Science and Technology  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/4b6ad1aa-8b8b-4933-93c5-94aed6976ac0>
- 2017 Dosimetric Approach to Neutron-Gamma Mixed Radiation Fields at a BNCT Treatment Room**  
Jeongin KIM<sup>1</sup>, Yunmi BAEK<sup>1</sup>, Seo Kon KANG<sup>1</sup>  
<sup>1</sup>Radiation Health Institute, KHNP  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a3ac6442-022f-4737-b946-42817df3271d>
- 2018 Electron Paramagnetic Resonance Retrospective Dosimetry Concepts for Radiation Accidents**  
Semra Tepe ÇAM<sup>1</sup>  
<sup>1</sup>Turkish Energy, Nuclear and Mineral Research Agency, Türkiye  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/376ac38e-2a68-4ac1-a22d-467d1ed85a40>
- 2019 Establishing Dose Coefficients for Common Paediatric Diagnostic Fluoroscopic Examinations in Support of ICRP Task Group 113: Updates From the Task Group**  
Wyatt SMITHER<sup>1</sup>, Kimberly APPLGATE<sup>2</sup>, Wesley BOLCH<sup>1</sup>, Emily MARSHALL<sup>3</sup>, David BORREGO<sup>4</sup>  
<sup>1</sup>J. Crayton Pruitt Family Department of Biomedical Engineering, College of Medicine Medical Physics Graduate Program, University of Florida, USA, <sup>2</sup>ICRP, USA, <sup>3</sup>Department of Radiology, University of Chicago, USA, <sup>4</sup>Radiation Protection Division, Office of Radiation and Indoor Air, U.S. Environmental Protection Agency, USA  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/871bef67-bbcd-4c3f-b1cc-1e7c7326b02a>
- 2020 Estimation of Radiation Dose to Commuters Using Patient Transport From Thyrotoxicosis Patients Treated With I-131 at Universitas Academic Hospital**  
Modisenyane MONGANE<sup>1,2</sup>, Karabo GABAYO<sup>1,2</sup>, Trevor-John TRINDER-SMITH<sup>2</sup>  
<sup>1</sup>Universitas Academic Hospital, South Africa, <sup>2</sup>University of the Free State, South Africa  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/3c084857-f72e-4779-93cb-0b12a3835f6e>
- 2021 EURADOS Pilot Group on Dosimetry in Nuclear Medicine**  
 Wei Bo LI<sup>1</sup>, Lara STRUELENS<sup>2</sup>, Augusto GIUSSANI<sup>1</sup>, Filip VANHAVERE<sup>2</sup>  
<sup>1</sup>BfS, Germany, <sup>2</sup>EURADOS  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/659be2e1-acd7-464e-a4e3-57eaaf76d7d7>
- 2022 Evaluating the Angular Distribution of Scattered Radiation From a Carbon Nanotube Technology (CNT)-Based Handheld X-ray Device During Intraoral Radiography**  
Yu-Hsuan CHEN<sup>1</sup>, Chiao-Yun CHEN<sup>2</sup>, Hui-Yu TSAI<sup>1</sup>  
<sup>1</sup>National Tsing Hua University, Taiwan, <sup>2</sup>Energy Resources International Co., Ltd  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/88f7df5b-972a-43e0-8db8-3e6ebe36f607>
- 2023 Evolving Beyond Giemsa: Development of a Simple High-Speed C-banding Staining Method to Improve Identifying Chromosomal Aberrations**  
Donovan ANDERSON<sup>1</sup>, Kai TAKEBAYASHI<sup>1</sup>, Naomi SASAKI<sup>1</sup>, Valerie Swee Ting GOH<sup>2</sup>, Ryo NAKAYAMA<sup>1</sup>, Akifumi NAKATA<sup>3</sup>, Yohei FUJISHIMA<sup>1</sup>, Tomisato MIURA<sup>1</sup>  
<sup>1</sup>Hirosaki University, Japan, <sup>2</sup>NUS, Singapore, <sup>3</sup>Hokkaido University of Science, Japan  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/c07bbd36-84c9-47d1-92ba-52fba4236b8d>

- 2024 Exposure Doses Estimation to Uranium Personnel of the Mining Enterprise and the Population of Akmola Region, Kazakhstan Using Tooth Enamel EPR Method**  
Kassym ZHUMADILOV<sup>1</sup>, Alexander IVANNIKOV<sup>2</sup>, Artem KHAILOV<sup>2</sup>, Valeriy SATEPANENKO<sup>2</sup>, Assel BAGRAMOVA<sup>1</sup>, Eldos BEKZHANOV<sup>1</sup>, Murat KASSYMZHANOV<sup>1</sup>, Shin TOYODA<sup>3</sup>, Masaharu HOSHI<sup>4</sup>  
<sup>1</sup>L.N. Gumilyov Eurasian National University, Kazakhstan, <sup>2</sup>A. Tsyb Medical Radiological Research Center - Branch of the National Medical Research Radiological Center of the Ministry of Health of the Russian Federation, Russian Federation, <sup>3</sup>Department of Applied Physics Faculty of Science Okayama University of Science, Japan, <sup>4</sup>Hiroshima University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/4f501570-12e9-4e2a-8d0b-db8634ec045a>
- 2025 Importance of Size Specific Dose Estimates in Radiation Dose Management of Pediatric Patients : Korean Population Study**  
C.W. KIM<sup>1,2</sup>, M.S. CHUN<sup>3</sup>, C.Y. HEO<sup>1</sup>, A.Y. LEE<sup>1,2</sup>, Y.H. CHOI<sup>4</sup>, J. H. KIM<sup>1,2,4,5</sup>  
<sup>1</sup>ClariPi Research, Seoul, Rep. Korea., <sup>2</sup>Interdisciplinary Program of Radiation Applied Life Science, College of Medicine, Seoul National University, Seoul, Rep. Korea, <sup>3</sup>Department of Radiation Oncology, Choong-Ang Healthcare System, Kwang-Myung shi, Rep. Korea, <sup>4</sup>Department of Radiology, College of Medicine, Seoul National University, Seoul, Rep. Korea, <sup>5</sup>Department of Intelligent Convergence Systems, Graduate School of Convergence Science and Technology, Seoul National University, Suwon, Rep. Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/43be6674-2678-4ba0-bfad-7e9b824b6440>
- 2026 Long-Term Retention of Plutonium in the Respiratory Tract Compartments: Arguments Against Chemical Binding**  
Deepesh POUDEL<sup>1</sup>, John KLUMPP<sup>1</sup>, Maia AVTANDILASHVILI<sup>2</sup>, Sergei TOLMACHEV<sup>2</sup>  
<sup>1</sup>Los Alamos National Laboratory, USA, <sup>2</sup>Washington State University, USA  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/0c678074-b5b7-4295-928b-9bdf4a5e0343>
- 2027 Inter-comparison of dose calculation software**  
Florence MENETRIER<sup>1</sup>, Laurent BODIN<sup>1</sup>  
<sup>1</sup>CEA  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/431cfcff-a01d-4137-b683-e5a68a393818>
- 2028 Measurement of Radiation Doses from X-Ray Human Body Scanners**  
Min Woo KWAK<sup>1</sup>, Yong Ho JIN<sup>1</sup>, Ga Eun OH<sup>1</sup>, Kwang Pyo KIM<sup>1</sup>  
<sup>1</sup>Kyung Hee University, South Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/b642587c-f400-463a-8ee4-6907b2978a51>
- 2029 National Medical Occupational Radiation Dose Monitoring in Saudi Arabia**  
Khulud ALSIRAJ<sup>1</sup>, Methail ALJUAID<sup>1</sup>  
<sup>1</sup>Nuclear and Radiological Regulatory Commission, Saudi Arabia  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/7b29df51-5def-41b8-9c4d-61976ca31001>
- 2030 Occupational Radiation Exposure for Industrial Radiography in Saudi Arabia**  
Hadeel ALSAYED<sup>1</sup>, Fadwa ALDOSARI<sup>1</sup>, Yasmin RAJHI<sup>1</sup>, Mohamm ALHARBI<sup>1</sup>  
<sup>1</sup>Nuclear and Radiological Regulatory Commission, Saudi Arabia  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/2a140987-b7e1-409f-928d-5c2697c9762d>
- 2031 Optimization of Patient Doses in Nuclear Medicine: A Pilot Study**  
Mpumelelo NYATHI<sup>1</sup>, Ttshhegofatso MASOGO<sup>1</sup>  
<sup>1</sup>Sefako Makgatho Health Science University, South Africa  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/52acff03-a611-47f2-b43d-a46655c28dc6>
- 2032 Perovskite Quantum Dots as Efficient Scintillators for Clinical X-ray Dosimetry**  
Sung-woo KIM<sup>1</sup>, Youngmoon GOH<sup>1</sup>, Jungwon KWAK<sup>1</sup>, Si Yeol SONG<sup>1</sup>, Sangeun CHO<sup>2</sup>, Hyunsik IM<sup>2</sup>  
<sup>1</sup>Department of Radiation Oncology, Asan Medical Center, Seoul, Korea, <sup>2</sup>Division of Physics and Semiconductor Science, Dongguk University, Seoul, Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/d74b3dfd-b445-4822-b55c-59f86c1be0a2>

- 2033 Primary Dose Reference Field Using the Compact Linear Accelerator to Replace Cs-137 Gamma-Ray Source**  
Junya ISHII<sup>1</sup>, Daisuke SATOH<sup>1</sup>, Takeshi FUJIWARA<sup>1</sup>, Masahito TANAKA<sup>1</sup>, Masahiro KATO<sup>1</sup>, Tadahiro KUROSAWA<sup>1</sup>  
<sup>1</sup>NMIJ, AIST, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/16aff489-57e5-4b37-9745-cfbc05797ee8>
- 2034 Radiation Protection Calculations for an Am-Be Neutron Source**  
Yael FRIED<sup>1</sup>, Avi BEN-SHLOMO<sup>1</sup>, Lior EPSTEIN<sup>1</sup>  
<sup>1</sup>Soreq NRC, Israel  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/2a95f6e3-e067-4e2e-abe5-bfca08750db1>
- 2035 The Investigation of the Impact of New ICRU95 Operational Quantities on the Reference Fields at JAEA-FRS in Terms of the Type-testing of the Dosimeters**  
Hiroshi YOSHITOMI<sup>1</sup>, Tomoya TSUJI<sup>1</sup>, Sho NISHINO<sup>1</sup>, Yoshihiko TANIMURA<sup>1</sup>  
<sup>1</sup>Japan Atomic Energy Agency  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/6cf65e77-6dcf-4f46-8fed-3aaeeee5c056>
- 2036 The Latest NORM Status in Taiwan for Future Discussion on Radiation Protection Strategy**  
Changting GUH<sup>1</sup>, Hiromi KOIKE<sup>1</sup>, Muditha RATHNAYAKE<sup>2</sup>, Takeshi IIMOTO<sup>1</sup>  
<sup>1</sup>University of Tokyo, Japan, <sup>2</sup>SLAEB, Sri Lanka  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/1b05c217-968e-4442-a8f0-9e6e6988d8e5>
- 2037 Theoretical Prediction of Pb-210 Activity in Hair and Nails as Biomarkers for Differentiating Radon Exposure Levels**  
Jing WANG<sup>1</sup>, Yuanyuan LIU<sup>1</sup>, Bin WU<sup>1</sup>, Jianping CHENG<sup>1</sup>  
<sup>1</sup>College of Nuclear Science and Technology, Beijing Normal University, Joint Laboratory of Jinping Ultra-low Radiation Background Measurement of Ministry of Ecology and Environment Beijing Normal University, Key Laboratory of Beam Technology of Ministry of Ecology and Environment Beijing Normal University  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/10a15213-e080-45da-801e-ab35689fd363>
- 2038 The UF/MSK Computational Phantom Libraries for Medical Dosimetry: Preliminary CT Dosimetry**  
Robert DAWSON<sup>1</sup>, Jared BAGGETT<sup>1</sup>, Laura DINWIDDIE<sup>1</sup>, Wyatt SMITHER<sup>1</sup>, Yitian WANG<sup>1</sup>, Stefan WEHMEIER<sup>1</sup>, Trung TRAN<sup>2</sup>, Sean DOMAL<sup>3</sup>, Cameron KOFLER<sup>4</sup>, Chansoo CHOI<sup>1</sup>, Yeon Soo YEOM<sup>5</sup>, Lukas CARTER<sup>6</sup>, Juan Camilo Ocampo RAMOS<sup>6</sup>, Pat ZANZONICO<sup>6</sup>, Adam KESNER<sup>6</sup>, Wesley BOLCH<sup>1</sup>  
<sup>1</sup>University of Florida, USA, <sup>2</sup>Indiana University, USA, <sup>3</sup>University of Texas Southwestern Medical Center, USA, <sup>4</sup>University of Chicago, USA, <sup>5</sup>Yonsei University, South Korea, <sup>6</sup>Memorial Sloan Kettering Cancer Center, USA  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/3d4e5d35-a8b5-48fc-b1f2-61eb86e7c30e>

## **Session 3: Communication**

### **2039 Educating on the Use of KI Tables through Gamification**

Sannah van BALEN<sup>1</sup>, Tunrayo ADELEKE-LARODO<sup>2</sup>, Lucy HENSHALL<sup>3</sup>, Eugene SHWAGERAUS<sup>1</sup>

<sup>1</sup>University of Cambridge, United Kingdom, <sup>2</sup>Non-affiliated, United Kingdom, <sup>3</sup>Loading...System, Spain

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/ce054b48-3fea-4fec-8f41-02e0ee5f1233>

### **2040 Discussion on Public Communication of Proton Therapy System Construction Project**

Luo XIN<sup>1</sup>

<sup>1</sup>China Institute of Atomic Energy, China

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a36c09cb-00b3-409f-8cf1-c50f9d531089>

### **2041 Recommendations for Effective Dissemination of Scientific Information, Based on the Analyses of Twitter Data Concerning Radiation after the Fukushima Nuclear Accident.**

Hiroyuki A. TORII<sup>1</sup>, Kazuko UNO<sup>2</sup>

<sup>1</sup>The University of Tokyo, Japan, <sup>2</sup>Louis Pasteur Center for Medical Research, Japan

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/97ae12bd-433c-40bf-8c53-49093559097b>

### **2042 “The Grey Zone” of Regulations - Risk Communication in Specific Cases**

Vaclav MATEJKA<sup>1</sup>

<sup>1</sup>State Office for Nuclear Safety, Czech Republic

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/744dcdaa-7a64-4048-a42d-4d513f108720>

### **2043 The Importance of Communication in the Case of a Nuclear or Radiological Emergency**

Ieva SITNIKOVAITĖ<sup>1</sup>, Julius ŽILIUKAS<sup>1</sup>, Danutė ŠIDIŠKIENĖ<sup>1</sup>

<sup>1</sup>Radiation Protection Centre, Lithuania

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/895cc430-518a-4ac5-88a6-9fb18f4308c3>

### **2044 The Importance of Fact Checking of Tweeter Content to Prevent Prolonged Health-related Consequences Caused by Radiation Anxiety in Fukushima**

Kazuko UNO<sup>1</sup>, Yuliya LYAMZINA<sup>1</sup>, Hiroyuki TORII<sup>2</sup>

<sup>1</sup>Louis Pasteur Center for Medical Research, Japan, <sup>2</sup>School of Science, The University of Tokyo, Japan

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/604cae38-b776-4bda-8700-65040822cef2>

### **2045 The Issues and Communication in Korea Regarding the Release of Treated Water from Fukushima NPP**

Kyo-Youn KIM<sup>1,2</sup>

<sup>1</sup>Korean Association for Radiation Protection, South Korea, <sup>2</sup>Korea Atomic Energy Research Institute, South Korea

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/c91ebe65-19d0-423c-9c3d-0466236367c4>

## **Session 4: How Experience of the Fukushima Daiichi Accident is Improving RP**

- 2046 Applying the Co-expertise Process Beyond Post-nuclear Accident Situations**  
Thu Zar WIN<sup>1</sup>  
*<sup>1</sup>Nagasaki University, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/4e83a6b4-451c-415a-9a40-dcec1c54fac7>
- 2047 Countermeasures for Prevent of Radiation Hazard in Workers after the Nuclear Accident at the TEPCO's Fukushima Daiichi Nuclear Power Plant by MHLW From Immediately after the Accident to the Phase of Decontamination and Decommission**  
Takanori OUCHI<sup>1</sup>, Yoshinori HIGASHI<sup>1</sup>, Makoto AKASHI<sup>2</sup>, Iimoto TAKESHI<sup>3</sup>, Shun KIMURA<sup>4</sup>, Munehiko KOWATARI<sup>5</sup>, Noboru TAKAMURA<sup>6</sup>, Tokuhiro YAMAMOTO<sup>7</sup>, Makoto FUNAKOSHI<sup>8</sup>, Hiroshi OKAMOTO<sup>8</sup>, Ayumi SHIMIZU<sup>8</sup>, Akari Kawaguchi<sup>8</sup>  
*<sup>1</sup>Ministry of Health, Labour and Welfare (MHLW), <sup>2</sup>Tokyo Healthcare University, <sup>3</sup>The University of Tokyo, <sup>4</sup>Nikkei Business Publications, Inc., <sup>5</sup>National Institutes for Quantum Science and Technology (QST), <sup>6</sup>The Atomic Bomb Disease Institute, Nagasaki University, <sup>7</sup>Nuclear Damage Compensation and Decommissioning Facilitation Corporation(NDF), <sup>8</sup>Japan Atomic Energy Organization (JAERO)*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/34f25746-5416-49ae-92e7-827845ac7c12>
- 2048 Current Environmental Contamination and Radiation Exposure Doses in the Restricted Areas Around the Fukushima Daiichi Nuclear Power Plant**  
Mengjie LIU<sup>1</sup>, Yasuyuki TAIRA<sup>1</sup>, Noboru TAKAMURA<sup>1</sup>  
*<sup>1</sup>Nagasaki University, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/903df8ee-cb8b-4e70-8829-acf0c9c9ec61>
- 2049 Establishment of NuHAT (Nuclear Disaster Health Assistance Team) for Nurse-led Radiation Risk Management After the Fukushima Nuclear Accident (Radiological Nursing Society of Japan - Report)**  
Shogo HORITA<sup>1</sup>, Tomoko KATO<sup>2</sup>, Nobuyuki SUGIURA<sup>3</sup>, Takumi YAMAGUCHI<sup>4</sup>, Koji YOSHIDA<sup>5</sup>, Aya GOTO<sup>6</sup>, Tomoko KUSAMA<sup>1</sup>  
*<sup>1</sup>Tokyo Healthcare University, Japan, <sup>2</sup>Toho University, Japan, <sup>3</sup>Chiyoda Technol Corporation, Japan, <sup>4</sup>Saitama Medical University, Japan, <sup>5</sup>Nagasaki University, Japan, <sup>6</sup>Fukushima Medical University, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/1aaec7b5-d2f6-4286-93a7-c3b34d5a2db1>
- 2050 Evaluation of Respirator Effectiveness for Internal Exposure Reduction During NPP Accidents: The Case of KF94 Masks in Korea**  
Seung Hun SHIN<sup>1</sup>, Hyeonmin LEE<sup>1</sup>, Hee Reyoung KIM<sup>1</sup>  
*<sup>1</sup>Ulsan National Institute of Science and Technology, Republic of Korea*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/d8bf4e8a-3029-492c-92a4-2e9c0ea82e86>
- 2051 Evaluations of the citizen participation workshop on the final disposal of the removed soil outside Fukushima Prefecture: The effect of dialogue on fostering trust and positive attitude**  
Yukihide SHIBATA<sup>1</sup>, Yume SOMA<sup>1</sup>, Mie TSUJIMOTO<sup>1</sup>, Honami UE<sup>1</sup>, Nana KIHARA<sup>1</sup>, Susumu OHNUMA<sup>1</sup>, Tetsumo YASUTAKA<sup>2</sup>  
*<sup>1</sup>Hokkaido University, Japan, <sup>2</sup>National Institute of Advanced Industrial Science and Technology, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/80bc32e3-3ce8-4582-8fe7-5eb3fd256b53>
- 2052 Experience and Lessons Learned from Modeling and Peer-Reviewing Various Fukushima Daiichi Nuclear Power Plant Accident Scenarios**  
Charley YU<sup>1</sup>  
*<sup>1</sup>Argonne National Laboratory, USA*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/f8143270-5806-4d1f-8371-2e3cd2257eef>



- 2053 How to Involve Stakeholders, especially Citizens, in the Revisioning Process of ICRP General Recommendation: An Analysis of ICRP Public Comments**  
Mamoru HAYASHI<sup>1</sup>, Yutaka HAMAOKA<sup>2</sup>  
<sup>1</sup>Toiyama University, <sup>2</sup>Keio University  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/cf17838d-e179-4f79-8784-d9152ae9dccc>
- 2054 Individual Monitoring of External Exposure of Worker in FDNPS**  
Hideki OKUBO<sup>1</sup>, Naoki MUKAIDA<sup>1</sup>, Masayoshi NOMURA<sup>1</sup>, Toshiyuki HAYASHIDA<sup>1</sup>, Toshikazu SUZUKI<sup>1</sup>, Takumaro MOMOSE<sup>2</sup>  
<sup>1</sup>TEPCO, <sup>2</sup>JAEA  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a947f403-ec52-47bb-bd90-b0ab2140048f>
- 2055 Individual Monitoring of Internal Exposure of Worker in FDNPS**  
Masako OHNO<sup>1</sup>, Naoki MUKAIDA<sup>1</sup>, Masayoshi NOMURA<sup>1</sup>, Toshiyuki HAYASHIDA<sup>1</sup>, Toshikazu SUZUKI<sup>1</sup>, Takumaro MOMOSE<sup>2</sup>  
<sup>1</sup>TEPCO, Japan, <sup>2</sup>JAEA, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/f68c0136-8b8b-4b1e-8880-704b09dc1f40>
- 2056 Methodology for Operating a Drone-Based Aerial Radiation Monitoring System: Early Response Strategy for Nuclear Accidents**  
SangHun SHIN<sup>1</sup>, HeeKwon KU<sup>1</sup>, MinBum HEO<sup>1</sup>, JaeWook KIM<sup>1</sup>, MiRi PARK<sup>1</sup>, SeungHyeon KIM<sup>2</sup>, JaeHyung PARK<sup>2</sup>, Byunggi PARK<sup>3</sup>, Bongsoo LEE<sup>2</sup>  
<sup>1</sup>Institute of Future Energy Technology, FNC Technology Co. Ltd., Yong-In, Korea, <sup>2</sup>School of Energy System Engineering, Nuclear engineering, Chung-Ang University, Seoul, Korea, <sup>3</sup>Department of Energy and Environmental Engineering, Soonchunhyang University, Asan, Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/afdae60a-af16-4140-9c7c-9da756ec7eb6>
- 2057 Promoting the Digital Tool Usability for Supporting Everyday Life in Reconstruction Areas After the Fukushima Daiichi Nuclear Power Station Accident: Results of a Pilot Study**  
Takashi OHBA<sup>1</sup>, Aya GOTO<sup>1</sup>, Hironori NAKANO<sup>1</sup>, Yohei KOYAMA<sup>1</sup>, Kaori HONDA<sup>1</sup>, Yukihiro FUJITA<sup>2</sup>, Yoshiaki HIROFUJI<sup>1</sup>, Kazuki YOSHIDA<sup>1,3</sup>, Kenneth E. NOLLET<sup>1</sup>, Michio MURAKAMI<sup>1</sup>, Koichi TANIGAWA<sup>4</sup>  
<sup>1</sup>FMU, Japan, <sup>2</sup>Naraha Town Office, Japan, <sup>3</sup>ISU, Japan, <sup>4</sup>FMC, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/be6a1b38-8c1c-4a89-b79e-48013ab2e317>
- 2058 Reconstruction of the Internal Thyroid Dose of Affected Populations by the 2011 Fukushima Nuclear Disaster**  
Eunjoo KIM<sup>1</sup>, Shozo HASHIMOTO<sup>1</sup>, Kotaro TANI<sup>1</sup>, Masayuki NAITO<sup>1</sup>, Yoshio TAKASHIMA<sup>1</sup>, Tetsuo ISHIKAWA<sup>2</sup>, Seiji YASUMURA<sup>2</sup>, Kenji KAMIYA<sup>2</sup>, Osamu KURIHARA<sup>1</sup>  
<sup>1</sup>QST, Japan, <sup>2</sup>Fukushima Medical University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/d53fa9aa-ff8f-425b-b046-b1dc3b526241>
- 2059 Strategic Development of Basic and Advanced Radiological Nursing Education in Response to the Fukushima Nuclear Disaster (Radiological Nursing Society of Japan - Report)**  
Koji Yoshida<sup>1</sup>, Yuko IKUTA<sup>2</sup>, Yuka NOTO<sup>3</sup>, Takumi YAMAGUCHI<sup>4</sup>, Rika YATSUSHIRO<sup>5</sup>, Aya GOTO<sup>6</sup>, Katsumasa OTA<sup>7</sup>, Tomoko KUSAMA<sup>8</sup>  
<sup>1</sup>Nagasaki University, <sup>2</sup>Japan Atomic Energy Agency, Japan, <sup>3</sup>Hirosaki University, Japan, <sup>4</sup>Saitama Medical University, Japan, <sup>5</sup>Kagoshima University, Japan, <sup>6</sup>Fukushima Medical University, Japan, <sup>7</sup>Tohto University, Japan, <sup>8</sup>Tokyo Healthcare University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/c2fa7953-f3fc-46ef-8f87-74d71e239328>

- 2060 The Discovery of Radiocesium-Bearing Microparticles Directly Delivered to a Person in Tokyo Immediately After the Fukushima Daiichi Nuclear Disaster**  
Shogo HIGAKI<sup>1</sup>  
<sup>1</sup>*University of Tokyo, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/4c7b6bf3-08e2-48bf-82cd-e32233a0a6ab>
- 2061 The Limitations of Radiological Protection in the Fukushima Nuclear Accident from the Citizens' Perspectives: Towards a Revision of the General Recommendations**  
Ayaka AKECHI<sup>1</sup>, Shinobu GOTO<sup>2</sup>, Yutaka HAMAOKA<sup>3</sup>, Nanako SHIMIZU<sup>4</sup>  
<sup>1</sup>*Kyoto Prefectural University, Japan*, <sup>2</sup>*Fukushima University, Japan*, <sup>3</sup>*Keio University, Japan*, <sup>4</sup>*Utsunomiya University, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/79a0b5b2-435e-4697-b017-777c968bc961>
- 2062 Thoughts, Perceptions and Concerns Regarding the Release of Tritium-Containing Treated Water in Residents Around TEPCO Fukushima Daiichi Nuclear Power Station**  
Varsha HANDE<sup>1</sup>, Makiko ORITA<sup>1</sup>, Hitomi MATSUNAGA<sup>1</sup>, Yuya KASHIWAZAKI<sup>1</sup>, Yasuyuki TAIRA<sup>1</sup>, Thierry SCHNEIDER<sup>2</sup>, Jacques LOCHARD<sup>3</sup>, Noboru TAKAMURA<sup>1</sup>  
<sup>1</sup>*Department of Global Health, Medicine and Welfare, Atomic Bomb Disease Institute, Nagasaki University Graduate School of Biomedical Sciences, Japan*, <sup>2</sup>*Nuclear Protection Evaluation Centre (CEPN), France*, <sup>3</sup>*Department of Health Risk Control, Atomic Bomb Disease Institute, Nagasaki University, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/5a1ef366-d387-44bc-a0a3-590cc80f8616>
- 2063 Time-Series Analysis of <sup>137</sup>Cs Activity Concentrations and Internal Radiation Doses From Marketable Crops Cultivated and Distributed in Fukushima Prefecture From 2012 to 2022**  
Hirofumi TSUKADA<sup>1</sup>, Satoshi FUKUTANI<sup>2</sup>, Tatsuo AONO<sup>3</sup>, Makoto AKASHI<sup>4</sup>  
<sup>1</sup>*IER, Fukushima University, Japan*, <sup>2</sup>*KURNS, Kyoto University, Japan*, <sup>3</sup>*F-REI, Japan*, <sup>4</sup>*Tokyo Healthcare University, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/8b07123c-ed50-4fbc-ba12-e67f51cb9904>
- 2064 Towards Digital and Analogue Archiving of History and Memory in Nuclear Disaster-affected Areas where Return is Difficult**  
Tetsuo YASUTAKA<sup>1</sup>, Sakurako SAKAHARA<sup>2</sup>, Takanori NAGANO<sup>3</sup>, Yumiko KANAI<sup>1</sup>, Momo TAKADA<sup>1</sup>, Shinko FUJII<sup>1</sup>, Yoriko IGARASHI<sup>1</sup>, Tatsuya NAKAGAWA<sup>3</sup>, Naoko KURIYAMA<sup>3</sup>, Yoichi OHASHI<sup>4</sup>, Shinichi TANAKA<sup>5</sup>  
<sup>1</sup>*National Institute of Advanced Industrial Science and Technology (AIST), Japan*, <sup>2</sup>*Kobe University, Japan(now in a different company)*, <sup>3</sup>*Kobe University, Japan*, <sup>4</sup>*Hosoya District, previous head of a ward, Japan*, <sup>5</sup>*Hosoya District, head of a ward, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/76aed9ac-d424-4a3a-b251-94e4541749ad>

## **Session 5: The Next Generation of Scientists & Professionals**

- 2065 Analysis of Radioactive Aerosol Characteristics Generated by Laser Cutting for Decommissioning of Nuclear Power Plants**  
Joonsoo OCK<sup>1</sup>, Wonseok YANG<sup>2</sup>, Jaesung SHIN<sup>3</sup>, Min-Ho LEE<sup>4</sup>, Sungyeol CHOI<sup>1</sup>  
<sup>1</sup>Seoul National University, Republic of Korea, <sup>2</sup>Korea Advanced Institute of Science and Technology, Republic of Korea, <sup>3</sup>Korea Atomic Energy Research Institute, Republic of Korea, <sup>4</sup>FNC Technology Co., Ltd.  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/f25fce2d-baca-47ca-9a46-74f4f5241deff>
- 2066 Construction of Pressurizer Demolition Scenario During Nuclear Power Plant Decommissioning**  
Hakyun LEE<sup>1</sup>, Minho LEE<sup>1</sup>, Sangheon LEE<sup>1</sup>, Jongsoo SONG<sup>1</sup>  
<sup>1</sup>Chosun University, South Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/8fc4b363-62ec-4406-a6d3-8bf25241deff>
- 2067 Effect of Reconstructing a Two-dimensional Radiation Dose Map at Any Point**  
Seo Kon KANG<sup>1</sup>, Jeongin KIM<sup>1</sup>, Yunmi BAEK<sup>1</sup>  
<sup>1</sup>Radiation Health Institute, KHNP  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/9adb7665-c8a5-4aed-a8ed-3c2ea00eb779>
- 2068 GM Counter-Tube Survey Meters With Resolving Times Greater Than Approximately 2,000 Microseconds Should Not Be Used for Contamination Inspection to Evaluate Operational Interventional Level 4**  
Kazuya KAKUTA<sup>1</sup>, Arifumi HASEGAWA<sup>2</sup>  
<sup>1</sup>Fukushima Medical University Hospital, Japan, <sup>2</sup>Fukushima Medical University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/4879723d-1d10-47df-956a-a76e3127e744>
- 2069 Initiatives to Increase Recruitment and Retention of Radiation Protection Professionals in the UK Nuclear Industry**  
Chris JONES<sup>1</sup>, Sarah FORDER<sup>2</sup>  
<sup>1</sup>AWE plc & ICRP, UK, <sup>2</sup>AWE plc, UK  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/de8b1a00-4238-4088-be9f-b4643e23692d>
- 2070 INSTA Launching; Empowering Educators and Advancing NST Education Programs for the Tertiary Level in Asia Pacific Region**  
Takeshi IIMOTO<sup>1</sup>, INSTA Steering Committee<sup>2</sup>, Marina MISHAR<sup>2</sup>  
<sup>1</sup>The University of Tokyo, <sup>2</sup>IAEA  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/f54170e0-7499-49e8-bd29-5600a7f97c6c>
- 2071 Survey of Young Professionals in the Field of Radiation Protection in Japan**  
Shinnosuke MATSUMOTO<sup>1</sup>, Yu IGARASHI<sup>2</sup>, Yumi SAIGUSA<sup>3</sup>  
<sup>1</sup>Tokyo Metropolitan University, Japan, <sup>2</sup>JAEA, Japan, <sup>3</sup>QST, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/8c4de45d-65d8-447c-b1e9-abd8c9435651>

## **Session 6: Stratification & Individualisation**

**2072 Advancing Individualized Radiation Dosimetry: Establishing Comprehensive Phantom Libraries Based on MRCPs**

Suhyeon KIM<sup>1</sup>, Bangho SHIN<sup>1</sup>, Chansoo CHOI<sup>2</sup>, Hyeonil KIM<sup>1</sup>, Haegin HAN<sup>1</sup>, Sungho MOON<sup>1</sup>, Gahee SON<sup>1</sup>, Chan Hyeong KIM<sup>1</sup>

<sup>1</sup>Hanyang University, South Korea, <sup>2</sup>University of Florida, USA

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/24b365c9-09a7-4c65-aa73-2eb4668fba75>

**2073 How Does Biological Sex Modify the Risks of Ionizing Radiation-induced Health Effects?**

Julie LEBLANC<sup>1</sup>, Kristi RANDHAWA<sup>1</sup>, Sarah GHAZI<sup>1</sup>, Simon BOUFFLER<sup>2</sup>

<sup>1</sup>Canadian Nuclear Safety Commission, <sup>2</sup>UK Health Security Agency

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/94e3745e-745e-4f16-8c1d-6c63f1e5fccd>

**2074 Individual Differences in Sensitivity to Ionizing Radiation Depends on Dose Rate and DNA Repair Capacity**

Masanori TOMITA<sup>1</sup>, Junya KOBAYASHI<sup>2</sup>

<sup>1</sup>CRIEPI, Japan, <sup>2</sup>IUHW, Japan

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/83defd63-1834-4440-8400-64b16a9100b7>

## **Session 7: Sustainable Development and Protection of the Environment**

- 2075 Artificial Radionuclides (Cs-137, Am-241, Sr-90, Pu-239+240) Accumulation by Potatoes under Different Radioactive Soil Contamination**  
Yelena POLIVKINA<sup>1</sup>, Andrey PANITSKIY<sup>1</sup>, Yelena SYSSOYEVA<sup>1</sup>, Lyudmila NEMYTOVA<sup>1</sup>, Aksana IVANOVA<sup>1</sup>  
<sup>1</sup>Institute of Radiation Safety and Ecology NNC RK, Kurchatov city, Kazahstan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/6a25871d-0fea-4122-a3c3-20e1b5baf540>
- 2076 Assessment of Radiological Hazard Parameters in Coastal Sands as well as River Sediments of Kanyakumari a High Background Natural Radiation Area, India**  
Thennaarassan NATARAJAN<sup>1,2</sup>, Shinnosuke YAMAZAKI<sup>2</sup>, Kazumasa INOUE<sup>1</sup>, Sarata Kumar SAHOO<sup>2</sup>  
<sup>1</sup>Tokyo Metropolitan University, Japan, <sup>2</sup>QST, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/0fc2e8dc-ea43-4040-a8f3-f8fbd0afc582>
- 2077 Assessment of Tritium Concentrations in Precipitation and Tap Water Collected in Thailand**  
Chonlada PITAKCHAIANAN<sup>1</sup>, Kanyanan KOSINARKARANAN<sup>1</sup>, Pantiwa KUMSUT<sup>1</sup>, Ryuta HAZAMA<sup>1</sup>, Tatsuhide HAMASAKI<sup>1</sup>, Anawat RITTIRONG<sup>2</sup>, Koichi SAKAKIBARA<sup>3</sup>, Yoshiyuki HIRANO<sup>4</sup>, Koki KASHIWAYA<sup>5</sup>, Yoshimune OGATA<sup>6</sup>, Yuka KATO<sup>7</sup>, Wanwisa SUDPRASERT<sup>8</sup>, Kiadtisak SAENBOONRUANG<sup>8</sup>, Chittranuch CHANTAROT<sup>8</sup>, Kanokwan KHAMANEK<sup>8</sup>, Soontree KHUNTONG<sup>9</sup>, Donruedee TOYEN<sup>10</sup>, Archara PHATTANASUB<sup>11</sup>, Monthon YONGPRAWAT<sup>12</sup>, Chakrit SAENKORAKOT<sup>11</sup>, Piyawan KRISANANGKURA<sup>12</sup>  
<sup>1</sup>Graduate School of Human Environment, Osaka Sangyo University, <sup>2</sup>Research Center for Nuclear Physics, Osaka University, <sup>3</sup>Faculty of Science, Shinshu University, <sup>4</sup>Department of Radiological Sciences, Nagoya University Graduate School of Medicine, <sup>5</sup>Graduate School of Engineering, Kyoto University, <sup>6</sup>Department of Chemistry, Aichi Medical University, <sup>7</sup>Nippon Raytec Co., Ltd., <sup>8</sup>Department of Applied Radiation and Isotopes, Kasetsart University, <sup>9</sup>Faculty of Science at Sriracha, Kasetsart University, <sup>10</sup>Department of Materials Science, Kasetsart University, <sup>11</sup>Thailand Institute of Nuclear Technology, <sup>12</sup>Office of Atoms for Peace  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/00360055-5082-4037-9344-196cad54b4a9>
- 2078 Attributes of <sup>7</sup>Be and <sup>210</sup>Pb Dynamics in the Lower Atmosphere over Osaka, Japan, Alongside the Size Dispersion of Key Chemical Constituents within Aerosols Adhered to <sup>7</sup>Be**  
Kosinarkaranun KANYANAN<sup>1</sup>, Ryuta HAZAMA<sup>1</sup>, Kumsut PANTIWA<sup>1</sup>, Pitakchaianan CHONLADA<sup>1</sup>, Tatsuhide HAMASAKI<sup>1</sup>, Noithong PANNIPA<sup>2</sup>, Hisakazu MURAMATSU<sup>3</sup>  
<sup>1</sup>Graduate School of Human Environment, Osaka Sangyo University, Japan, <sup>2</sup>Mahanakorn Khonkaen-Asia Technological College, Thailand, <sup>3</sup>Chemistry Division, Faculty of Education, Shinshu University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/66ac62ed-e6e0-4ffd-acee-997176a8960c>
- 2079 Deposition Distribution of <sup>210</sup>Pb in the Northern Hemisphere Derived from Calculations using a Long-range Atmospheric Transport and Deposition Model**  
Yu CAI<sup>1</sup>, Takeshi IIMOTO<sup>1</sup>, Hiromi YAMAZAWA<sup>2</sup>  
<sup>1</sup>The University of Tokyo, Japan, <sup>2</sup>Nagoya University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/f6d36885-6a5f-4bdc-b73b-fa2432528b38>
- 2080 Distribution of Radioactive Cesium-Rich Micro-Particles in Soil on the Forest Slopes in Fukushima**  
Hirromichi WAKI<sup>1</sup>, Takahiro TATSUNO<sup>2</sup>, Naoto NIHEI<sup>2</sup>, Minato KAKUMA<sup>1</sup>, Waka NAGASAWA<sup>3</sup>, Toshihiro WADA<sup>2</sup>, Masashi MURAKAMI<sup>3</sup>, Nobuhito OHTE<sup>1</sup>  
<sup>1</sup>Kyoto University, Japan, <sup>2</sup>Fukushima University, Japan, <sup>3</sup>Chiba University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/4ed6982b-1b7d-41fa-88b4-a49d9b52f9e3>

- 2081 Indoor Radon and Thoron Concentration in Bangladeshi Dwellings: Capital Dhaka and Northern High Radiation Background Area**  
Md. Mahamudul HASAN<sup>1,2</sup>, Mirosław JANIK<sup>2</sup>, Takeshi IIMOTO<sup>1</sup>  
<sup>1</sup>The University of Tokyo, Japan, <sup>2</sup>QST, Japan  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/2eefcac8-8a60-4eac-b32f-a82b6364fb2a>
- 2082 Integrated Dose Assessment as a Tool for Sustainable Environmental Radiation Protection**  
Benjamin ZORKO<sup>1</sup>, Juan Carlos MORA<sup>2</sup>, Diego TELLERIA<sup>3</sup>, Valeria AMADO<sup>4</sup>, Amanda ANDERSON<sup>5</sup>, Justin SMITH<sup>6</sup>, Yuri BONCHUK<sup>7</sup>, Cecile BOYER<sup>8</sup>, Stephanie BUSH-GODDARD<sup>9</sup>, Peter CARNY<sup>10</sup>, Benoit CHARRASSE<sup>11</sup>, Ari IKONEN<sup>12</sup>, Elisabeth LECLERC<sup>13</sup>, Marguerite MONFORT<sup>14</sup>, Christophe MOURLON<sup>15</sup>  
<sup>1</sup>Jožef Stefan Institute, Slovenia, <sup>2</sup>CIEMAT, Spain, <sup>3</sup>IAEA, Austria, <sup>4</sup>Nuclear Regulatory Authority, Argentina, <sup>5</sup>US Department of Energy, USA, <sup>6</sup>UK Health Security Agency, United Kingdom, <sup>7</sup>Ukrainian Radiation Protection Institute, Ukraine, <sup>8</sup>Electricité de France (EDF) - CIDEN, France, <sup>9</sup>U.S. Nuclear Regulatory Commission, USA, <sup>10</sup>ABmerit s.r.o., Slovakia, <sup>11</sup>CEA, DEN, DTN, France, <sup>12</sup>EnviroCase, Ltd., Finland, <sup>13</sup>Andra 1-7, France, <sup>14</sup>CEA, DA/DIF, France, <sup>15</sup>IRSN, France  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/5dcbc010-0bb0-438b-9c5c-1d1eab31bc60>
- 2083 Powder Sandwich Technique to Assess Radon-thoron Exhalation and Emanation in the North Abu Rusheid Mylonitic Rock Samples in Egypt**  
Sara SAKR<sup>1</sup>, Sarata Kumar SAHOO<sup>2</sup>, Kazumasa INOUE<sup>1</sup>, Mirosław JANIK<sup>2</sup>  
<sup>1</sup>Tokyo Metropolitan University, Japan, <sup>2</sup>QST, Japan  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a208f6b6-ac14-41c2-ad92-0ac8defe9ecf>
- 2084 Radiological Status of Big Hoofed Animals Inhabiting Semipalatinsk Test Site**  
Andrey PANITSKIY<sup>1</sup>, Asem BAZARBAEVA<sup>1</sup>, Symbat BAIGAZY<sup>1</sup>, Ivan ALEXANDROVICH<sup>1</sup>  
<sup>1</sup>Institute Of Radiation Safety And Ecology, Kazakhstan  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/09d5fc7a-7f2a-4b98-a186-33e60d3d93e0>
- 2085 Radionuclide Desorption from Post-wildfire Ash and Its Effect on River Water Activity Concentrations in the Chernobyl Exclusion Zone**  
Yasunori IGARASHI<sup>1</sup>, Valentyn PROTSAK<sup>2</sup>, Gennady LAPTEV<sup>2</sup>, Ihor MALOSHTAN<sup>2</sup>, Dmitry SAMOILOV<sup>3</sup>, Serhii KIRIEIEV<sup>3</sup>, Alexei KONOPLEV<sup>1</sup>  
<sup>1</sup>Institute of Environmental Radioactivity, Fukushima University, <sup>2</sup>Ukrainian Hydrometeorological Institute, <sup>3</sup>State Specialized Enterprise Ecocentre  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/98926956-1ea8-42b6-889f-ecb299e1146b>
- 2086 Rapid Assessment of Mutational Risks in Tree Species Exposed to Low-Dose-Rate Radiation Following the Nuclear Disaster in 2011**  
Saneyoshi UENO<sup>1</sup>, Yoichi HASEGAWA<sup>1</sup>, Shuri KATO<sup>2</sup>, Hideki MORI<sup>1</sup>, Hirofumi TSUKADA<sup>3</sup>, Hajime OHIRA<sup>4</sup>, Shingo KANEKO<sup>4</sup>  
<sup>1</sup>Department of Forest Molecular Genetics and Biotechnology, Forestry and Forest Products Research Institute, Forest Research and Management Organization, Japan, <sup>2</sup>Tama Forest Science Garden, Forestry and Forest Products Research Institute, Forest Research and Management Organization, Japan, <sup>3</sup>Institute of Environmental Radioactivity, Fukushima University, Japan, <sup>4</sup>Faculty of Symbiotic Systems Science, Fukushima University, Japan  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/5c9cbddb-f11e-425e-9b92-0d2d74dfb11>
- 2087 Research into the Aerial Uptake of HTO Vapours by Pepper and Eggplant**  
Yelena POLIVKINA<sup>1</sup>, Yelena SYSSOYEVA<sup>1</sup>, Andrey PANITSKIY<sup>1</sup>, Liliya SUBBOTINA<sup>1</sup>  
<sup>1</sup>Branch 'Institute of Radiation Safety and Ecology' of RSE NNC RK, Kurchatov, Kazakhstan  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/30b42cc2-e26f-4def-baca-d05809d05338>
- 2088 Research into the Impact by The Radiation Factor on Structural and Anatomical Indicators of Plants under Conditions of a Simulated Experiment**  
Yelena SYSSOYEVA<sup>1</sup>  
<sup>1</sup>Branch "Institute of Radiation Safety and Ecology" RSE NNC RK, Kurchatov, Kazakhstan  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/fc5c7282-b388-4d40-9135-2e23e9420d34>

**2089 Study on Influence Factors on Radon Exhalation Rate from Soil - the Improvement of Accumulation Chamber Technique**

Qianhao JIN<sup>1</sup>, Akihiro SAKODA<sup>2</sup>, Takeshi IIMOTO<sup>1</sup>

<sup>1</sup>The University of Tokyo, Japan, <sup>2</sup>JAEA, Japan

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/73c70f25-dfa5-426b-a0cc-ebefdec72548>

**2090 Vertical Distribution of Radioactive Cesium-rich Microparticles in the Soil Collected from Fukushima Prefecture**

Takahiro TATSUNO<sup>1</sup>, Hiromichi WAKI<sup>2</sup>, Naoto NIHEI<sup>1</sup>, Nobuhito OHTE<sup>2</sup>

<sup>1</sup>Fukushima University, Japan, <sup>2</sup>Kyoto University, Japan

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/28ad6b80-633d-4864-9ef3-916604f9340b>

## **Session 8: Classification of Effects**

(No presentation)

## **Session 9: Exposure Categories & Situations**

**2091 A Study on the Application of Dose Constraints in LINAC Facility Shielding for Uncontrolled Areas**

Sang Hyun PARK<sup>1</sup>, Jong Hoon PARK<sup>1</sup>

<sup>1</sup>Korean Institute of Nuclear Safety, South Korea

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/72f4eeaf-3bd7-4a7b-a4ea-ddf76f1317e1>

**2092 Case Study of Naturally Occurring Radioactive Deposits Found in Metal Pipe Waste and Related Radiological Protection Issues**

Hiromi KOIKE<sup>1</sup>, Michiaki KAI<sup>2</sup>, Takeshi IIMOTO<sup>1</sup>

<sup>1</sup>The University of Tokyo, <sup>2</sup>Nippon Bunri University

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/7b920404-8f4b-414b-8027-0b26e3ba612a>

**2093 Determination of a Safe Radiation Distance From a 16-slice Multi-Detector Computed Tomography (MDCT) Scan Machine**

Andrei HOCSON<sup>1</sup>, Nathan CONCEPCION<sup>1</sup>

<sup>1</sup>St. Luke's Medical Center Global City, Philippines

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/828faafe-313b-43a3-ab88-2082a89c3e23>

**2094 Radiation Risk Assessment of Krypton-containing Electron Tube**

Yeijin BANG<sup>1</sup>, Jimin SHIN<sup>1</sup>, Sunlee SHIN<sup>1</sup>, Hee SEO<sup>1</sup>, Byeonghyeon PARK<sup>2</sup>, Sangmin LEE<sup>2</sup>

<sup>1</sup>Jeonbuk National University, Republic of Korea, <sup>2</sup>Korea Institute of Nuclear Safety, Republic of Korea

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a2eb1a97-88c7-4135-8513-31cc898a702c>

**2095 The Latest NORM Status in Taiwan for Future Discussion on Radiation Protection Strategy (UPDATED)**

Changting GUH<sup>1</sup>, Hiromi KOIKE<sup>1</sup>, Muditha RATHNAYAKE<sup>2</sup>, Takeshi IIMOTO<sup>1</sup>

<sup>1</sup>The University of Tokyo, Japan, <sup>2</sup>SLAEB, Sri Lanka

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/c4b59d11-d781-4fd8-aeb6-c5c6a6b2e47f>

## **Session 10: Tolerability & Reasonableness**

**2096 Analysis of Cancer Mortality by Occupation in the Working Population in Japan as a Benchmark for Comparison with Radiation Risk**

Momo TAKADA<sup>1</sup>, Jun Hirouchi<sup>2</sup>, Ikuo KUJIRAOKA<sup>2</sup>, Shogo TAKAHARA<sup>2</sup>, Michiaki KAI<sup>3</sup>, Thierry SCHNEIDER<sup>4</sup>

<sup>1</sup>AIST, Japan, <sup>2</sup>JAEA, Japan, <sup>3</sup>NBU, Japan, <sup>4</sup>CEPN, France

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/3036fa33-3fa7-4b0e-93f9-05ee198eb53c>

**2097 Application of Disability-adjusted Life Years (DALYs) in Radiation Protection**

Jun HIROUCHI<sup>1</sup>, Ikuo KUJIRAOKA<sup>1</sup>, Shogo TAKAHARA<sup>1</sup>, Momo TAKADA<sup>2</sup>, Michiaki KAI<sup>3</sup>, Thierry SCHNEIDER<sup>4</sup>

<sup>1</sup>JAEA, Japan, <sup>2</sup>AIST, Japan, <sup>3</sup>NBU, Japan, <sup>4</sup>CEPN, France

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/e6b35c93-fd7a-415f-879d-800533cd22bd>

## **Session 11: Offspring & Next Generations**

**2098 MRG Data That Revolutionizes the Fundamentals of Radiation Protection Over 100 Years and the Theoretical Reproduction and Interpretation by the WAM Model**

Masako BANDO<sup>1</sup>, Yuichi TSUNOYAMA<sup>1</sup>, Yoshiharu YONEKURA<sup>2</sup>, Hiroshi TOKI<sup>2</sup>

<sup>1</sup>Kyoto University, Japan, <sup>2</sup>Osaka University, Japan

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/f07420c6-4bf9-4ed7-9519-63ccae88bf7f>

**2099 Statistical Analysis of Low Dose Mouse Experiments With WGS Technology and Quantitative Reproduction of Mutation Frequency Using Whack-a-Mole Model**

Hiroshi TOKI<sup>1</sup>, Yoichi GONDO<sup>2</sup>, Arikuni UCHIMURA<sup>3</sup>, Yuichi TSUNOYAMA<sup>4</sup>, Masako BANDO<sup>4</sup>

<sup>1</sup>RCNP, Osaka University, Japan, <sup>2</sup>Tokai University, Japan, <sup>3</sup>RERF, Japan, <sup>4</sup>Kyoto University, Japan

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/75fdad96-6820-464e-9264-98c0c1202a3c>

**2100 Transgenerational Effects in the Progeny of Male Mice Exposed to Continuous Low Dose-Rate Gamma-Rays**

Satoshi TANAKA<sup>1</sup>, Ignacia TANAKA<sup>1</sup>, Toshiyuki KOBAYASHI<sup>1</sup>

<sup>1</sup>Institute for Environmental Sciences (IES), Japan

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/947b1339-309e-4229-a0d9-2ee0ae806668>

**2101 Whole Genome Sequencing-Based Analysis of Low Dose Rate Radiation-Induced Mutations in Normal Human Fibroblast NB1RGB in Culture**

Enkhbaatar MILAI<sup>1</sup>, Dulguun TSUMBUUKHUU<sup>1</sup>, Takashi SUGIHARA<sup>2</sup>, Mikio SHIMADA<sup>1</sup>, Yoichi GONDO<sup>3</sup>, Yoshihisa MATSUMOTO<sup>1</sup>

<sup>1</sup>Laboratory for Zero-Carbon Energy, Institute of Innovative Research, Tokyo Institute of Technology, Japan, <sup>2</sup>Department of Radiobiology, Institute of Environmental Science, Japan, <sup>3</sup>Department of Molecular Life Sciences, Tokai University School of Medicine, Japan

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/adf85798-597e-4035-9728-4b303aa0fa1f>



## **Session 12: Radiation Emergencies**

- 2102 Chelation Model Validation: Modeling of a Plutonium-238 Inhalation Incident Treated With DTPA at Los Alamos National Laboratory**  
Sara DUMIT<sup>1</sup>, Guthrie MILLER<sup>2</sup>, Deepesh POUDEL<sup>1</sup>, Luiz BERTELLI<sup>2</sup>, John KLUMPP<sup>1</sup>  
<sup>1</sup>Los Alamos National Laboratory, USA, <sup>2</sup>Retired (Los Alamos National Laboratory), USA  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/5395567a-23f9-4dfa-bf8c-f817aef601bb>
- 2104 Development and Features of McSEE: A User-Friendly GUI-Based Monte Carlo Simulation Software for External Radiation Exposure**  
Hyeonil KIM<sup>1</sup>, Bangho SHIN<sup>1</sup>, Chansoo CHOI<sup>2</sup>, Suhyeon KIM<sup>1</sup>, Haegin HAN<sup>1</sup>, Sungho MOON<sup>1</sup>, Gahee SON<sup>1</sup>, Chan Hyeong KIM<sup>1</sup>  
<sup>1</sup>Hanyang University, Republic of Korea, <sup>2</sup>University of Florida, USA  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/e85fd3d3-fd62-43e4-9759-26b0d84dd12e>
- 2105 Development of a New Thyroid Monitor for Pediatric Use in Nuclear Emergencies**  
Kazuaki YAJIMA<sup>1</sup>, Eunjoo KIM<sup>1</sup>, Yoshio TAKASHIMA<sup>1</sup>, Kotaro TANI<sup>1</sup>, Masumi OGAWA<sup>2</sup>, Osamu KURIHARA<sup>1</sup>  
<sup>1</sup>QST, Japan, <sup>2</sup>JSDF Central Hospital, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/3afc88dc-34c2-4d5e-91f5-9ec3daa04f0e>
- 2106 Development of E-learning Application for Chromosomal Aberrations to Quickly Train the Qualified Analysts for Biological Dose Assessment in Radiation Emergency**  
HyoJin YUN<sup>1</sup>, Su San YANG<sup>1</sup>, HwaYoung KIM<sup>1</sup>, YangHee LEE<sup>1</sup>, Soon Woo KWON<sup>1</sup>, Ki Moon SEONG<sup>1</sup>  
<sup>1</sup>Laboratory of Biological Dosimetry, National Radiation Emergency Medical Center, Korea Institute of Radiological & Medical Sciences, Rep. of Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/fc0d44f9-7bc7-4794-ba14-60a6f4bf0db1>
- 2107 Dicentric Assay Protocol Simplifying for Cytogenetic Dosimetry On-site**  
Thanh Mai TRAN<sup>1</sup>  
<sup>1</sup>Hirosaki University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/517f669c-f61e-49b6-be03-211b4f8d061b>
- 2108 Evaluation of Radiation Protection Performance of Major Evacuation Facilities during NPP Accident in Korea**  
Hyeonmin LEE<sup>1</sup>, Seung Hun SHIN<sup>1</sup>, Hee Reyoung KIM<sup>1</sup>  
<sup>1</sup>Ulsan National Institute of Science and Technology  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/92ac9eb2-4a2a-4078-8351-088e78a1c6fd>
- 2109 Feasibility of  $\alpha$ -Cyclodextrin for Reduction of Thyroid Radioactive Iodine Exposure**  
Masahiro HIROTA<sup>1</sup>, Kodai NISHI<sup>2</sup>, Shogo HIGAKI<sup>3</sup>, Shigeki ITO<sup>4</sup>  
<sup>1</sup>Shinshu University, Japan, <sup>2</sup>Nagasaki University, Japan, <sup>3</sup>University of Tokyo, Japan, <sup>4</sup>Kumamoto University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/0d9ba23c-d677-40ec-bdbd-c709549f3d1d>
- 2110 Fecal Bioassay Method for Pu-239, Pu-240 and Am-241**  
Chuangao WANG<sup>1</sup>, Yunyun YIN<sup>1</sup>, Hongchao PANG<sup>1</sup>, Zhiping LUO<sup>1</sup>, Ying WANG<sup>1</sup>  
<sup>1</sup>China Institute of Atomic Energy, China  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/f9fdd791-52b6-47df-b627-cc7bda017e04>

- 2111 Internal Dose Assessment for Actinide Inhalation by a New Lung Counting System at QST, Japan**  
Masayuki NAITO<sup>1</sup>, Yuki TAMAKUMA<sup>2</sup>, Kazuaki YAJIMA<sup>1</sup>, Kotaro TANI<sup>1</sup>, Eunjoo KIM<sup>1</sup>, Osamu KURIHARA<sup>1</sup>  
<sup>1</sup>National Institutes for Quantum Science and Technology, <sup>2</sup>Nagasaki University  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/15fce8c9-1494-4127-a116-ee1b99c84ec8>
- 2112 Investigation of Kriging Methodology Types for Deriving Dose Maps to Assess Radiation Dose to Workers**  
Ji Woo KIM<sup>1</sup>, Min Seong KIM<sup>1</sup>, Ju Young KIM<sup>1</sup>, Kwang Pyo KIM<sup>1</sup>  
<sup>1</sup>Kyung Hee University, South Korea  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/76ff1526-ffbd-4ced-ae13-b28c2f13edb3>
- 2113 Issues on Dose Reconstruction of Victims in Low Energy X-ray Exposure Accidents - Case Studies Introducing a Monte-Carlo Based PHITS Code -**  
Minoru SAKAMA<sup>1</sup>, Munehiko KOWATARI<sup>2</sup>, Masafumi AKIYOSHI<sup>3</sup>, Keiji ODA<sup>4</sup>, Atsushi KASAI<sup>5</sup>, Nobuyuki HAMADA<sup>6</sup>, Masahiro FUKUSHI<sup>7</sup>, Ichiro YAMAGUCHI<sup>8</sup>, Yu IGARASHI<sup>9</sup>, Takeshi IIMOTO<sup>10</sup>  
<sup>1</sup>Tokushima Univ., Japan, <sup>2</sup>QST, Japan, <sup>3</sup>Osaka Metropolitan Univ., Japan, <sup>4</sup>Electron Science Institute, Japan, <sup>5</sup>JAERI, retired, Japan, <sup>6</sup>Central Research Institute of Electric Power Industry (CRIEPI), Japan, <sup>7</sup>Tsukuba International Univ., Japan, <sup>8</sup>National Institute of Public Health, Japan, <sup>9</sup>JAEA, Japan, <sup>10</sup>Tokyo Univ., Japan  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/dc812d21-5889-4460-8396-48f23ceac21f>
- 2114 Nuclear Fallout and Accident Source Term Modeling for Internal Dosimetry of Radiation Countermeasures**  
Brandon WILSON<sup>1</sup>, David HOOPER<sup>1</sup>, Shaheen DEWJI<sup>2</sup>  
<sup>1</sup>ORNL, USA, <sup>2</sup>Georgia Institute of Technology, USA  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/c3aa85d3-9700-42cb-b3cc-029d4202ebb9>
- 2115 Population Monitoring for Thyroid Exposure Due to Intake of Radioiodines in Nuclear Emergency - Current Status of Japan, South Korea, and China -**  
Osamu KURIHARA<sup>1</sup>, Wi-Ho HA<sup>2</sup>, Jeongin KIM<sup>3</sup>, Cao QINJIAN<sup>4</sup>, Fei TUO<sup>5</sup>, Eunjoo KIM<sup>1</sup>, Guosheng YANG<sup>1</sup>, Qing-jie LIU<sup>5</sup>, Seongjae JANG<sup>6</sup>  
<sup>1</sup>QST, Japan, <sup>2</sup>KAERI, Korea, <sup>3</sup>KHNP-RHI, Korea, <sup>4</sup>CIRP, China, <sup>5</sup>NIRP, China, <sup>6</sup>KIRAMS, Korea  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/e2826389-fa46-4c8b-83cc-e7a3f30099c8>
- 2116 Public Health Preparedness for a Nuclear Detonation: Lessons from the Covid-19 Pandemic**  
Chunsheng LI<sup>1</sup>  
<sup>1</sup>Health Canada, Canada  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/822ec69d-13c8-4480-b8c1-fb92157a6c2e>
- 2117 Radiological Impact Assessment and Transport Pathway of Radionuclides Released Into the Air After the Fukushima Accident**  
Kyung-Suk SUH<sup>1</sup>, Sora KIM<sup>1</sup>, Byung-Il MIN<sup>1</sup>, Kihyun PARK<sup>1</sup>, Yoomi CHOI<sup>1</sup>, Jiyeon KIM<sup>1</sup>, Min-Chae KIM<sup>1</sup>, Hyeonjeong KIM<sup>1</sup>  
<sup>1</sup>KAERI, South Korea  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a6e572ec-1946-4260-bda1-936b271b3682>
- 2118 Results and Perspectives of the NATO Project BioPhyMeTRE “Novel Biological and Physical Methods for Triage in Radiological and Nuclear (R/N) Emergencies”**  
Clarice PATRONO<sup>1</sup>, Valentina PALMA<sup>1</sup>, Emanuela BORTOLIN<sup>2</sup>, Nadica Maltar STRMEČKI<sup>3</sup>, Laura KENZHINA<sup>4</sup>, Dina BIYAKHMETOVA<sup>4</sup>, Fail ZHAMALDINOV<sup>4</sup>, Aygul MAMYRBAYEVA<sup>4</sup>, Sara Della MONACA<sup>2</sup>, Paola FATTIBENE<sup>2</sup>, Maria Cristina QUATTRINI<sup>2</sup>, Ina ERCEG<sup>3</sup>, Kristina SMOKROVIĆ<sup>3</sup>  
<sup>1</sup>Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), Italy, <sup>2</sup>Italian National Institute of Health (ISS), Italy, <sup>3</sup>Ruder Bošković Institute (RBI), Croatia, <sup>4</sup>Institute of Radiation Safety and Ecology (IRSE), Kaza  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/5ac193f2-0a14-47eb-89e8-afb3dc413200>

- 2119 Shielding Room Design for Body Counters: A Trade-off between Background Reduction and Building Cost**  
Yu WANG<sup>1</sup>, Yuanyuan LIU<sup>1</sup>, Bin WU<sup>1</sup>, Jianping CHENG<sup>1</sup>  
<sup>1</sup>College of Nuclear Science and Technology, Beijing Normal University, Joint Laboratory of Jinping Ultra-low Radiation Background Measurement of Ministry of Ecology and Environment Beijing Normal University, Key Laboratory of Beam Technology of Ministry of Education, China  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a9a2fc6a-97c6-44ac-a46b-5aba27aa6051>
- 2120 The Development of Rapid Bioassay Methods for Radiation Emergency Medicine**  
Guosheng YANG<sup>1</sup>, Eunjoo KIM<sup>1</sup>, Jian ZHENG<sup>1</sup>, Hatsuho SENO<sup>1</sup>, Munehiko KOWATARI<sup>1</sup>, Osamu KURIHARA<sup>1</sup>  
<sup>1</sup>National Institutes for Quantum Science and Technology, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/473b0b84-c16b-49f9-a416-220bf39874ba>
- 2121 The Influence of Phytohaemagglutinin on Radiation Biodosimetry in the Event of Delayed Sample Shipment**  
Ji In KIM<sup>1</sup>, Kyeong Min KIM<sup>2</sup>, Hee Jin CHOI<sup>3</sup>, Ji Young LEE<sup>1</sup>, Su Mi JO<sup>1</sup>, Ji Woo LEE<sup>1</sup>, Younghyun LEE<sup>1</sup>  
<sup>1</sup>Soonchunhyang University, Republic of Korea, <sup>2</sup>Soonchunhyang University, Republic of Korea, <sup>3</sup>Soonchunyang University, Republic of Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/6ebc575a-01ef-4841-9a8b-4f93da573c92>
- 2122 Virtual Calibration of Transportable Radiation Detection Instruments to Assess Internal Contamination in Population Monitoring**  
MinSeok PARK<sup>1</sup>, Jaeryong YOO<sup>1</sup>, Bangho SHIN<sup>2</sup>  
<sup>1</sup>Laboratory of Health Physics, Korea Institute of Radiological and Medical Sciences, Republic of Korea, <sup>2</sup>Department of Nuclear Engineering, Hanyang University, Republic of Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/042f6939-6e2d-4ba7-9818-a367bac49eb2>

## **Session 13: Imaging in Radiotherapy**

- 2123 Comparison of the Radixact ClearRT® System with a Conventional CT Scan: Impact on Patient Registration and Verification accuracy in Patients undergoing Radiotherapy Treatments with Synchrony®**  
Christian David Trujillo BASTIDAS<sup>1,2</sup>, Gloria Maria Díaz LONDOÑO<sup>1</sup>, Amilcar Estrada MOLINA<sup>3</sup>, Maria Cristina Plazas de PINZON<sup>1</sup>, Jacob SHEA<sup>4</sup>, Michael TAYLOR<sup>5</sup>  
<sup>1</sup>Universidad Nacional de Colombia, Colombia, <sup>2</sup>Clinica de Oncología Astorga, Colombia, <sup>3</sup>ROCOL International, Colombia, <sup>4</sup>Imaging Systems, USA, <sup>5</sup>Accuray, USA  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/d887c864-7410-4825-8dab-7dfc952bc207>
- 2124 Impact of a Vendor-agnostic Deep Learning-based CT Denoising Technique on Reducing Patient Radiation Dose: Korean and Mongolian Population Study**  
Ahyeong LEE<sup>1,2</sup>, Chulkyun AHN<sup>1,2</sup>, Ju Gang NAM<sup>3</sup>, Khulan KHURELSUKH<sup>4</sup>, Bayarbaatar BOLD<sup>2</sup>, Chang Won KIM<sup>1</sup>, Jin Mo GOO<sup>3</sup>, Jong Hyo KIM<sup>1,2,3</sup>  
<sup>1</sup>ClariPi Research, Seoul, Rep. of Korea, <sup>2</sup>Department of Applied Bioengineering, Graduate School of Convergence Science and Technology, Seoul National University, Rep. of Korea, <sup>3</sup>Department of Radiology, Seoul National University College of Medicine, and Institute of Radiation Medicine, Seoul National University, Rep. of Korea, <sup>4</sup>Department of Radiology, Intermed Hospital, Ulaanbaatar Mongolia  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a87bab73-9370-412f-8fc3-75ed3fef1ced>
- 2125 Proposal and Evaluation of a Practical Cone Beam Computed Tomography (CBCT) Dose Optimization Method**  
Sebastien GROS<sup>1</sup>, Junguo BIAN<sup>1</sup>, Jacob JACKSON<sup>1</sup>, Michael DELAFUENTE<sup>1</sup>, Mahadevappa MAHESH<sup>2</sup>  
<sup>1</sup>Loyola University Chicago, USA, <sup>2</sup>Johns Hopkins University, USA  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/5a67bc27-6e41-44f1-b95e-d43066ae95a7>
- 2126 Radiomic, Dosiomic and Clinical Features Modeling to Predict Local Failure After Stereotactic Body Radiotherapy for Spinal Metastases**  
Syoma IDE<sup>1</sup>, Yujiro NAKAJIMA<sup>1</sup>, Kei ITO<sup>2</sup>, Kentaro TAGUCHI<sup>2</sup>, Fumiya TSURUMAKI<sup>1,2</sup>, Yuhi SUDA<sup>2</sup>, Satoshi KITO<sup>2</sup>, Keiko MUROFUSHI<sup>2</sup>, Yukio FUJITA<sup>1</sup>  
<sup>1</sup>Komazawa University Graduate School, Japan, <sup>2</sup>Tokyo Metropolitan Komagome Hospital, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/36b9727b-ea32-4783-a6ec-683e8df3659e>

## **Session 14: Justification**

- 2127 Justification and Optimization of Pediatric CT in Prefetures around Tokyo**  
Osamu MIYAZAKI<sup>1</sup>, Reiko OKAMOTO<sup>1</sup>, Masayuki KITAMURA<sup>1</sup>, Rumi IMAI<sup>1</sup>, Ayako IMAI<sup>1</sup>, Yoshiyuki TSUTSUMI<sup>1</sup>, Mikiko MIYASAKA<sup>1</sup>, Shunsuke NOSAKA<sup>1</sup>  
<sup>1</sup>*Dept of Radiology, National Center for Child Health and Development*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a58cd585-474e-49d7-b749-73b12327c427>

## **Session 15: RP in Ion Beam and Targeted Alpha Therapy**

- 2128 Applicability of Simplified Alpha Spectroscopy to Radionuclidic Purity Tests on Production Floors of Alpha-emitting Radionuclides**  
Yuma MIHEI<sup>1</sup>, Kotaro TANI<sup>2</sup>, Jun ICHINOSE<sup>2</sup>, Osamu KURIHARA<sup>2</sup>, Kazumasa INOUE<sup>3</sup>, Masahiro FUKUSHI<sup>4</sup>, Kotaro NAGATSU<sup>2</sup>  
<sup>1</sup>*QST, Tokyo Metropolitan University, Japan*, <sup>2</sup>*QST, Japan*, <sup>3</sup>*Tokyo Metropolitan University, Japan*, <sup>4</sup>*Tsukuba International University, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/d4795b28-5e55-4272-81e4-661927a19a06>
- 2129 Stray Radiation Dose Measurement in a Proton Therapy Room in Pencil Beam Scanning Mode**  
Jilong YUAN<sup>1</sup>, Xiangjie MA<sup>1</sup>, Xiao WEI<sup>1</sup>, Mingsheng LI<sup>1</sup>, Jinsheng CHENG<sup>1</sup>  
<sup>1</sup>*National Institute for Radiological Protection, Chinese Center for Disease Control and Prevention, Key Laboratory of Radiological Protection and Nuclear Emergency, China CDC, China*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/1f1788a6-3f71-4d0f-acda-b3c3ff4eca8e>
- 2130 The Study of Radiation Protection in the Integration of Transcatheter Cardiovascular Imaging and Transesophageal Echocardiography**  
Kuo Ting TANG<sup>1</sup>, Chien Yi TING<sup>2</sup>  
<sup>1</sup>*Division of Cardiovascular Medicine, Chi-Mei Medical Center, Tainan City, Taiwan*, <sup>2</sup>*1. Department of Medical Imaging and Radiological Sciences, Chung Shan Medical University, Taiwan, R.O.C. 2. Chung Shan Medical University Hospital, Taiwan, R.O.C.*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/0d81dff2-f4f6-444e-9e46-c4755de363cd>

## **Session 16: Radiation Detriment, Other Risk Metrics, and Their Application**

- 2131 A Mathematical Model for the Occurrence of DSB Taking Account of the Repair of SSB**  
Tetsuhiro KINUGAWA<sup>1</sup>, Yuichiro MANABE<sup>1</sup>, Fuminobu SATO<sup>1</sup>, Takahiro WADA<sup>2</sup>  
<sup>1</sup>Osaka University, Japan, <sup>2</sup>Kansai University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/01901754-3e7f-4708-9938-73671e471064>
- 2132 A Mathematical Modeling of Elkind Recovery**  
Takahiro WADA<sup>1</sup>, Yuichiro MANABE<sup>2</sup>, Tetsuhiro KINUGAWA<sup>2</sup>  
<sup>1</sup>Kansai University, Japan, <sup>2</sup>Osaka University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/ffcefdb8-3f73-4b5a-80be-ffe41725559d>
- 2133 Aspects of Risk Projection Models Relevant for Detriment Calculation and Application to Radiation-Induced Leukemia**  
Markus EIDEMÜLLER<sup>1</sup>  
<sup>1</sup>Federal Office for Radiation Protection, Germany  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/3ef31646-eccb-4fec-a816-3465d8e0df2b>
- 2134 In-Situ Radiometric Assessment of Ruru Region in Gulmi, Nepal**  
Bal Vikram KHATRI<sup>1</sup>, Raju KHANAL<sup>2</sup>, Himali KALAKHETY<sup>3</sup>, Om Prakash NIRLA<sup>2</sup>  
<sup>1</sup>Department of Physics, Amrit Campus, Tribhuvan University, Kathmandu, Nepal, <sup>2</sup>Central Department of Physics, Tribhuvan University, Kirtipur, Nepal, <sup>3</sup>Department of Physics and Geosciences, Texas A. & M. University, Kingsville, Texas, USA  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/ee0f70bf-ead1-4dec-bd30-1eda49ab8e65>
- 2135 The Application of Disability-adjusted Life Years (DALYs) Index for Radiation and Other Risk: Preliminary Calculation Results and Considerations**  
Tatsuki KIMURA<sup>1</sup>, Michiya SASAKI<sup>1</sup>  
<sup>1</sup>Central Research Institute of Electric Power Industry, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/09655361-f3f3-4c71-85c3-97a548e29a7a>

## **Session 17: Effects & Dose-Response: Cancer, Circulatory Disease, and Beyond**

- 2136 Activities of Planning and Acting Network for Low Dose Radiation Research in Japan (PLANET): 2020-2023 and beyond**  
Yutaka YAMADA<sup>1</sup>, Tatsuhiko IMAOKA<sup>1</sup>, Toshiyasu IWASAKI<sup>2</sup>, Junya KOBAYASHI<sup>3</sup>, Munechika MISUMI<sup>4</sup>, Kazuo SAKAI<sup>5</sup>, Takashi SUGIHARA<sup>6</sup>, Keiji SUZUKI<sup>7</sup>, Hiroshi TAUCHI<sup>8</sup>, Hiroshi YASUDA<sup>9</sup>, Shinji YOSHINAGA<sup>9</sup>, Megumi SASATANI<sup>9</sup>, Satoshi TANAKA<sup>6</sup>, Kazutaka DOI<sup>1</sup>, Masanori TOMITA<sup>2</sup>, Daisuke IIZUKA<sup>1</sup>, Shizuko KAKINUMA<sup>1</sup>, Michiya SASAKI<sup>2</sup>, Michiaki KAI<sup>10</sup>  
<sup>1</sup>QST, Japan, <sup>2</sup>CRIEPI, Japan, <sup>3</sup>International University of Health and Welfare, Japan, <sup>4</sup>RERF, Japan, <sup>5</sup>REA, Japan, <sup>6</sup>IES, Japan, <sup>7</sup>Nagasaki University, Japan, <sup>8</sup>Ibaraki University, Japan, <sup>9</sup>Hiroshima University, Japan, <sup>10</sup>Nippon Bunri University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/7f6bb328-db61-47b9-b4c5-679e9cfb8ff5>
- 2137 Dose-Response Relationship Between Occupational Exposure to Ionizing Radiation and Mortality from Metabolic and Cardiovascular Diseases among Korean Radiation Workers**  
Eun Bi NOH<sup>1</sup>, Eun Shil CHA<sup>1</sup>, Hyoju SUNG<sup>1</sup>, Haesu JEONG<sup>1</sup>, Dalnim LEE<sup>1</sup>, Soyeon JUNG<sup>1</sup>, Won-II JANG<sup>1</sup>, Songwon SEO<sup>1</sup>  
<sup>1</sup>National Radiation Emergency Medical Center, Korea Institute of Radiological and Medical Sciences, South Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/202489de-5647-4f57-baa0-ca4492f2a8da>
- 2138 Healthy Worker Survival Bias in a Cohort of Medical Radiation Workers**  
Jaeho JEONG<sup>1</sup>, Won Jin LEE<sup>2</sup>, Ye Jin BANG<sup>2</sup>, Young Min KIM<sup>1</sup>  
<sup>1</sup>Department of Statistics, Kyungpook National University, South Korea, <sup>2</sup>Department of Preventive Medicine, Korea University College of Medicine, South Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/586be43e-c720-460f-80b2-8ef5ca4ec9c2>
- 2139 Indirect Effects in Ionizing Radiation Cataractogenesis**  
Kazuo NERIISHI<sup>1</sup>, Richard RICHARDSON<sup>2</sup>  
<sup>1</sup>Kobushinosato Nursing Care Geriatric Health Facilities, Japan, <sup>2</sup>Canadian Nuclear Laboratories (CNL), Canada  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/00087271-073a-4b98-8039-0a13b325aaa8>
- 2140 Investigation Into Effects of Chronic and Low Dose Irradiation Using Various Cellular Models**  
Christelle CHUA<sup>1</sup>, Lance TAY<sup>1</sup>, Zihuai CHEW<sup>1</sup>, Jonathan YEO<sup>1</sup>, Shu Xian TEO<sup>1</sup>, Valerie GOH<sup>1</sup>, Han Wei TAN<sup>1</sup>  
<sup>1</sup>Singapore Nuclear Research and Safety Initiative, National University of Singapore, Singapore  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/3edfb95a-d1ab-481d-8184-b99e3f790923>
- 2141 Is It Possible to Reproduce in Mouse Experiments the Events of Mankind's Largest Long-Term Internal Exposure Accident That Occurred Around the Techa River in the Urals Nuclear Disaster in the 1950s?**  
Masaoki KOHZAKI<sup>1</sup>, Akira OOTSUYAMA<sup>2</sup>, Toshiaki ABE<sup>3</sup>, Manabu TSUKAMOTO<sup>4</sup>, Toshiyuki UMATA<sup>3</sup>, Ryuji OKAZAKI<sup>1</sup>  
<sup>1</sup>Department of Radiobiology and Hygiene Management, Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health, Japan, <sup>2</sup>Department of Radiation Biology and Health, School of Medicine, University of Occupational and Environmental Health, Japan, <sup>3</sup>Radioisotope Research Center, Facility for Education and Research Support, University of Occupational and Environmental Health, Japan, <sup>4</sup>Department of Orthopedic Surgery, School of Medicine, University of Occupational and Environmental Health, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/e0c25b25-5faa-4e0c-9994-d97d5df51f30>
- 2142 Longitudinal Analysis of Leukocyte Counts and Long-Term Health Risks in Exposed Rhesus Monkeys**  
Yuiko CHINO<sup>1</sup>, Aidan LEWIS<sup>1</sup>, Stephen AICHELE<sup>1</sup>, John OLSON<sup>2</sup>, George SCHAAF<sup>2</sup>, Susan BAILEY<sup>1</sup>, J. Mark CLINE<sup>2</sup>, Thomas JOHNSON<sup>1</sup>  
<sup>1</sup>Colorado State University, USA, <sup>2</sup>Wake Forest School of Medicine, USA  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/065ea5d5-1e1e-412c-9513-ef6ca032eaf7>

- 2143 Mathematical Analysis of Earlier Onset Hypothesis in Acute Exposure Situation**  
Isao KAWAGUCHI<sup>1</sup>, Shinji YOSHINAGA<sup>2</sup>  
<sup>1</sup>*QST, Japan*, <sup>2</sup>*Hiroshima University, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a6bb959e-4b54-47e1-bb99-a2ad850a491e>
- 2144 Non-cancer Mortality Among the Early Entrants of A-bomb Survivors in Hiroshima: 1970-2015**  
Seiko HIROTA<sup>1</sup>, Shinji YOSHINAGA<sup>1</sup>, Kodai KUME<sup>1</sup>, Hideshi KAWAKAMI<sup>1</sup>  
<sup>1</sup>*RIRBM, Hiroshima University, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/67c1e9f4-eb43-4ec1-bcb6-7b0aa182aeaf>
- 2145 Polygala Tenuifolia Water Extract Attenuates the Cellular Oxidative Damage in Irradiated IMR-90 Cells and the Neurogenesis Suppression in Cranially Irradiated Mice**  
Uhee JUNG<sup>1</sup>, Rae-Kwon KIM<sup>1</sup>, In-Gyu KIM<sup>1</sup>, Kyung-Suk SUH<sup>1</sup>  
<sup>1</sup>*KAERI, Republic of Korea*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a15d5dd1-febd-4cf4-9d12-ad9df36e6c10>
- 2146 Radiation Exposure and Mortality of Circulatory Diseases in a Cohort of Korean Radiation Workers**  
Haesu JEONG<sup>1</sup>, Eun Shil CHA<sup>1</sup>, Eun Bi NOH<sup>1</sup>, Dalnim LEE<sup>1</sup>, So Yeon JUNG<sup>1</sup>, Won-II JANG<sup>1</sup>, Songwon SEO<sup>1</sup>  
<sup>1</sup>*Korea Institute of Radiological and Medical Sciences, South Korea*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a6b5d191-22c4-4038-8e5d-ab2fd057ce5b>
- 2147 Radiation-Induced Mammary Cancer Mechanism From the Viewpoint of Cellular Dynamics**  
Daisuke IIZUKA<sup>1</sup>, Mari OGAWA<sup>1</sup>, Mayumi SHINAGAWA<sup>1</sup>, Chizuru TSUROKA<sup>1</sup>, Masaaki SUNAOSHI<sup>1</sup>, Shizuko KAKINUMA<sup>1</sup>, Tatsuhiko IMAOKA<sup>1</sup>  
<sup>1</sup>*QST, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/4acb5fc1-20ef-4d04-95c0-d718ef84dc00>
- 2148 Relationship between Micronucleus Formation and Oxidative Stress in Human Vascular Endothelial Cells under Low Dose-rate Irradiation.**  
Qingmei MENG<sup>1</sup>, Juny KOBAYASHI<sup>2</sup>  
<sup>1</sup>*Kyoto University, Japan*, <sup>2</sup>*University of Health and Welfare, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/3d8b9ff3-6ce0-4e0b-9417-83a6b6b9f32f>
- 2149 Sustainable Development of Radiation Epidemiology for Public Health in Korea**  
Songwon SEO<sup>1</sup>, Dalnim LEE<sup>1</sup>, Eun Shil CHA<sup>1</sup>, Hyoju SUNG<sup>1</sup>, Soojin PARK<sup>1</sup>, Ga Bin LEE<sup>1</sup>, Eun Bi NOH<sup>1</sup>, Haesu JEONG<sup>1</sup>, Soyeon JUNG<sup>1</sup>, Won-II JANG<sup>1</sup>  
<sup>1</sup>*Korea Institute of Radiological & Medical Sciences, Korea*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/dad4f189-1118-43ca-bb0a-0211b206b54f>
- 2150 The Biological Response to Internal and External Exposure to Cesium-137 may be Different even at Equivalent Doses**  
Hiroo NAKAJIMA<sup>1</sup>, Mizuki OHNO<sup>2</sup>, Noriko TAKANO<sup>2</sup>, Satoru ENDO<sup>3</sup>, Hiroshi ISHIHARA<sup>4</sup>  
<sup>1</sup>*Osaka University, Japan*, <sup>2</sup>*Kyushu University, Japan*, <sup>3</sup>*Hiroshima University, Japan*, <sup>4</sup>*QST, Japan*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/21350caa-874c-4775-a878-06ba82f42f7d>
- 2151 The Global Register of Low-Dose Research Projects**  
Dmitry KLOKOV<sup>1</sup>, Nick PRIEST<sup>2</sup>, Nicolas SOPPERA<sup>3</sup>, Paul LOCKE<sup>4</sup>, Jacqueline GARNIER-LAPLACE<sup>3</sup>, Dominique LAURIER<sup>1</sup>  
<sup>1</sup>*Institute for Radiological Protection and Nuclear Safety (IRSN), France*, <sup>2</sup>*Université Laval, Québec, Canada*, <sup>3</sup>*Nuclear Energy Agency (NEA), France*, <sup>4</sup>*Johns Hopkins Bloomberg School of Public Health, Maryland, USA*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/0e1718bb-30c8-470c-b5df-178aa14d1be1>



- 2152 Verification of Hypothesis “Radiation-induced Stem Cell Competition (RISCC)” to Understand Dose-rate Effect**  
[Japanese Title] 線量率効果を説明する「放射線誘発幹細胞競合」仮説の検証  
Yuki FUJIMICHI<sup>1</sup>, Kensuke OTSUKA<sup>1</sup>, Toshiyasu IWASAKI<sup>1</sup>, Masanori TOMITA<sup>1</sup>  
<sup>1</sup>CRIEPI, Japan

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/881c9896-a33f-4e2c-ac9a-72db3dba4e21>

- 2153 Viewpoint on the Use of the Linear No-threshold (LNT) Model at Low Doses and Dose Rates in Radiological Protection**  
Dominique LAURIER<sup>1</sup>, Yann BILLARAND<sup>1</sup>, Dmitry KLOKOV<sup>1</sup>, Klervi LEURAUD<sup>1</sup>  
<sup>1</sup>Institute for Radiological Protection and Nuclear Safety (IRSN), France

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/b7d22ee5-bc9a-4c97-b036-8eab71ed610c>

## **Session 18: Strengthening Expertise and Raising Public Awareness**

- 2154 Analysis for Raising Radon Public Awareness**  
Kremena IVANOVA<sup>1</sup>, Jana DJOUNOVA<sup>1</sup>, Ilia TASEV<sup>2</sup>  
<sup>1</sup>NCRRP, Bulgaria, <sup>2</sup>Ministry of Health, Bulgaria

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/c8c7e63a-50dc-4d87-adae-c2529c2bb8cd>

- 2155 Certification of Radiation Protection Professionals in Australia and New Zealand**  
Brent ROGERS<sup>1</sup>, Cameron JEFFRIES<sup>2</sup>, Kent GREGORY<sup>3</sup>, Tomas KRON<sup>4</sup>  
<sup>1</sup>South Eastern Sydney Local Health District, Sydney, Australia, <sup>2</sup>SA Medical Imaging, Department of Health and Wellbeing, Adelaide, Australia, <sup>3</sup>SA Radiation Pty Ltd, Adelaide, Australia, <sup>4</sup>Peter MacCallum Cancer Centre, Melbourne, Australia

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/1e46d4f7-a719-4552-8341-d67568207e06>

- 2156 Developing and Maintaining Radiation Protection Expertise: A U.S. and Global Perspective**  
Jonathan NAGATA<sup>1</sup>, David BORREGO<sup>1</sup>, Sara DECAIR<sup>1</sup>, Armin ANSARI<sup>1</sup>  
<sup>1</sup>U.S. Environmental Protection Agency, USA

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/7b3393b5-905c-4b4d-bbbd-e35024f0e06e>

- 2157 ICRP Publications Translation Project in Japan**  
Aki HIRASUGI<sup>1</sup>, Midori NAKAMURA<sup>1</sup>, Mari MORI<sup>1</sup>, Asako TAKAMASA<sup>1</sup>, Hideki TOMA<sup>1</sup>  
<sup>1</sup>Secretariat of ICRP Publications Japanese Translation Project 2023, Japan NUS Co.,Ltd.

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/f9f1654a-359f-41cb-b503-29408b32e56d>

- 2158 Occupational RP: Lessons learned from one of the world's largest operation nuclear power plant**  
Alexander ALBISHARAT<sup>1</sup>, Aaron KLASSEN<sup>1</sup>  
<sup>1</sup>Bruce Power, Canada

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/36f28ce5-9c31-4acf-9092-103f22101da5>

- 2159 The Academic Preparation and Professional Certification in Health Physics in the United States**  
Wei-Hsung WANG<sup>1</sup>  
<sup>1</sup>Louisiana State University, USA

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/88a9a313-30b4-45f3-ae71-afcccc24dc19>

- 2160 We Are Strengthening Expertise and Raising Public Awareness About Radon Topics**  
Marcela BERCIKOVA<sup>1</sup>  
<sup>1</sup>ISUJB, Czech Republic

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/6a794198-4802-4479-ab5a-34e7da904b34>

## Other

- 2161 Assessment of External Radiation Dose to Workers at the Decommissioning Workplace of a Phosphate Industry**  
Seong Yeon LEE<sup>1</sup>, Seong Hun JEON<sup>1</sup>, Min Woo KWAK<sup>1</sup>, Kwang Pyo KIM<sup>1</sup>  
<sup>1</sup>*Kyung Hee University, South Korea*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/328cb16e-4024-4d2d-9b15-9763db0ef2d9>
- 2162 Measurements of Radioactive Cesium Contamination in a Facility after the Accident with the Disused Sealed Radioactive Source**  
Alfred VIDIC<sup>1</sup>, Zorana ILIC<sup>1</sup>  
<sup>1</sup>*Institute for Public Health of Federation of Bosnia and Herzegovina, Bosnia and Herzegovina*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/f42e52b0-da53-4bb2-8806-f0f034341a8f>
- 2163 Mechanical Properties and Attenuation Ability of Biowaste-derived CaCO<sub>3</sub> for Radiation Shielding Applications**  
Ralph Micko Dela CRUZ<sup>1,2</sup>, Ramon Carlo CRUZPERO<sup>2,3</sup>  
<sup>1</sup>*Department of Science and Technology, Philippines*, <sup>2</sup>*Department of Physical Sciences and Mathematics, University of the Philippines Manila, Philippines*, <sup>3</sup>*Philippine General Hospital, Philippines*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/66ee343b-b91f-40ea-8fa4-780b5bace0ff>
- 2164 Monte Carlo Simulations of Gamma Ray Scattering through Concrete with Embedded Lead Sheets**  
Annesley Vina GENTOLEA<sup>1</sup>, Austin DIZON<sup>1</sup>, Ramon Carlo CRUZPERO<sup>1,2</sup>  
<sup>1</sup>*University of the Philippines Manila, Philippines*, <sup>2</sup>*Philippine General Hospital, Philippines*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/6f4f85b5-5459-4c26-a978-7f6dc9470d65>
- 2165 Physical Security Conditions of Disused Sealed Sources of Cobalt Therapy**  
Miguel ZERPA<sup>1</sup>  
<sup>1</sup>*Ministry of Popular Power for Health, Bolivarian Republic of Venezuela*  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/f4023489-b091-4f7c-9167-c5f3d2f1386c>

## ICRP Posters

- 2401 **ICRP Main Commission**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/9a0f78e3-bb28-45fa-8e6c-f5c684f37b65>
- 2402 **ICRP Scientific Secretariat**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/ee6a676e-a0a0-40a4-9a03-648b14b10b04>
- 2403 **ICRP Committees**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/c14fdc2f-27e1-479c-87ab-74c667ec7942>
- 2404 **ICRP Mentorship Programme**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/43e7a274-51ce-4036-ade9-eb18e55d27e2>
- 2405 **Publication 153: Radiological Protection in Veterinary Practice**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/39927ac3-d482-427e-a46c-1faec5008d48>
- 2406 **Publication 154: Optimisation of Radiological Protection in Digital Radiology Techniques for Medical Imaging**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/f75fae68-725d-44c3-8f30-6f61d858e142>
- 2407 **Publication 155: Specific Absorbed Fractions for Reference Paediatric Individuals**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/d709ef8e-5374-4364-b2d9-6977322deb46>
- 2408 **Publication 156: Paediatric Mesh-type Reference Computational Phantoms**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/e248f6f4-d0a2-4557-a1c3-72f687a970d5>
- 2409 **Task Group 36: Radiation Dose to Patients in Diagnostic Nuclear Medicine**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/f9b301f3-bb75-466c-ad6c-13c21b8284b4>
- 2410 **Task Group 91: Radiation Risk Inference at Low-dose and Low-dose Rate Exposure for Radiological Protection Purposes**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/e9f04388-0d40-4c75-9b02-07b6c533dbff>
- 2411 **Task Group 95: Internal Dose Coefficients**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/81f99994-df2a-40d3-bf00-cd9f6ed5d443>
- 2412 **Task Group 97: Application of the Commission's Recommendations for Surface and Near Surface Disposal of Solid Radioactive Waste**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/3bcb88e4-9dd9-4f53-a77f-ac7cb1696827>
- 2413 **Task Group 98: Application of the Commission's Recommendations to Exposures Resulting from Contaminated Sites from Past Industrial, Military and Nuclear Activities**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/0c9eef51-a1aa-412e-a49b-35bcc6dde8f>
- 2414 **Task Group 99: Reference Animal and Plant (RAP) Monographs**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/ebe53aca-123d-4af4-b7ec-a38fcc1de448>
- 2415 **Task Group 105: Considering the Environment when Applying the System of Radiological Protection**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/3cedbda9-21d6-4ece-a18d-443427e23449>

- 2416 **Task Group 106: Application of the Commission's Recommendations to Activities involving Mobile High Activity Sources**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/c6960464-2378-4af3-a1a7-3e2d9ae1a232>
- 2417 **Task Group 109: Ethics in Radiological Protection for Medical Diagnosis and Treatment**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/f2f88cfc-d458-42e7-93c2-2eed4df81913>
- 2418 **Task Group 111: Factors Governing the Individual Response of Humans to Ionising Radiation**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/f8916c2a-db69-4209-b018-fc42f101c988>
- 2419 **Task Group 112: Emergency Dosimetry**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/c1896a55-fbee-488f-b956-de5329b3dfa2>
- 2420 **Task Group 113: Reference Organ and Effective Dose Coefficients for Common Diagnostic X-ray Imaging Examinations**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/6c7d55a4-2e33-4a46-8b81-c7db443373b1>
- 2421 **Task Group 114: Reasonableness and Tolerability in the System of Radiological Protection**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/54d02fd3-8509-41e9-9cdd-8f4249e4de59>
- 2422 **Task Group 115: Risk and Dose Assessment for Radiological Protection of Astronauts**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/8fc67cde-d897-4f55-9ff7-5e2f4755e11c>
- 2423 **Task Group 116: Radiological Protection Aspects of Imaging in Radiotherapy**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/ba9d77e7-a64c-43d4-8334-3ec146028d79>
- 2424 **Task Group 117: Radiological Protection in PET and PET/CT**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/7294f611-de41-4218-b62e-0bc67987378c>
- 2425 **Task Group 118: Relative Biological Effectiveness (RBE), Quality Factor (Q), and Radiation Weighting Factor (wR)**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/52a6ee59-72be-48fa-adb7-f7ba2afbaab8>
- 2426 **Task Group 119: Effects of Ionising Radiation on Diseases of the Circulatory System and their Consideration in the System of Radiological Protection**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/bee0f0bb-9fa3-4cde-af61-605ef6a6bea9>
- 2427 **Task Group 120: Radiological Protection for Radiation Emergencies and Malicious Events**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/245bc148-5ef6-4775-9a21-06ab4669d71c>
- 2428 **Task Group 121: Effects of Ionising Radiation Exposure in Offspring and Next Generations**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/d617e368-5cd0-442a-b539-0b20dd5c385d>
- 2429 **Task Group 122: Update of Detriment Calculation for Cancer**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/826da9f4-e51a-43a3-9206-72199e66365a>
- 2430 **Task Group 123: Classification of Harmful Radiation-induced Effects on Human Health for Radiological Protection Purposes**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/6f4a8801-9349-4ae6-811e-80d69a44b33d>
- 2431 **Task Group 124: Application of the Principle of Justification**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/bc8de511-a1cc-4abc-b250-e0af40b2f125>
- 2432 **Task Group 125: Ecosystem Services in Environmental Radiological Protection**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/f4b0ce7e-5488-4b96-bd94-25cb7f821139>

- 2433 **Task Group 126: Radiological Protection in Human Biomedical Research**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/2652c90f-9a07-4be7-919a-c81e5d6fffc7>
- 2434 **Task Group 127: Exposure Situations and Categories of Exposure**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/f8820758-0d09-4d6d-9deb-def8495a97f1>
- 2435 **Task Group 128: Individualisation and Stratification in Radiological Protection: Implications and Areas of Application**  
Poster: <https://event.fourwaves.com/icrp2023/abstracts/95f11189-fbd9-46bf-bac0-f8182fac5aba>

# POSTER (ONLINE ONLY)

## **Session 1: Going Beyond Dose: Wellbeing in Radiological Protection**

### **2201 Average Glandular Dose of Patients Undergoing Digital Breast Tomosynthesis Mammography Examination at East Avenue Medical Center**

Everjoy MONES<sup>1</sup>, Roland Cristopher CABALLAR<sup>1,2</sup>, Julie CRUZ<sup>3</sup>

<sup>1</sup>The Graduate School, University of Santo Tomas, Philippines, <sup>2</sup>Department of Mathematics and Physics, University of Santo Tomas, Philippines, <sup>3</sup>Department of Radiological Sciences, East Avenue Medical Center, Philippines

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/6a238dd0-0904-4b4a-a0cb-a64f52e54162>

## **Session 2: Dosimetry for the Next General Recommendations**

### **2010 Algorithms for De-Clustering Chromosomes in a Dicentric Chromosome Assay**

[\*Changed to Online-only Poster]

Max PLATKOV<sup>1</sup>, Ziv GARDOS<sup>2</sup>, Marina MINDLIN<sup>3</sup>, Inna LEVITSKY<sup>2</sup>, Ariela BURG<sup>2</sup>, Raphael GONEN<sup>1</sup>

<sup>1</sup>Nuclear Research Center Negev, Beer-Sheba, Israel, <sup>2</sup>Shamoon College of Engineering, Chemical Engineering Department, Beer Sheba, Israel, <sup>3</sup>Ben Gurion University of the Negev, Department of Biomedical Engineering, Beer Sheba, Israel

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/25db541c-fb29-4110-a194-fb223b3a6a82>

### **2202 Institutional Diagnostic Reference Levels for Pediatric Computed Tomography Examinations Using Size-Specific Dose Estimates Based on Water Equivalent Diameter in Northern Nigeria**

Musa Yusuf DAMBELE<sup>1</sup>, Anam CHOIRUL<sup>2</sup>, Nkubli B. FLAVIOUS<sup>3</sup>, Joseph Dlama ZIRA<sup>4</sup>, Mohammed Sani UMAR<sup>5</sup>

<sup>1</sup>Department of Radiography, Bayero University Kano, Nigeria, <sup>2</sup>Department of Physics, Diponegoro University, Indonesia, <sup>3</sup>Department of Radiography, University of Maiduguri, Nigeria, <sup>4</sup>Department of Radiography, Federal University of Lafia, Nigeria, <sup>5</sup>Department of Radiography and Radiation sciences, Baze University Abuja

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/70289607-ff04-4dbe-98d9-3e43a95d984e>

### **2225 Application Research of Active Personal Dosimeter (APD) in Pulsed Radiation Field**

Limeng CUI<sup>1</sup>, Guoliang JIN<sup>2</sup>, Zechen FENG<sup>1</sup>, Yongzhong MA<sup>1</sup>, Xiaohai MA<sup>2</sup>

<sup>1</sup>Beijing Center for Disease Control and Prevention, China, <sup>2</sup>Anzhen Hospital Affiliated to Capital Medical University, China

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/540aefeb-a951-4461-8b02-b99fe84e6348>

## **Session 3: Communication**

### **2203 Implications for Providing Information about Radiation risks: A Comparison of Mental Models Between Fukushima Residents and Experts**

Motoko KOSUGI<sup>1</sup>, Reiko KUWAGAKI<sup>2</sup>, Tomoko TSUCHIYA<sup>3</sup>

<sup>1</sup>Shizuoka University, Japan, <sup>2</sup>Central Research Institute of Electric Power Industry, Japan, <sup>3</sup>TONEriCo, Japan

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/3af3edd0-aca8-4e95-941b-f3cfa87e6d5d>

## **Session 4: How Experience of the Fukushima Daiichi Accident is Improving RP**

### **2204 Comparative Analysis of Radiological Measurement Data around the Fukushima Daiichi Nuclear Power Plant to Propose Radiological Measurement Methods for Public Protection in the Event of a Radiation Emergency**

Sungyeop JOUNG<sup>1</sup>, Young-Yong JI<sup>1</sup>, Eunjoong LEE<sup>1</sup>, Wanook JI<sup>1</sup>, Yoomi CHOI<sup>1</sup>

<sup>1</sup>*Korea Atomic Energy Research Institute, South Korea*

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/be09a55e-7357-43ad-abef-9db8a67a354a>

## **Session 5: The Next Generation of Scientists & Professionals**

### **2206 EFOMP Malaga Declaration 2023: An Updated Vision on Medical Physics in Europe**

Brenda BYRNE<sup>1</sup>, Loredana MARCU<sup>2</sup>, Lorenzo Nicola MAZZONI<sup>3</sup>, Carmel J CARUANA<sup>4</sup>, Amanda BARRY<sup>5</sup>, Guadalupe Martín MARTÍN<sup>6</sup>, Michele STASI<sup>7</sup>, Samuel RUIZ<sup>8</sup>, Antonio Lopez MEDINA<sup>9</sup>, Kalliopi PLATONI<sup>10</sup>, Ad J J MAAS<sup>11</sup>, Sam AGIUS<sup>12</sup>, Efi KOUTSOUELI<sup>13</sup>, Paddy GILLIGAN<sup>14</sup>

<sup>1</sup>*Chair EFOMP Professional Matters Committee, Mater Misericordiae University Hospital, Ireland,* <sup>2</sup>*Chair EFOMP European and International Matters Committee, Faculty of Informatics and Science, University of Oradea, Romania,* <sup>3</sup>*Medical Physics Unit PT-PO, AUSL Toscana Centro, Italy,* <sup>4</sup>*Faculty of Health Sciences, University of Malta, Malta,* <sup>5</sup>*Dept. Applied Science & Dept. Health and Sports Science, South Eastern Technological University, Ireland,* <sup>6</sup>*Hospital Universitario de Fuenlabrada, Spain,* <sup>7</sup>*Medical Physics Department, AO Ordine Mauriziano di Torino, Italy,* <sup>8</sup>*Marqués de Valdecilla University Hospital, Spain,* <sup>9</sup>*Servizo Galego de Saúde, Spain,* <sup>10</sup>*National and Kapodistrian University of Athens, Greece,* <sup>11</sup>*Retired Medical Physics Expert, MREC Brabant for Medical Devices, Netherlands,* <sup>12</sup>*Ministry for Health, Malta,* <sup>13</sup>*Secretary General EFOMP, Hygeia Hospital, Greece,* <sup>14</sup>*President EFOMP, Mater Misericordiae University Hospital, Ireland*

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/cf8181bf-0164-4276-b851-8176a8377098>

## **Session 6: Stratification & Individualisation**

### **2207 Establish Facility DRLs Based on Clinical Indication and BMI Categories for CT Scan**

Ahlem JOUINI<sup>1</sup>, Salha Al MOHANNADI<sup>1</sup>, Ali BARAH<sup>1</sup>, Shady ALKHAZZAM<sup>2</sup>

<sup>1</sup>*Hamad Medical Corporation, Clinical Imaging, Qatar,* <sup>2</sup>*Hamad Medical Corporation, Medical Physics Section, Qatar*

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/8cdcc181-253f-43e1-91e6-d0534385e33d>

## **Session 7: Sustainable Development and Protection of the Environment**

- 2208 A Systematic Review of Environmental Effects after the Fukushima Accident: Comparison with the ICRP DCRL**  
Momo TAKADA<sup>1</sup>, Thierry SCHNEIDER<sup>2</sup>  
<sup>1</sup>AIST, Japan, <sup>2</sup>CEPN, France  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/1e61f827-910f-4dbb-939f-b41a3ba717da>
- 2209 Estimation of the Minimum Detectable Activity for Underwater Radiation Monitoring System**  
Janguen PARK<sup>1</sup>, Sung-Hee JUNG<sup>1</sup>, Jinho MOON<sup>1</sup>, Daemin OH<sup>2</sup>  
<sup>1</sup>Radioisotope Research Division, Korea Atomic Energy Research Institute (KAERI), Rep. of Korea, <sup>2</sup>Department of Environmental Research, Korea Institute of Civil Engineering and Building Technology (KICT), Republic of Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/25b6fed9-5ecb-45ee-9db9-474d3ad6bf92>

## **Session 8: Classification of Effects**

(No presentation)

## **Session 9: Exposure Categories & Situations**

- 2210 Criteria for Designating Nurses as Radiation Workers in Japan (Radiological Nursing Society of Japan - Report)**  
Shogo HORITA<sup>1</sup>, Katsumasa OTA<sup>2</sup>, Emiko KONISHI<sup>3</sup>, Nobuyuki SUGIURA<sup>4</sup>, Kenji SUGAI<sup>5</sup>, Tomoko KUSAMA<sup>1</sup>  
<sup>1</sup>Tokyo Healthcare University, Japan, <sup>2</sup>Tohto University, Japan, <sup>3</sup>Kagoshima University, Japan, <sup>4</sup>Chiyoda Technol Corporation, Japan, <sup>5</sup>Radiation Effects Association, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/005f893e-2a39-4fab-bd1e-6728fc5207f8>



## **Session 10: Tolerability & Reasonableness**

(No presentation)

## **Session 11: Offspring & Next Generations**

(No presentation)

## **Session 12: Radiation Emergencies**

### **2211 Determination of Individual Absorbed Dose by Cytogenetic Biodosimetry in Kazakhstan for Radiation/nuclear Emergency Preparedness and Response.**

Laura KENZHINA<sup>1</sup>, Aigul MAMYRBAYEVA<sup>2</sup>, Dina BIYAKHMETOVA<sup>2</sup>, Fail ZHAMALDINOV<sup>2</sup>, Antonella TESTA<sup>3</sup>, Clarice PATRONO<sup>3</sup>, Valentina PALMA<sup>3</sup>

<sup>1</sup>Institut of radiation safety and ecology (IRSE) of National Nuclear center, Republic of Kazakhstan, <sup>2</sup>Institute of radiation safety and ecology (IRSE) of National nuclear center of Kazakhstan, Republic of Kazakhstan, <sup>3</sup>Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), Italy

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/f89d7b21-498e-4377-b3e3-a9d7dd1134b9>

### **2226 Use of Low Cost Personal Objects for a Rapid Radiation Triage with a Portable OSL System**

Emanuela BORTOLIN<sup>1</sup>, Sara Della MONACA<sup>1</sup>, Kristina SMOKROVIĆ<sup>2</sup>, Ina ERCEG<sup>2</sup>, Paola FATTIBENE<sup>1</sup>, Maja Vojnić KORTMIŠ<sup>2</sup>, Maria Cristina QUATTRINI<sup>1</sup>, Nadica MALTAR-STRMEČKI<sup>2</sup>

<sup>1</sup>Istituto Superiore di Sanità, Italy, <sup>2</sup>Ruđer Bošković Institute, Croatia

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a8fe1e19-d6ad-4c67-a1f1-084f656ae628>

## **Session 13: Imaging in Radiotherapy**

- 2213 Comparison of Equal Dosing and Step-up Dosing for Fractionated Radiotherapy in a Cell Culture Model**  
Han Wei TAN<sup>1</sup>, Caryn WUJANTO<sup>2</sup>, Balamurugan VELLAYAPPAN<sup>3</sup>, Christelle En Lin CHUA<sup>1</sup>  
<sup>1</sup>Singapore Nuclear Research and Safety Initiative, National University of Singapore, <sup>2</sup>National University Cancer Institute Singapore, National University Hospital, <sup>3</sup>National University Cancer Institute Singapore, National University Hospital; Yong Loo Lin School of Medicine, National University of Singapore  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/68e6a3a9-2a1d-4063-af2d-8947f890fcf5>
- 2214 Optimal Relative Electron Density Assignment Strategy for Adaptive-to-shape Adaptive Treatment using 1.5 T MR-linac**  
Jiwon SUNG<sup>1</sup>, Yeonho CHOI<sup>1</sup>, Jun Won KIM<sup>1</sup>, Jihun KIM<sup>1</sup>  
<sup>1</sup>Department of Radiation Oncology, Gangnam Severance Hospital, Yonsei University College of Medicine, Seoul, South Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a6b6ae59-4ed4-4d34-aa95-6701089c42b4>
- 2215 Optimization of MCP-96 Alloy Thickness in Patient Position Verification Imaging With Computed Radiography (CR) on Telecobalt 60 Machine**  
Dwi Sugeng SUPRIYADI<sup>1</sup>, Lina CHORIDAH<sup>2</sup>, Siti MASROCHAH<sup>3</sup>, CH Nawangsih PRIHHARSANTI<sup>4</sup>, Ari SUWONDO<sup>3</sup>  
<sup>1</sup>Radiotherapy Department, Dr. Moewardi Hospital, Indonesia, <sup>2</sup>Radiology Department, Dr. Sardjito Hospital, Indonesia, <sup>3</sup>Health Polytechnic of Semarang, Indonesia, <sup>4</sup>Radiotherapy Department, Dr. Kariadi Hospital, Indonesia  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a0293178-3a46-4e6b-8e64-98fc157adcd2>
- 2216 Radiological Protection Aspects of Imaging in Radiotherapy - Avoidance of Errors Originating from IGRT**  
Aurelie ISAMBERT<sup>1</sup>, Jenia VASSILEVA<sup>2</sup>, Colin MARTIN<sup>3</sup>  
<sup>1</sup>IRSN, France, <sup>2</sup>IAEA, Austria, <sup>3</sup>University of Glasgow, United Kingdom  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/69dd130a-6ab6-4334-ac95-f5b6b681c581>
- 2227 Logan Graphical Analysis of PET/CT Imaging for Dosimetry in Targeted Radionuclide Therapy**  
Thanh Tai DUONG<sup>1</sup>, Danny De SARNO<sup>1</sup>, Martin MARTINOV<sup>2</sup>, Hatim FAKIR<sup>1</sup>, Kevin CHUNG<sup>1</sup>, Glenn BAUMAN<sup>1</sup>, Rowan THOMSON<sup>1</sup>, Ting Yim LEE<sup>1</sup>  
<sup>1</sup>University of Western Ontario, Canada, <sup>2</sup>Carleton University, Canada  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/ce84e473-06f9-4e59-82e8-ecf67bb36a6f>

## **Session 14: Justification**

(No presentation)

## **Session 15: RP in Ion Beam and Targeted Alpha Therapy**

- 2217 Measurement of the Ambient Dose Equivalent in a Treatment Room of a Proton Therapy Synchrotron-Based Facility**  
Evangelina Martínez FRANCÉS<sup>1</sup>, Verónica Morán VELASCO<sup>1</sup>, Pablo Echegoyen RUIZ<sup>1</sup>, Leticia Soria Ruiz-OGARRIO<sup>1</sup>, Josep M. MARTÍ-CLIMENT<sup>1</sup>  
<sup>1</sup>Clínica Universidad de Navarra, Spain  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/93a6de31-f0b8-4d8f-a8c8-1cf33ee1dc5c>

## **Session 16: Radiation Detriment, Other Risk Metrics, and Their Application**

- 2218 **A Probabilistic Method for Predicting Acute Radiation Dermatitis Grade in Patients With Head and Neck Cancer Using a Model Based on Bayesian Probability**  
Keisuke HAMADA<sup>1</sup>, Toshioh FUJIBUCHI<sup>2</sup>, Hiroyuki ARAKAWA<sup>2</sup>  
<sup>1</sup>National Hospital Organization Kyushu Cancer Center, Japan, <sup>2</sup>Graduate School of Medical Sciences, Kyushu University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/b6904490-719d-4ad5-91d7-b24cddf0197b>

## **Session 17: Effects & Dose-Response: Cancer, Circulatory Disease, and Beyond**

- 2219 **A Study on the Relationship between Chromosome Aberration and Cerebrovascular Disease in Male Workers**  
Yunmi BAEK<sup>1</sup>, Seo Kon KANG<sup>1</sup>, Jeongin KIM<sup>1</sup>, Sookhee SEONG<sup>1</sup>  
<sup>1</sup>Radiation Health Institute, KHNP  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/b07cc03d-474b-48b0-afc3-c6bb5f71f687>
- 2220 **Do not Waste Time and Money for AOP: Admitting LNT as a Scientific Fact is the Highest Priority for the Next General Recommendation**  
Yutaka HAMAOKA<sup>1</sup>  
<sup>1</sup>Keio University, Japan  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/accaa62d-e559-46c7-aec3-abb5cf49bdf3>
- 2221 **Thyroid Examination in Fukushima: An Critical Review of Related Studies**  
Yutaka HAMAOKA<sup>1</sup>  
<sup>1</sup>Keio University  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/92c7fb74-d57c-4017-b485-04209eb96ede>

## **Session 18: Strengthening Expertise and Raising Public Awareness**

- 2222 **Radiation Protection Education during the Residency and its Relationship to Radiation Safety Behaviors in South Korea**  
Seulki KO<sup>1</sup>, Seungwon CHO<sup>2</sup>  
<sup>1</sup>Eulji University School of Medicine, South Korea, <sup>2</sup>Hanyang University College of Medicine, South Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/e09565ab-26a2-45d6-b24b-aa8ab4cfa2d6>

## **Other**

- 2223 **Review of Repackaging Facilities for Disposal of Spent Nuclear Fuels Developed in Foreign Countries**  
Shindong LEE<sup>1</sup>, Hyeokjae KIM<sup>1</sup>, Geonwoo SON<sup>1</sup>, Kwangpyo KIM<sup>1</sup>  
<sup>1</sup>Kyunghee University, Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/19257480-3a24-4878-b947-8d817a4d6fda>
- 2224 **Sensitivity Analysis of Hydrological Characteristics of NORM Waste Landfill**  
Seong Hun JEON<sup>1</sup>, Seong Yeon LEE<sup>1</sup>, Yong Ho JIN<sup>1</sup>, Kwang Pyo KIM<sup>1</sup>  
<sup>1</sup>Kyung Hee University, South Korea  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/3e257463-9abc-4e0d-b5ce-6b8a35de9322>

# PRE-RECORDED VIDEO

## Session 1: Going Beyond Dose: Wellbeing in Radiological Protection

### 2301 **Competing Risk Model; a New Integrated Approach to Assessing Contextual Impacts of Ionising Radiation**

Colin SEYMOUR<sup>1</sup>, Carmel MOTHERSILL<sup>1</sup>

<sup>1</sup>*McMaster University, Canada*

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/a6fa97b5-5ae2-4162-9185-6bd79fa1856b>

### 2358 **Career Burnout and Psychological Consistency among Radiation Workers in China: a Cross Section Study**

Limeng CUI<sup>1</sup>, Zechen FENG<sup>1</sup>, Hui XU<sup>2</sup>

<sup>1</sup>*Beijing Center for Disease Control and Prevention*, <sup>2</sup>*China Center for Disease Control and Prevention*

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/a42de039-c4d1-4f05-8d16-891dbbc5d052>

## Session 2: Dosimetry for the Next General Recommendations

### 2302 **An Objective Methodology to Assess Dose Efficiency of CT Systems**

Maximilian GÖPPEL<sup>1</sup>, Mathias ANTON<sup>2</sup>, Hugo de las Heras GALA<sup>1</sup>, Patrizia KUNERT<sup>1</sup>, Sebastian TRINKL<sup>1</sup>, Augusto GIUSSANI<sup>1</sup>, Damien RACINE<sup>3</sup>, Gunnar BRIX<sup>1</sup>

<sup>1</sup>*BfS, Germany*, <sup>2</sup>*PTB, Germany*, <sup>3</sup>*CHUV, Switzerland*

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/d7b74f9a-67ab-4ae3-aa73-708c07754103>

### 2303 **Assessment of External Exposure of Workers Using a Radioactive Source in Geophysics Research**

Sangbin HAN<sup>1</sup>, Geehyun KIM<sup>1</sup>

<sup>1</sup>*Seoul National University, Republic of Korea*

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/6f7e4733-e994-4220-968d-7d660e0792a6>

### 2304 **Estimation of Fetal Doses for a CT Examination of the Mother Using a 3D-Printed Phantom and Computer Simulations**

Patrizia KUNERT<sup>1</sup>, Helmut SCHLATTL<sup>1</sup>, Sebastian TRINKL<sup>1</sup>, Augusto GIUSSANI<sup>1</sup>, Gunnar BRIX<sup>1</sup>

<sup>1</sup>*Federal Office for Radiation Protection, Germany*

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/2740dcd9-a1a9-4c2a-a64d-f925c69ca0aa>

### 2305 **Estimation of Radiation Dose to Thyroid Gland for Patients Undergoing Brain Computed Tomography Examinations in Khartoum**

FathiLi AWAD<sup>1</sup>, Safia HAFEZ<sup>2</sup>, Elmubarak MOHAMED<sup>3</sup>

<sup>1</sup>*Liwa Colleg*, <sup>2</sup>*Red Sea University*, <sup>3</sup>*Consultant Radiologists Diagnostic Center, Saudi Arabia (KSA)*

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/08147fb2-0298-40c0-a3b1-3c83f488e17e>

### 2306 **Investigation the Stability of EPR Signals in Fingernail Dosimetry**

Samayeh AZARIASL<sup>1</sup>, Hiroshi YASUDA<sup>1</sup>

<sup>1</sup>*Hiroshima University, Japan*

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/88c0179b-8d35-4b47-a648-dc42bd9efe0d>

- 2307 Macroscale and Microscale Intra-Liver Vascular Models Within the Adult Mesh-Type Reference Computational Phantoms for Applications to Internal Dosimetry**  
Robert DAWSON<sup>1</sup>, Julia WITHROW<sup>1</sup>, Camilo CORREA-ALFONSO<sup>2</sup>, Derek JOKISCH<sup>3</sup>, Carlos HUESA-BERRAL<sup>4, 5</sup>, Alejandro BERTOLET<sup>4, 5</sup>, Chris BEEKMAN<sup>4, 5</sup>, Harald PAGANETTI<sup>4, 5</sup>, Wesley BOLCH<sup>1</sup>  
<sup>1</sup>University of Florida, USA, <sup>2</sup>MD Anderson Cancer Center, USA, <sup>3</sup>Francis Marion University, USA, <sup>4</sup>Massachusetts General Hospital, USA, <sup>5</sup>Harvard Medical School, USA  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/412c3001-50b2-47ca-af01-6f5b9f110b1a>
- 2308 Mesh-based Skeletal Models: Advanced Skeletal Dosimetry for ICRP Reference Adults**  
Chansoo CHOI<sup>1</sup>, Yitian WANG<sup>1</sup>, Robert J DAWSON<sup>1</sup>, Bangho SHIN<sup>2</sup>, Wesley E BOLCH<sup>1</sup>  
<sup>1</sup>University of Florida, USA, <sup>2</sup>Hanyang University, Republic of Korea  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/e692cd6a-e5d2-4800-ba7d-55d12cddf96e>
- 2310 Radionuclides and Committed Internal Exposure Dose for Radioactivation in Boron Neutron Capture Therapy**  
Ryosuke NARITA<sup>1</sup>, Yoshinori SAKURAI<sup>1</sup>  
<sup>1</sup>Kyoto University, Japan  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/162e4e43-297e-4524-82ff-2d44cffda0e2>
- 2311 The Importance of Computational Personal Dosimetry for the Future of Dosimetry**  
Filip VANHAVERE<sup>1</sup>  
<sup>1</sup>SCK CEN (Belgian Nuclear Research Centre), Belgium  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/7fd0a321-9246-42ff-a450-66f173f8546d>
- 2356 Dose and Risk estimates for Protection of Populations and Individuals**  
John HARRISON<sup>1</sup>, Hans-Georg MENZEL<sup>2</sup>, Richard WAKEFORD<sup>3</sup>  
<sup>1</sup>UK Health Security Agency, UK, <sup>2</sup>ICRU, Germany, <sup>3</sup>University of Manchester, UK  
Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/c7eed6c2-820f-49c9-9e4a-96bf4ec1a486>

### **Session 3: Communication**

- 2312 ARPANSA's Experience Countering Radiation Misinformation**  
David SIBENALER<sup>1</sup>  
<sup>1</sup>ARPANSA  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/6c94fe4f-ead3-46a6-92b0-d4e736f77abb>
- 2313 Clinical Decision Support: Progress Towards Appropriate Imaging**  
Geraldine MCGINTY<sup>1</sup>  
<sup>1</sup>Weill Cornell Medicine, USA  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/b6e4e7a6-0dad-40d4-a066-382702f1b938>
- 2314 The Debate Over Interpretation of Risk From Low Dose Diagnostic Exposures**  
Colin WALSH<sup>1</sup>  
<sup>1</sup>St. James's Hospital, Ireland  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/222a1aad-9312-4d3c-b286-e0b184701c7a>

## **Session 4: How Experience of the Fukushima Daiichi Accident is Improving RP**

### **2357 YouTube Videos Related to the Fukushima Nuclear Disaster: Content Analysis**

Limeng CUI<sup>1</sup>

*1Beijing Center for Disease control and prevention*

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/6c460103-4bcb-4f83-8c04-5ee0eef84959>

## **Session 5: The Next Generation of Scientists & Professionals**

### **2315 Development of an Occupational Exposure Estimation System During X-ray Fluoroscopy by Body Tracking Using a Depth Camera**

Kenta HONIDEN<sup>1</sup>, Toshioh FUJIBUCHI<sup>1</sup>, Hiroyuki ARAKAWA<sup>1</sup>, Takashi YOSHINAGA<sup>2</sup>

*<sup>1</sup>Kyushu University, Japan, <sup>2</sup>Institute of Systems Information Technologies and Nanotechnologies, Japan*

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/c3bb6b4a-feb7-4bd2-8ade-1842c446e6f2>

### **2316 Next Generation of Medical Physicists: A New Model of Education Is Needed for a New Breed of Professionals Who Can Insert Themselves More Rapidly Into the Clinical Milieu**

Carmel J. CARUANA<sup>1</sup>, Eric PACE<sup>1</sup>

*<sup>1</sup>Medical Physics, Faculty of Health Sciences, University of Malta, Malta*

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/50e418a9-deff-4871-a116-11ecfa41211e>

### **2317 Photon and Neutron Ambient Dose in the Room of TrueBeam LINAC 10 MV Photon Beam: Monte Carlo Simulation and Measurement**

Soai Dang QUOC<sup>1</sup>, Toshioh FUJIBUCHI<sup>2</sup>, Hiroyuki ARAKAWA<sup>2</sup>, Keisuke HAMADA<sup>3</sup>

*<sup>1</sup>Department of Health Sciences, Graduate school of Medical Sciences, Kyushu University, Japan, <sup>2</sup>Department of Health Sciences, Faculty of Medical Sciences, Kyushu University, Japan, <sup>3</sup>Department of Radiological Technology, National Hospital Organization Kyushu Cancer Center, Japan*

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/959d1d9a-9a8b-41d3-a620-fe99d4b199a3>

### **2318 Proposal of Direction Vector Visualization of Scattered Radiation for the Purpose of Appropriate use of Radiation Protective Plates**

Kyoko HIZUKURI<sup>1</sup>, Toshioh FUJIBUCHI<sup>1</sup>, Hiroyuki ARAKAWA<sup>1</sup>

*<sup>1</sup>Kyushu University, Japan*

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/a3c98f9a-6800-4608-9e4e-171376c3b0eb>

### **2319 Rethinking Tissue Reactions to Radiation: The Tissue-Sparing Effect as a Threshold for Radiation-Induced Male Infertility**

Hisanori FUKUNAGA<sup>1</sup>, Kevin PRISE<sup>2</sup>

*<sup>1</sup>Hokkaido University, Japan, <sup>2</sup>Queen's University Belfast, UK*

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/b97ae9b1-1449-48ab-b0e5-94c3b8793b19>

## **Session 6: Stratification & Individualisation**

(No presentation)

## **Session 7: Sustainable Development and Protection of the Environment**

### **2322 Global Seafood Dose 2023: Assessment by an International Team**

Mathew P. JOHANSEN<sup>1</sup>, Julia G. CARPENTER<sup>2</sup>, Sabine CHARMASSON<sup>3</sup>, Justin P. GWYNN<sup>4</sup>, Paul MCGINNITY<sup>5</sup>, Airi MORI<sup>6</sup>, Blake ORR<sup>1</sup>, Marie SIMON-CORNU<sup>3</sup>, Iolanda OSVATH<sup>5</sup>

<sup>1</sup>Australian Nuclear Science and Technology Organisation, Australia, <sup>2</sup>Australian Radiation Protection and Nuclear Safety Agency, Australia, <sup>3</sup>Institut de Radioprotection et de Sûreté Nucléaire (IRSN), France, <sup>4</sup>Norwegian Radiation and Nuclear Safety Authority, <sup>5</sup>IAEA Marine Environment Laboratories, Monaco, <sup>6</sup>Japan Atomic Energy Agency, Japan

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/7a4e8dfa-e70b-4bb8-aaf1-07d30fd0c47f>

### **2352 To Leave or Not to Leave: A Tiered Assessment of the Impacts of Scale Residue From Decommissioned Offshore Oil and Gas Infrastructure in Australia**

Amy MACINTOSH<sup>1,2</sup>, Tom CRESSWELL<sup>2</sup>, Darren KOPPEL<sup>3</sup>, Gillian HIRTH<sup>4</sup>, Rick TINKER<sup>4</sup>, Katherine DAFFORN<sup>1</sup>, Anthony CHARITON<sup>1</sup>, Beth PENROSE<sup>5</sup>, Andrew LANGENDAM<sup>6</sup>

<sup>1</sup>Macquarie University, Australia, <sup>2</sup>Australian Nuclear Science and Technology Organisation, Australia, <sup>3</sup>Australian Institute of Marine Science, Australia, <sup>4</sup>Australian Radiation Protection and Nuclear Safety Authority, Australia, <sup>5</sup>Charles Darwin University Research Institute of Northern Agriculture and Drought Resilience, Australia, <sup>6</sup>Australian Synchrotron, Australia

Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/6da3eabd-03d6-4fea-8d11-ddb21a5ffab1>

## **Session 8: Classification of Effects**

(No presentation)

## **Session 9: Exposure Categories & Situations**

### **2323 A Proposal for Consistency of the Graded Approach in Radiological Protection**

Jaiki LEE<sup>1</sup>

<sup>1</sup>Korean Association for Radiation Protection, South Korea

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/c9103480-2c07-4b30-bbe2-758b236d8ac3>

### **2324 Machine Learning Multivariate Clustering and Outlier Analysis of INdoor Radon in Urban -Ryral Canada: A Geospatial Analysis**

Selim KHAN<sup>1</sup>, Dustin PEARSON<sup>1</sup>, Tiago MORAIS<sup>2</sup>, Joshua TARON<sup>3</sup>, Cathy RYAN<sup>2</sup>, Aaron GOODARZI<sup>1</sup>

<sup>1</sup>School of Medicine, University of Calgary, AB, Canada, <sup>2</sup>Department of Geoscience, University of Calgary, AB, Canada, <sup>3</sup>School of Architecture, Planning and Landscape, University of Calgary, AB, Canada

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/5f047e2a-f09b-420e-8d6d-cb920613f64e>

## **Session 10: Tolerability & Reasonableness**

- 2325 Consideration of Losses and Legal Issues Related to Negative Radiation Rumors in South Korea**  
Min BEAK<sup>1</sup>, Eunok HAN<sup>2</sup>  
*<sup>1</sup>Pohang University of Science and Technology, Korea, <sup>2</sup>Korea Academy of Nuclear Safety*  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/aecd5fe8-adf0-43d2-b7d2-fc7165daba0f>
- 2326 Increasing Expectations and Specifications with Decreasing Inventories of Radionuclides - Wishes and Recommendations for Communication and Reasonableness from a German User's Perspective**  
Ralph BRUNNER<sup>1</sup>  
*<sup>1</sup>PreussenElektra GmbH/VGBE Energy e.V., Germany*  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/32a59b2c-a854-44ba-9a90-198601844007>
- 2327 Some Suggestions to Change the System of Radiation Protection**  
Bernd LORENZ<sup>1</sup>  
*<sup>1</sup>Lorenz Consulting*  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/573614a3-319e-490b-bc17-0cf6af9c34f7>

## **Session 11: Offspring & Next Generations**

(No presentation)

## **Session 12: Radiation Emergencies**

- 2328 Cross-Border Radiological Risks: A Comprehensive Risk Assessment for Hypothetical Accident Scenarios at a Proximate Nuclear Power Plant**  
Tran Canh Hai NGUYEN<sup>1</sup>  
*<sup>1</sup>Dalat Nuclear Research Institute, Vietnam*  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/05debc5c-5ebc-46a8-ba40-43d609f6594b>
- 2329 Embedded Radioactive Fragment Following a Radiological Dispersal Device Attack: Artifact Removal in Medical Imaging and Doses to Patient and Medical Team Using the ICRP Adult Reference Computational Phantoms**  
Rachel Hen SHUKRUN<sup>1,2</sup>, Hanan DATZ<sup>2</sup>, Zeev ZALEVSKY<sup>1</sup>, Lior EPSTEIN<sup>2</sup>  
*<sup>1</sup>Bar-Ilan University, Israel, <sup>2</sup>Soreq NRC, Israel*  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/2e1d2536-252a-4558-95aa-f61df1337870>
- 2330 Main Control Room Dose Assessment Sensitivity Analysis in Virtual Accident Scenarios of Nuclear Power Plant**  
Seung-Chan LEE<sup>1</sup>  
*<sup>1</sup>Central Research Institute, Korea Hydro & Nuclear Power Company, South Korea*  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/e18f2dc3-6cff-4eef-bbd2-66944d39ea64>



- 2331 Multi-stage Deep Learning Framework for Dicentric Chromosome Identification**  
 Soon Woo KWON<sup>1</sup>, Yang Hee LEE<sup>1</sup>, Hyo Jin YOON<sup>1</sup>, Su San YANG<sup>1</sup>, Ki Moon SEONG<sup>1</sup>  
<sup>1</sup>Lab of Biological Dosimetry, National Radiation Emergency Medical Center, Korea Institute of Radiological and Medical Sciences, South Korea  
 Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/94b344b2-a831-4f00-ad30-fcfa40cac71d>
- 2332 R&D of the High-sensitivity Compton Camera for Lu-177 Radioactive Contamination Imaging**  
 Hikari TSUKAMOTO<sup>1</sup>, Hiroshi MURAISHI<sup>1</sup>, Ryoji ENOMOTO<sup>2</sup>, Hideaki KATAGIRI<sup>3</sup>, Mika KAGAYA<sup>4</sup>, Takara WATANABE<sup>1</sup>, Takahiro MIZOGUCHI<sup>1</sup>, Yusuke WATANABE<sup>1</sup>, Daisuke KANO<sup>5</sup>  
<sup>1</sup>Graduate School of Medical Sciences, Kitasato University, Japan, <sup>2</sup>Institute for Cosmic Ray Research, University of Tokyo, Japan, <sup>3</sup>College of Science, Ibaraki University, Japan, <sup>4</sup>National Institute of Technology, Sendai College, Japan, <sup>5</sup>National Cancer Center Hospital East, Japan  
 Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/35608a0c-6794-4e80-a58b-1779371ea2d0>
- 2353 Advancing Internal Dosimetry: Machine Learning for Reconstructing Acute Inhalation Exposures from Historical Experimental Data**  
 David GONZALEZ<sup>1</sup>, Shaheen DEWJI<sup>1</sup>  
<sup>1</sup>Georgia Institute of Technology, USA  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/21185d71-9ce4-40df-b930-4645bba6369e>
- 2354 A Novel Approach to Internal Dosimetry in Radiation Emergencies: Combining Computer Vision, Computational Fluid and Particle Dynamics, and Biokinetic Modeling**  
 Ignacio BARTOL<sup>1</sup>, Emmanuel MATE-KOLE<sup>1</sup>, Martin Graffigna PALOMBA<sup>1</sup>, Lotem Buchbinder SHADUR<sup>1</sup>, Mauricio Tano RETAMALES<sup>2</sup>, Shaheen DEWJI<sup>1</sup>  
<sup>1</sup>Georgia Institute of Technology, USA, <sup>2</sup>Texas A&M University, USA  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/f020f933-054a-471b-9a8b-ae8baaa9a52a>
- 2355 Lung counting Efficiency and Chest-wall Thickness Correction for In-vivo Assay Triage of Inhaled Radionuclides**  
 Yi (Vanessa) WEI<sup>1</sup>, Shaheen DEWJI<sup>1</sup>  
<sup>1</sup>Georgia Institute of Technology, USA  
 Abstract & Poster: <https://event.fourwaves.com/icrp2023/abstracts/ff921d30-7057-468f-87c5-801b150a82df>

### **Session 13: Imaging in Radiotherapy**

- 2333 Optimization for Bladder Size Before Treatment Planning in Prostate Cancer Patients Receiving Radiotherapy**  
 Chihwei YU<sup>1,2</sup>, Huiyu TSAI<sup>2</sup>  
<sup>1</sup>CMUHCH, Taiwan, <sup>2</sup>NES NTHU, Taiwan  
 Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/593080d7-dc1b-4ed7-b012-00a74e7a0fff>
- 2334 Radiation Dose Reduction Strategy for SPECT/CT Bone Scan**  
 Manal ALEZZI<sup>1</sup>, Owais KOTBI<sup>1</sup>, Gihad HAMMID<sup>1</sup>, Ashraf FOUDA<sup>1</sup>, Yusra ZABARMAWI<sup>2</sup>  
<sup>1</sup>King Abdullah Medical City, Saudi Arabia, <sup>2</sup>Umm Al-qura University, Saudi Arabia  
 Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/62793183-c8f7-4ee6-b2c7-7f6c202b06fd>
- 2335 Validation of Quantitative Parameters Derived from 99mTc-GSA Liver Scintigraphy for Evaluating Liver Function in Patients: Implications for Imaging in Radiotherapy**  
 Arman Nessipkhan<sup>1</sup>, Takashi KUDO<sup>2</sup>  
<sup>1</sup>Department of Radioisotope Medicine, Nagasaki University Graduate School of Biomedical Sciences, Nagasaki, Japan, <sup>2</sup>Department of Radioisotope Medicine, Atomic Bomb Disease Institute, Nagasaki University, Nagasaki, Japan  
 Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/910f08d1-9de2-41bf-aca6-6d0a053fa715>

## **Session 14: Justification**

**2336 What's Safer: The Radiation Dose or the Protective Action? Developing a Tool for Justified Protective Actions in Nuclear and Radiological Emergencies**

Jessica CALLEN-KOVTUNOVA<sup>1</sup>, Thomas MCKENNA<sup>2</sup>, Georg STEINHAUSER<sup>3</sup>, Toshimitsu HOMMA<sup>4</sup>  
<sup>1</sup>Private Consultant & ICRP, UK, <sup>2</sup>Retired (US NRC & IAEA), Austria, <sup>3</sup>TU Wien, Austria, <sup>4</sup>ICRP, Japan

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/9f656cc1-1f26-425f-a370-49221c2e673a>

## **Session 15: RP in Ion Beam and Targeted Alpha Therapy**

**2338 Effects of Proton Microbeam Irradiation on Normal Cells: Integrated Approach Applied to Neurotoxicity Study**

Christelle ADAM-GUILLERMIN<sup>1</sup>, Ahmad SLEIMAN<sup>1</sup>, Kévin LALANNE<sup>1</sup>, Sarah ELIE<sup>1</sup>, Mikael CARDOT-MARTIN<sup>1</sup>, Amokrane ALLAOUA<sup>1</sup>, François VIANNA-LEGROS<sup>1</sup>  
<sup>1</sup>IRSN, France

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/744d0f43-8b96-4721-b471-098bc9efda95>

**2359 Evaluation of Ambient Dose From Activated Walls Depending on the Material in Shielding of Compact Proton Therapy Centers (CPTC)**

Gonzalo F. Garcia-Fernandez<sup>1</sup>, Eduardo Gallego<sup>1</sup>  
<sup>1</sup>Universidad Politécnica de Madrid, Spain

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/259e81d5-f830-4de2-a28d-49f7b6219aaa>

## **Session 16: Radiation Detriment, Other Risk Metrics, and Their Application**

**2339 A Need for Modified Sievert as Radiation Dose Unit**

Momina MATEEN<sup>1</sup>, Kaylyn OLSHANOSKI<sup>2</sup>, Phuong DANG<sup>3</sup>, Satoru ENDO<sup>4</sup>, Chary RANGACHARYULU<sup>2</sup>

<sup>1</sup>Department of Radiology, Radiation Oncology, and Medical Physics, The Ottawa Hospital, University of Ottawa, Canada, <sup>2</sup>Department of Physics and Engineering Physics, University of Saskatchewan, Canada, <sup>3</sup>Department of Radiation Oncology, Medical College of Wisconsin, USA, <sup>4</sup>Quantum Energy Applications, Program of Mechanical Engineering, Graduate School of Advanced Science and Engineering, Hiroshima University, Japan

Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/ac7bd4c0-4e37-4535-a9fb-b46c8a24ff55>

## **Session 17: Effects & Dose-Response: Cancer, Circulatory Disease, and Beyond**

- 2340 Assessment of Healthy Tissues Doses and Associated Second Cancer Risk After Involved Site Radiation Therapy (ISRT) in Hodgkin Lymphoma: A Comparison of 3D-ISRT and Helical Tomotherapy (HT)**  
Assya BOUGHALIA<sup>1</sup>  
*<sup>1</sup>Nuclear Research Centre of Algiers, Algeria*  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/c31caf50-ea9d-406a-a77c-c3dd78b8a9e9>
- 2341 Biological Models Investigating the Modulators of Responses of the Circulatory System to Ionizing Radiation**  
Sasha JANDE<sup>1</sup>, Prabal SUBEDI<sup>2</sup>, Omid AZIMZADEH<sup>2</sup>, Nobuyuki HAMADA<sup>3</sup>  
*<sup>1</sup>Queen's University, Canada, <sup>2</sup>Bundesamt für Strahlenschutz, Germany, <sup>3</sup>CRIPEI, Japan*  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/5672e972-8164-4ff3-8b7c-4ecbbd7c8377>
- 2343 Toxicity and Second Cancer Estimate for Hypo-and-Conventional Fractionation for VMAT Radiotherapy of Prostate Carcinoma**  
Assya BOUGHALIA<sup>1</sup>, Yasmine CHAOUCHI<sup>2</sup>, Nour El Imene KEBAILY<sup>2</sup>  
*<sup>1</sup>Nuclear Research Centre of Algiers, Algeria, <sup>2</sup>Houari Boumediene University, Physics Faculty, Algeria*  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/4c29e909-e1bb-4222-a90c-8779e2e8c549>

## **Session 18: Strengthening Expertise and Raising Public Awareness**

- 2344 Are We Safe? Exploring Psychological Factors Affecting Radiation Risk Perception of Old Uranium Mining Quarters' Dwellers**  
Ana Rita MELO<sup>1</sup>, Octávia Monteiro GIL<sup>2</sup>, Isabel PAIVA<sup>2</sup>, Mário Capucho dos REIS<sup>2</sup>, José Manuel PALMA-OLIVEIRA<sup>3</sup>, Décio Ruivo MARTINS<sup>1</sup>, Alcides PEREIRA<sup>4</sup>, Rui Manuel Coelho da SILVA<sup>5</sup>  
*<sup>1</sup>CFisUC, Department of Physics, University of Coimbra, Portugal, <sup>2</sup>C2TN, Center for Nuclear Sciences and Technologies, Técnico Lisboa, University of Lisbon, Portugal, <sup>3</sup>Faculty of Psychology, University of Lisbon, Portugal, <sup>4</sup>Department of Earth Sciences and Laboratory of Natural Radioactivity, University of Coimbra, Portugal, <sup>5</sup>Institute for Plasmas and Nuclear Fusion, Técnico Lisboa, University of Lisbon, Portugal*  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/d2d27bb0-d4cf-4ea5-8f00-1894a60fbd8>
- 2345 Radiation Protection Training Program for Radiation Workers in Hamad Medical Corporation-Qatar**  
Mohammad Hassan KHARITA<sup>1</sup>, Chief Marck De CASTRO<sup>1</sup>, Antar ALY<sup>1</sup>  
*<sup>1</sup>Hamad Medical Corporation*  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/2c70eab0-abc5-4cb8-b842-27e8e5216e5f>
- 2347 Spatial Sharing in Survey Meter Training Utilizing Mixed and Augmented Reality**  
Hiroyuki ARAKAWA<sup>1</sup>, Toshioh FUJIBUCHI<sup>1</sup>, Yoshihiro OKADA<sup>1</sup>, Kosuke KANEKO<sup>1</sup>  
*<sup>1</sup>Kyushu University, Japan*  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/088933a6-45aa-4854-8dae-2b3e5945d382>
- 2348 Strengthening Expertise and Raising Public Awareness: Decades of Experience in Communicating Radiation Safety with " Good Science in Plain Language", a Canadian Perspective.**  
Lynn MACDONALD<sup>1</sup>  
*<sup>1</sup>Radiation Safety Institute of Canada, Canada*  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/e3aa76d3-76c9-47c0-a1c7-24b8ccb53bd4>

- 2349 Survey of Personal Dosimeter Wearing Status of Medical Workers in Radiation-Controlled Areas**  
Satoru MATSUZAKI<sup>1</sup>, Takashi MORITAKE<sup>2</sup>, Koich NAKAGAMI<sup>3</sup>, Keisuke NAGAMOTO<sup>3</sup>, Koichi MOROTA<sup>1</sup>, Tomoko KURIYAMA<sup>4</sup>, Go HITOMI<sup>5</sup>, Naoki KUNUGITA<sup>4</sup>  
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Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/7c452f71-756e-44c5-afad-b9cc9cfbb899>
- 2350 The Italian transposition of the European directive 2013/59/Euratom and the effects on radioprotection controls.**  
Martina GIUSTI<sup>1</sup>, Niccolò PERSIANI<sup>1</sup>  
<sup>1</sup>Department of Experimental and Clinical Medicine, University of Florence, Italy  
Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/7aad0e65-2c09-4211-80c0-fff3390c636a>

### Other

- 2351 Analysis of Activated Radionuclides for Different Concretes Based on the Proton Beam Source Using PHITS Code**  
Euna LEE<sup>1</sup>, Wonhyeong LEE<sup>1</sup>, Jongwoo KIM<sup>1,2</sup>, Junik CHO<sup>1</sup>, Yoonsun CHUNG<sup>1</sup>, Yong Kyun KIM<sup>1</sup>  
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Abstract & Video: <https://event.fourwaves.com/icrp2023/abstracts/0cb2dd09-3e0f-45d3-886a-a5cf5c3edfb5>