



**Third International
Conference on Radiation
and Applications in Various
Fields of Research**

**June 8 - 12 | 2015
Slovenska Plaža
Budva | Montenegro
www.rad-conference.org**

RAD

CONFERENCE

PROGRAMME



Third International Conference on Radiation and Applications in Various Fields of Research

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June 8 - 12 | 2015 | Slovenska Plaža | Budva | Montenegro

Conference Programme

Sunday, June 7

09:00-21:00 Registration

Monday, June 8

08:00-20:00 Registration

08:15-09:45 Poster Sessions Lobby

Radon and Thoron Chairperson: Michael Zhukovsky

- RT1 Ş. Turhan, S. Akyürek, M. Erdoğan, Indoor radon concentrations in schools of the Cappadocia region
- RT2 O. Ulkum, C. Taskopru, M. M. Sac, M. Ichedef, M. N. Kumru, Soil gas radon anomalies and seismic activities around Bodrum peninsula
- RT3 T. Zhdanov, M. Melgunov, Emanating characteristics of weathered rocks with a high content of natural radioactive elements
- RT4 K. Szacsvai, T. Neda, S. Poszet, A. Szakacs, Radon concentration in drinking water and supplementary exposure from South-East of Transylvania, Romania
- RT5 J. Olszewski, K. Walczak, M. Zmyslony, Exposure to radon of workers in underground tourist routes in Poland
- RT6 K. Walczak, J. Olszewski, M. Zmyslony, Estimation of radon exposure in geothermal spas in Poland
- RT7 T. Ozbay, O. Karadeniz, Determination of indoor radon exposure for diagnosis of lung cancer patients in Izmir
- RT8 T. Ozbay, O. Karadeniz, Indoor ^{222}Rn levels and effective dose estimation of academic staff in Izmir-Turkey

Radiation Physics Chairperson: Boris Lončar

- RH1 G. Arzumanyan, V. Vartic, G. Rachkovskaya, P-conversion properties of novel oxy-fluoride phosphors based on Er^{3+} -doped nanoglasceramics
- RH2 B. Štrbac et al., Investigation of daily set-up errors during conformal radiation therapy of pelvis
- RH3 D. Maletić et al., Correlative and periodogram analysis of dependence of continuous gamma spectrum in the shallow underground laboratory on cosmic ray and climate variables

- RH4 A. Barabashov, I.V. Khyzhniy, S.A. Uytunov, E.V. Savchenko, A.N. Ponomaryov, V.E. Bondybey, **Radiation-induced desorption of excited molecules from nitrogen films**
- RH5 D. Bennett, B. Rudek, M. Wang, G. Hilgers, H. Rabus, **Cross sections for ionization of DNA constituents by protons**
- RH6 N. Sarigul, M. Surucu, B. Aydogan, **Electron spectrum effect on life response to 6 MV photon beam using Monte Carlo and Burlin cavity theory**
- RH7 M. Shpotyuk, O. Shpotyuk, S. Ubizskii, **Optical characterization of gamma-induced metastability in glassy arsenic trisulphide**
- RH8 D. Chalyy, M. Shpotyuk, S. Ubizskii, **Ge-As-Se chalcogenide glasses as radiation-resistant sensing material for fiber-optical temperature sensors**
- RH9 E.-S. Badita, E. Stancu, C. Vancea, F. Scarlat, I. Calina, A. Scarisoreanu, **Influence of high energy ionizing radiation on single mode optical fiber properties**
- RH10 A.O. Gavrilyk, M. B. Miklin, V. A. Anan'ev, V. Pak, **Formation diamagnetic and radical product as a crystalline nitrate by UV light and gamma rays**
- RH11 T. Chuvilskaia, **Electronic-positron (pairino's) structure of nuclear substance (matter)**
- RH12 Z. Lahodová, L. Viererbl, M. Vinš, J. Šrank, **Research of dosimetric characteristics of fuel containing material**

10:00

Official Opening

Room B

Oral Session

Radiation Physics

Chairperson: Sergei Baranovski

Room A

10:30

E. Surraud, M. Dinh, P.-G. Reinhard, L. Lacombe, **Dynamics of irradiation: from molecules to nano-objects and from material science to biology**

10:45

B. Rudek, A. Alexander, D. Benett, M. Wang, **Fragmentation of DNA constituents by ion impact**

11:00

H. Nettelbeck et al., **Fruition of biologically-weighted radiation quantities based on a multi-scale approach**

11:15

R. Panajotovic, S. Ptasinska, V. Lyamayev, K. Prince, **Low-energy electron damage of DPPC molecules - a NEXAFS study**

11:30

B. Petrovic et al., **The variation of Hounsfield units on scanning parameters and influence on CT to RED conversion curves**

11:45

E. Savchenko et al., **Stability of ionic centers and relaxation dynamics in irradiated "ICES"**

12:00

K. Cherevko, T. Vlasenko, L. Bulavin, V. Sysoev, **Irradiation influence on thermodynamic properties of liquid systems**

Oral Session

Radon and Thoron

Chairperson: Janja Vaupotič

Room B

10:30

G. Cinelli, T. Tollefen, P. Bossew, V. Gruber, M. De Cort, **The European atlas of natural radiation**

10:45

C. S. Fernandez, J. L. Gutierrez-Villanueva, I. Fuente Merino, L. S. Quindos Poncela, **New challenges for radon related with the EU-BSS: The Spanish experience**

11:00

A. Onishchenko, A. Varaksin, I. Yarmoshenko, M. Zhukovsky, **Error assessment on the planning stage of national radon case-control study**

11:15

A.-L. Grund, J. Buermeyer, V. Grimm, M. Gundlach, J. Breckow, **Influence of constructional energy-saving measures on the radon-concentration in the air in dwellings**

11:30

A. Onishchenko, G. Malinovsky, A. Vasilyev, M. Zhukovsky, **Radon measurements in kindergartens in Ural radon prone areas**

11:45

M. Bahtijari, G. Nafezi, G. Hodolli, **Exposure to radon in dwellings and schools in the Sharri community, Kosovo**

12:00 R. Mehra, R. Jakhu, P. Bangotra, B. K. Sahoo, Study of ^{222}Rn exhalation rate and natural radioactivity in soil samples for the assessment of average effective dose

12:15 **Sponsor Presentation: Landauer Nordic**

Plenary Session

Invited lecture

Room B

Chairperson: Peter Bossew

14:00 Shinji Tokonami, Thoron (Rn-220) interference on Radon (Rn-222) detecting system and resulting issues

14:30 **Sponsor Presentation: Dr. Westmeier GmbH**

Oral Session

Radiation Physics

Room A

Chairperson: Hyun-Tai Chung

15:00 H. Nettelbeck et al., Experimental nanodosimetry paving the way for a new concept of radiation quality

15:15 G. M. Grittani, Design and development of a high energy electron irradiation station for multi-disciplinary experiments

15:30 J. M. Rahm, W. Y. Baek, H. Hofsäss, H. Rabus, Measurement of the stopping power for carbon ions in water using inverted Doppler shift attenuation

15:45 S. Stefanovsky, O. Stefanovsky, E. Belova, Radiation effects in borosilicate radioactive slag bearing glasses

16:00 A. Belchior et al., Comparison of nanodosimetric parameters obtained with the Monte Carlo codes PARTRAC, PTra and Geant4-DNA

16:15 S. Brkić, Matter in extreme conditions

Oral Session

Radon and Thoron

Room B

Chairperson: Shinji Tokonami

15:00 B. Bulanek, J. Hulka, K. Jilek, I. Stekl, Continuous radiation monitoring in NORM industries using the detector Timepix

15:15 P. Bossew, Can terrestrial gamma dose rate serve as predictor of geogenic radon?

15:30 M. Zhukovsky, I. Yarmoshenko, Radon exposure and dose calculation: problems of choice

15:45 J. Vaupotič, A. Brodar, A. Gregorič, Radon levels in tap waters in Slovenia

16:00 A. S. Silva, M. de L. Dinis, Radon levels in Portuguese thermal spas

16:15 K. Jilek, A. Fronka, S. Giammanco, M. Neznal, J. Thomas, J. Halka, The NRPI multi-purpose on-line monitoring station for measurement of natural radioactivity in the ambient atmosphere and in the soil

16:30 P. Bangotra, R. Mehra, R. Jakhu, K. Kaur, S. Kanse, Measurement of EEC and unattached fraction of ^{222}Rn and ^{220}Rn using deposition based progeny sensors and pin-hole cup dosimeters

Oral Session

Radiation Protection

Room C

Chairperson: Gunter Pretzsch

15:00 E. Pryakhin, V. Kashcheev, A. Menyajlo, V. Ivanov, Estimating lifetime risk of cancer associated with multiple CT scans

15:15 E. A. Jakubowska, N. Golnik, M. A. Gryziński, Determination of absorbed dose radiation quality near eye phantom irradiated with therapeutic proton beam using a ring shaped recombination chamber

15:30 M. R. Dashtipour, S. M. Hosseini Pooya, H. Afarideh, F. Mianji, Assessment of the extremity dose during the exposure by an Iridium-192 source using a close-hand phantom

- 15:45 I. Akimova et al., **Web-application "FAR EAST RADIOLOGICAL SAFETY"**
- 16:00 I. Dimitrov, Tz. Nonova, A. Mladenov, K. Krezhov, **Radiation levels at carrying out the refurbishment of the Bulgarian research reactor IRT 2000**

16:30-17:00

Refreshments

Oral Session

Radiation Protection

Room A

Chairperson: Nevenka Antovic

- 17:00 M. Vasyanovich, A. Ekidin, M. Zhukovsky, **Radiation exposure with airborne discharge from European nuclear power plants**
- 17:15 G. Pretzsch, A. Artmann, V. Krasnov, P. Krukovskiy, **Radioactive dust release from the new safe confinement at Chernobyl**
- 17:30 J. Hudzietzová, J. Sabol, B. Šesták, **Radiation protection aspects relevant to radiological terrorism**
- 17:45 I. Vošahlíková, M. Kozlovská, P. Smitka, T. Dropa, **Testing possibilities of personal radiation and chemical protective clothing**
- 18:00 Y. Lee, W.-K. Chung, J. K. Kim, E. J. Choi, K. R. Dong, **Application of process mapping for radiation safety control**
- 18:15 G. Rosca Fartat, C. Popescu, C. Stanescu, **The horizontal fuel channels in the CANDU 6 nuclear reactor**
- 18:30 G. Laštovička-Medin, **When science meets the art, and human awareness meets the responsibility**

Oral Session

Radiobiology

Room B

Chairperson: Jin Kyu Kim

- 17:00 A. Pimenta, D. Guerreiro, P. Santos, A. Falcão, F. Margaça, S. Cabo Verde, **Tracking enteric viruses inactivation by gamma irradiation**
- 17:15 N. Kudryasheva, A. Petrova, T. Rozhko, O. Guseynov, **Response of marine microorganisms to low-dose radioactive exposure**
- 17:30 N. Khamidullina, V. Trofimov, E. Deshevaya, **Main aspects of radiation sterilization of Martian Landers elements**
- 17:45 S. Hurem et al., **A multigenerational study of subchronic gamma irradiation effects in the Zebrafish model**
- 18:00 A. Moskalev, M. Shaposhnikov, D. Peregudova, E. Plyusnina, A. Kudryavtzeva, **Drosophila gene expression alterations after influence of pollutants (dioxin, toluene, formaldehyde) and low dose of gamma-irradiation**
- 18:15 B. Mitrović et al., **The efficiency of different adsorbents in aim of broilers protection in case of alimentary intoxication with uranium**

Oral Session

Neutron and Space Radiation

Room C

Chairperson: Wiktor Zipper

- 17:00 M. Herbert, **Calibration of a Ne230 scintillator up to 64 Mev at the iTHEMBA labs time-of-flight facility for in water neutron spectrometry**
- 17:15 B. Bergmann, **Study of fast neutron interactions in silicon by Timepix detectors**
- 17:30 R. Bedogni, J.-M. Gomez-Ros, A. Pola, D. Bortot, M. Lorenzoli, **CYSP and SP2: novel instruments for continuous spectrometric monitoring of neutron producing facilities**
- 17:45 K. Krezhov et al., **Room temperature neutron diffraction study of the proton conducting BaCe_{0.85}Y_{0.15}O_{3-δ} (BCY15)**
- 18:00 J. Semkova et al., **Radiation investigations for ExoMars 2016 and 2018 interplanetary missions -objectives, experiments and instrumentation**
- 18:15 R. Koleva et al., **Radiation measurements on the International Space Station with Liulin-5 dosimetric telescope: Summary of results for years 2012 - 2014**

Radiation protectionChairpersons: **Jozef Sabol, Sergey Nikiforov**

- RP1 K. Voskanyan, S. Vorozhtsova, A. Abrosimova, G. Mitsyn, V. Gaevskiy, S. Shvidky, **The effectiveness of radiation damage reduction in mice by laser light depending on the time interval between exposures**
- RP2 O. Ciraj-Bjelac, D. Arandjic, P. Bozovic, S. Ceklic, J. Stankovic, Dj. Lazarevic, **Assessment of occupational dose in fluoroscopy procedures when individual monitoring is not utilized**
- RP3 D. Arandjic, S. Ceklic, J. Stankovic, P. Bozovic, O. Ciraj-Bjelac, **Characterization of scattered radiation in dental cone beam computed tomography**
- RP4 S. J. Yoo, H.-K., B. S. Lee, **External dose assessment of design basis accidents at a nuclear power plant based on ICRP 103 dosimetric setting**
- RP5 E. Antonescu et al., **Assessment of patients' in-taken doses in dental radiology**
- RP6 V. N. Gulbin, N. S. Kolpakov, V. V. Cherdynstsev, N. P. Gulbina, **The functional composites obtained with by using carbon nano-materials**
- RP7 N. Belosludtseva, K. Belosludtsev, S. Gudkov, G. D. Mironova, **Possible role of phospholipase A2 and mitochondria in the mechanism of ionizing radiation-induced oxidative stress**
- RP8 D.-H. Cho, K. P. Kim, **Radiological Consequence of Gaseous Tritium Light Source**
- RP9 M. Malakyan, S. Bajinyan, D. Yeghiazaryan, A. Dallakyan, V. Tonoyan, **Study of L-tyrosine and pyridinecarboxaldehydes derived schiff base copper complexes as potential radioprotective agents**
- RP10 S. M. Hosseini Pooya, F. Mianji, M. R. Kardan, N. Rastkhah, **Quantifiable technical aspects of a quality management system for TL personal dosimetry services**
- RP11 S. M. Hosseini Pooya, M. R. Dashtipour, A. Enferadi, T. Orouji, **Public exposure in boundary areas of Iran; preliminary results**
- RP12 F. Ciupagea, G. Rosca Fartat, A. Cucu, A. I. Coroianu, **Study on occupational exposure in industrial radiography practice**
- RP13 M. Dolha, A. Timar-Gabor, C. Cosma, **Assessment of ambient gamma dose rates in Transylvania region by TL method: Preliminary results**
- RP14 J. Kaljevic, M. Cvijovic, J. Stankovic, V. Stanic, **Occupational exposures to ionising radiation at a copper mill**
- RP15 Ł. Murawski, M. Gryziński, M. Maciak, **Research stand for testing concrete shielding**
- RP16 N. Svrkota, I. Antovic, D. Civkovic, N. M. Antovic, P. Vukotic, R. Zekic, **A risk factor for lung cancer due to radon and excess lifetime cancer risk due to terrestrial radiation - coastal area of Montenegro**
- RP17 M. Spunei, I. Malaescu, C.N. Marin, **Sample thickness and composition effect on the absorbed dose through some materials**
- RP18 Y. N. Kim, S. H. Choi, S. K. Kim, **Monte Carlo study on photon-neutron coupled transport in a shielding barrier of laminated structure of borated polyethylene with lead in a medical accelerator room**
- RP19 G. Rosca Fartat, C. Popescu, C. Stanescu, **The horizontal fuel channels in CANDU 6 nuclear reactor - Part I: Presentation and reference plans for instalation**
- RP20 G. Rosca Fartat, C. Popescu, C. Stanescu, **The horizontal fuel channels in CANDU 6 nuclear reactor - Part II: Assembly main steps**
- RP21 G. Rosca Fartat, C. Popescu, C. Stanescu, **The horizontal fuel channels in CANDU 6 nuclear reactor - Part III: Decommissioning device**
- RP22 O. Morozova, **Insurance against radiation emergency risks in the Russian Federation: past, present and future**

- RP23 O. Morozova, Specific psychological features of residents in areas of possible radiation emergencies
- RP24 J. Jovanović, N. Lazarević, J. Djurić, B. Adnadević, Kinetics of cobalt-60 adsorption removal from liquid radioactive waste using a poly (acrylic acid) hydrogel

21:00-24:00

Red Cocktail, Rondo Pool, Slovenska Plaza

Tuesday, June 9

08:00-20:00

Registration

08:15-09:45

Poster Sessions

Lobby

Medical Imaging

Chairperson: Đurđica Milković

- MI1 V. Shchedrenok, O. Moguchaya, T. Zakhmatova, K. Sebelev, I. Zuev, Possibilities of the beam diagnostic at pathology of a vertebral artery
- MI2 V. Shchedrenok, O. Moguchaya, I. Zuev, T. Zakhmatova, K. Sebelev, Value of the beam diagnostic for spine surgery
- MI3 K. Nishi, S. Nakamura, K. Tashiro, F. Iwano, Low - dose Coronary Computed Tomography in the evaluation of spotty calcifications in arterial plaque
- MI4 S. Serban, V. Serban, The necessity of higher voltages for special radiographs in medical radiology
- MI5 O. Kozgus Guldu, E. Ilker Medine, S. Ece, S. Evran, D. Odaci Demirkol, S. Timur, P. Unak, Radioiodinated green fluorescence protein linked magnetic nanoparticles in dual imaging of cancer cells
- MI6 Ş. Altan, S. Teksöz, Ç. İçhedef, E. Uçar, E. Ilker Medine, P. Unak, ^{99m}Tc-MELPHALAN and In Vitro evaluation
- MI7 S.-J. Lee, S. J. An, Y. H. Chung, Monte Carlo Modeling of a novel depth-encoding PET detector with DETECT2000
- MI8 C. Y. Lee et al., Fast Compressed sensing based proton CBCT reconstruction algorithm
- MI9 M. Vljaković et al., The role of somatostatin receptor scintigraphy and F-18 FDG PET scan in selecting thyroid cancer patients with negative I-131 scan and rising thyroglobulin for peptide radio-receptor therapy

Non-ionizing Radiation

Chairperson: Ercan Yilmaz

- NI1 Đ. Stratimirović, S. Blesić, C. Wright, M. Allen, J. Ajtić, Wavelet analysis of personal solar UVR exposure
- NI2 D. Sarvan, J. Ajtić, V. Miljković, Fractality of Observed Solar Radiation Data
- NI3 O. Gerasimchuk, P. Skorobogatov, K. Epifantsev, The analysis of ambient temperature influence on digital ICs electrical overstress pulse hardness
- NI4 A. Ilić, S. Ćirković, J. Ristić-Djurović, Evaluation of SMF exposure field levels and gradients obtainable using the 2D magnetic arrays

Neutron Radiation

Chairperson: Ercan Yilmaz

- NR1 J. Derrien, A. Dubus, N. Pauly, R. Tesse, Studies of neutron activation profiles in Carbon, Iron and Copper targets
- NR2 M. A. Menezes, E. Maia, R. Jacimovic, Worker's health awareness program in Belo Horizonte, Brazil: support by neutron activation analysis

- NR3 S. Domański, B. Boimski, P. Tulik, Long time observations of the emission change of an old californium source
- NR4 S. M. Perovich, M. Calasan, The special trans functions theory to the degree of nuclear fuel burn-up estimations

Space Radiation
Chairperson: Ercan Yilmaz

- SR1 M. Artiomov, N. Khamidullina, FD_ORBIT2 - software package for calculation of radiation conditions of S/C flight in complex evolving Earth orbits

Plenary Session
Invited talk Room A
Chairperson: Gayle Woloschak

10:00

Michael J. Atkinson, The role of the non-coding transcriptome on the regulation of the radiation response at low doses

Oral Session
Radiobiology Room A
Chairperson: Michael J. Atkinson

10:30

V. Lener et al., Single low dose X-ray exposure-induced blood brain barrier damage in mice

10:45

I. Jackson, C. Buck, N. Desai, T. Shea-Donohue, Z. Vujaskovic, Development of animal models for testing new therapeutic strategies to mitigate and/or treat multiorgan injury and improve survival following lethal radiation exposure

11:00

O. Katsarska, E. Zaharieva, N. Aneva, G. Savova, K. Stankova, R. Boteva, ST2 protein as a novel biomarker for an increased risk of cardiovascular disease in individuals occupationally exposed to low-dose radiation

11:15

D. Firsanov, V. Mikhailov, V. Soukhov, Assessment of radiation response by tissue-specific gH2AX formation and elimination after X-irradiation

11:30

Special talk: Katalin Lumniczky, RENEb - The Road towards a European Biodosimetry Network

Oral Session
Radiochemistry Room B
Chairperson: Peter Burns

10:30

S. Lahiri, M. Maiti, Radio-Green Chemistry or Green Radiochemistry?

10:45

A. Yurt Kilcar, Z. F. Biber Muftuler, V. Tekin, I. E. Medine, P. Unak, In vitro evaluation of promising novel brain agents: Bioquin-HMPAO (BH) and PLGA encapsulated BH (BH-PLGA) nanocapsules

11:00

V. Tekin, F. Z. Biber Muftuler, A. Yurt Kilcar, P. Unak, In vivo evaluation of radioiodinated natural lawsone as a teranostic agent

11:15

J. Zvezdanović, D. Cvetković, S. Petrović, J. Stanojević, D. Marković, Plant pigments interaction with UV-light: in vivo and in vitro approach

11:30

G. Angelini, C. Cherubini, O. Ursini, Reactivity of selected primitive amino acids induced by gamma-irradiation in astrochemical context

11:45

A. Krivokapic, S. G. Aalbergstjoe, A. Sanderud, E. O. Hole, E. Sagstuen, Radiation chemistry of the EPR dosimeter lithium formate monohydrate

Oral Session
Medical Imaging Room C
Chairperson: Turan Olgar

10:30

J. Popić Ramač, Ž. Knežević, M. Majer, V. Vidjak, H. Hršak and S. Miljanić, Comparison of cancer risks for two different chest CT protocols

10:45

S. Nakamura, K. Nishi, K. Tashiro, F. Iwano, S. Nakane, DAT-scan in diagnosis of idiopathic Parkinson disease in our hospital

- 11:00 V. Shchedrenok, O. Moguchaya, I. Zakhmatov, E. Potemkina, M. Kotov, K. Sebelev, **Brain dislocation morphometry at neurology and neurosurgery**
- 11:15 M. Matveeva, J. Samoylova, O. Tonkih, **Clinical case: Magnetic resonance imaging in detection of combination Dandy-Walker syndrome and diabetes mellitus type 1**
- 11:30 Y. Kovalenko, I. Myronova, **Improvement of pediatric diagnostic imaging due to application of digital microfocuss radiography**

Plenary Session

Invited talk

Room B

Chairperson: Marek Trojanowicz

14:00

Susanta Lahiri, **Radionuclides in medicine: from the first clinical use of radium to CERN-MEDICS**

Oral Session

Radiobiology

Room A

Chairperson: Soile Tapio

14:30

J. Hu, X. Zhang, A. Zhang, W. Goetz, Z. Vujaskovic, I. Jackson, **Role of pulmonary progenitor cells in repair and regeneration of irradiated lung tissue**

14:45

J. K. Kim, M. Y. Kang, J.-H. Kim, **Cellular responses mediated by radiation-induced p53 level**

15:00

I.V. Koshlan, N.A. Koshlan, P.Bláha, R.D. Govorun R.D., E.A. Krasavin, **HPRT mutant induction in V79 cells over time after exposure to radiation of different LET**

15:15

T. Paunesku, **The use of radiosensitizing Fe₃O₄/TiO₂ nanoconjugates in neuroblastoma cell lines**

15:30

K. Lumniczky, K. Dobos, L. Papp, A. Benedek, N. Eniko Bogdandi, G. Safrany, **The effect of irradiation on the inflammatory phenotype of brain pericytes**

15:45

N. E. Bogdándi et al., **The effect of radiochemotherapy on the phenotype of regulatory T cells and myeloid-derived suppressor cells in colorectal cancer patients**

Oral Session

Radiochemistry

Room B

Chairperson: Susanta Lahiri

14:30

H. Tuovinen et al., **Release of radionuclides and heavy metals from uranium mine waste at a former uranium mine in Eno, Eastern Finland**

14:45

N. Kuzmenkova, I. Vlasova, A. Rozhkova, E. Pryakhin, S. Kalmykov, Y. Mokrov, **Radionuclides distribution among zoo-, phyto- plankton and benthos in artificial reservoirs**

15:00

N. Horvatinčić, A. Sironić, J. Barešić, I. Krajcar Bronić, **Carbon isotope (¹⁴C and ¹³C) exchange processes in the biosphere: case study of the Plitvice Lakes**

15:15

S. S. Kim, G. N. Kim, J. K. Moon, **Decontamination of radioactive concrete**

15:30

I. A. Abbasi, **Production of ¹⁰³Pd via (n, α)-reaction and its separation by spontaneous electrodeposition**

Oral Session

Medical Imaging

Room C

Chairperson: Jelena Popić Ramač

14:30

S. Baranovski, **Impact ionization phenomena in disordered systems related to the avalanche multiplication and switching effect**

14:45

T. Olgar, L. Ergun, D. Bor, **Investigation of noise sources for digital radiography systems**

15:00

I. Kulich, L. Aslamova, N. Melenevska, N. Miroshnichenko, S. Miroshnichenko, **The optimization methods of image quality during the chest screening of patients with different mass index**

15:15	E. Petrova, Radiological images and prognosis of pneumoconioses in fundamental industries in Bulgaria
15:30	B. Pojskić, E. Štimjanin, Aortic dissection and HOCM-Case report
16:00-16:30	Refreshments
	Oral Session Radiobiology Room A Chairperson: Isabel Jackson
16:30	N. Anastasov et al., Non-coding RNAs as potential biomarkers of radiation response
16:45	G. Woloschak, Micro RNA responses to high and low dose rates of radiation
17:00	J. Miszczyk, K. Rawojc, A. Możdżeń, A. Panek, J. Swakoń, M. Rydygier, Evaluation of the usefulness of Premature Chromosome Condensation assay in rapid retrospective biological dosimetry
	Oral Session Radiochemistry Room B Chairperson: Nada Horvatinčić
16:30	M. Trojanowicz, A. Bojanowska-Czajka, M. Lyczko, K. Kulisa, G. Kciuk, J. Moskal, Radiolytic decomposition of environmentally persistent perfluorinated surfactants with the use of ionizing radiation
16:45	P. Burns, Recent advances in the properties and applications of Uranyl Peroxide Cage Clusters
17:00	M. Mihon, C. Tuta, A.-C. Ion, D. Niculae, V. Lavric, Influence of the separation parameters applied in chemical impurities determination
17:15	A. Titov, A. Zaitsevskii, Yu. Demidov, N. Mosyagin, L. Skripnikov, First principle based modeling and interpretation of chemical experiments on superheavy element identification
17:30	O. Ursini, C. Cherubini, L. Lilla, Gamma-irradiation: an alternative method to anchor organosilane on silica surface
	Oral Session Non-ionising Radiation Room C Chairperson: Jelena Ajtić
16:30	A. Maes, R. Anthonissen, L. Verschaeve, A laboratory investigation of the alleged association between extremely low frequency magnetic field exposures and an increased risk of Alzheimer's disease
16:45	M. Strakhovskaya, N. Belenikina, E. Ivanova, E. Kholina, G. Fraikin, Sensitivity of microorganisms to photoinactivation in the presence of endogenous and exogenous tetrapyrroles
17:00	A. Garrido, M. de L. Dinis, Occupational exposure to electromagnetic fields in arc and resistance welding
17:15	Y. P. Chukova, Weak influences in the context of thermodynamic consideration of bioeffects of electromagnetic radiation
18:15-19:45	Poster Sessions Lobby
	Radiochemistry Chairpersons: Ayfer Yurt Kilcar, Ornella Ursini
RC1	N. Konovalova, V. Krapukhin, V. Kulemin, V. Lavrikov, S. Kulyukhin, Spiral filtering element as the basis of the filtration installations for removal of the solid radioactive impurities from gas and liquid phases
RC2	Ly. Popov, Determination of ³H and ¹⁴C in gas-aerosol discharges and surface air near the vicinity of Kozloduy nuclear power plant (Bulgaria)
RC3	J. Halleröd, C. Ekberg, E. Aneheim, Development of the Chalmers Grouped Actinide Extraction process

- RC4 I. Kajan, **Chemistry of RuO₄ in the containment of nuclear power plant**
- RC5 S. Yusan, K. Korzhynbayeva, S. Aytas, **A comparative study of the sorption of uranium (VI) on raw and modified diatomite samples from Kazakhstan**
- RC6 M. Habibi, R. Leyma, S. Platzer, W. Kandjoller, R. Krachler, G. Wallner, **Radionuclide extraction from aqueous solutions by ionic liquids**
- RC7 E. Belova, I. Skvortsov, A. Rodin, M. Kadyko, **Influence of uranyl nitrate on the thermal stability of the extractant mixtures with nitric acid**
- RC8 E. Belova, Z. Dzhivanova, G. Thorzhnitsky, S. Stefanovsky, **Research on dependence of Pu (IV) transition completeness into the organic phase while its extraction with 30% TBP solution in Isopar-M on the type and dose of irradiation in the cyclic mode conditions**
- RC9 A. Melentev, N. Samarina, S. Lukin, A. Mashkin, **Stabilization of Plutonium(IV) + Neptunium(IV) and Plutonium(IV) + Neptunium(V) for the simplified Plutonium purification cycle of the Purex-process**
- RC10 Yu. Demidov, A. Zaitsevskii, **Adsorption of superheavy element 113 single atoms on gold and quartz surfaces: a relativistic density functional study**
- RC11 A. Safonov, S. Ostalkevich, A. Ivanenko, T. Khizniak, O. Gorbunova, **Flow-through bioreactor with bacteria from extreme habitats for LRW denitration in FSUE «RADON»**
- RC12 A. Safonov, K. German, V. Tregubova, O. Gorbunova, **Laboratory unit for organic radioactive wastes biodegradation tests**
- RC13 A. Safonov, K. German, V. Tregubova, T. Khizniak, O. Gorbunova, I. Zinikovskaya, **Flow-through bioreactor for the decontamination of LRW from uranyl and pertechnetate-ions**
- RC14 K. German, A. Safonov, **Techneium sulfide formation kinetics and size speciation for environmental mobility control**
- RC15 J. Cruz-Castañeda, T. Buhse, A. Negron-Mendoza, **The radiolysis of glyceraldehyde adsorbed onto mineral surfaces**
- RC16 L. A. González López, M. Colín-García, A. Heredia, S. Ramos-Bernal, A. Negron-Mendoza, **Acetic acid decomposition, the role of radiation and temperature in the stability of organics on primitive Earth**
- RC17 A. Berisha, A. Gashi, A. Kryeziu, V. Mehmeti, F. Podvorica, **The effectiveness of covalently bonded phenylene films onto mild steel as a corrosion barrier toward the protons**
- RC18 A. Berisha, B. Jashari, V. Mehmeti, K. Jusufi, M. Ismaili, **Protection of mild steel from corrosion in mineral acid media by the use of mixed inhibitors: 4-aminobenzoic acid and some amino thiazole derivatives**
- RC19 A. Berisha, T. Demelezi, V. Mehmeti, M. Ismaili, K. Jusufi, **The theoretical (DFT/B3LYP) and experimental study of the effect of pyridine/thiazole derivatives on the corrosion behavior of mild steel in perchloric acid as a corrosion media**
- RE33 S. Akozcan, **Radioactivity levels and hazards of soils in the Kucuk Menderes Basin, Turkey**
- RH14 C. Dueñas, M^a del Carmen Fernandez, E. Gordo, S. Cañete, E. Liger, M. Pérez, **Long-term atmospheric depositional fluxes of radionuclides at Malaga (coastal Mediterranean station)**

Radiobiology

Chairperson: Tatjana Paunescu

- RB1 S. Tapio, M. J Atkinson, G. Safrany, **Establishing a research partnership within the EURATOM radiation protection programme of Horizon 2020: The OPERRA consortium**
- RB2 V. Makarchuk et al., **NOS-inhibitor enhances the antitumor efficacy of radiation therapy**
- RB3 R. Polanek, E. R. Szabó, K. Hideghéty, **Preliminary studies of radiobiological experiments with laser accelerated particle beams**

- RB4 V. Atkocius, E. Janulionis, K. P. Valuckas, V. Samerdokiene, **Second primaries after HDR ^{252}Cf or ^{60}Co brachytherapy combined with EBRT for carcinomas of cervix or corpus uteri**
- RB5 N. Takai, R. Takami, R. Aoki, S. Ichinose, Y. Ohba, **The activation of N-methyl-D-aspartate receptor and correlation with radiation-induced gut injuries**
- RB6 M. Zadneprianetc et al., **IRIF cluster formation and structure in human fibroblasts after irradiation with boron ions and gamma-rays**
- RB7 V. Garaj Vrhovac, M. Gerić, S. Miljanić, B. Mihaljević, G. Gajski, **Sodium copper chlorophyllin: a potential radioprotective candidate**
- RB8 S.-H. Ryu, S.-W. Lee, E. Y. Park, J.-W. Ryu, **The protective effect of alpha-lipoic acid for radiation-induced fibrosis in BALBc mice**
- RB9 M. Shaposhnikov, D. Peregudova, E. Plyusnina, A. Moskalev, **Effect of low-dose gamma radiation on the *Drosophila melanogaster* lifespan**
- RB10 S. V. Belkina, **Impact of medium nutrition on the shape of bacteria survival curve and RBE of α -particles**
- RM21 N. Georgieva et al., **PET/CT in NSCLC with brain metastases**

21:00-24:00

Blue Cocktail, Rondo Pool, Slovenska Plaza

Wednesday, June 10

08:00-19:00

Excursion

21:00-24:00

Green Cocktail, Rondo Pool, Slovenska Plaza

Thursday, June 11

08:00-20:00

Registration

08:15-09:45

Poster Sessions

Lobby

Biochemistry
Chairperson: **Vladimir Jurišić**

- BC1 E. Gershtein, N. Kushlinskii, **Insulin-like growth factors and IGF-binding proteins as diagnostic, prognostic and predictive tumor markers**
- BC2 S. Pavelka, **Leptin affects thyroid hormone metabolism in WAT**
- BC3 M. Temelie, D. Savu, C. Dragomir, N. Moiso, **Studies of mechanisms involved in bleomy cin-induced bystander effects and stress response on mouse embryonic fibroblasts**
- BC4 A. Berman, N. Kozlova, G. Morozovich, **Integrin alpha-2/beta-1 rescues human melanoma cells from senescence**
- BC5 N. Kozlova, G. Morozovich, N. Ushakova, A. Berman, **Integrin alpha-5/beta-1 as a signal switch to the human breast carcinoma cell invasion**
- BC6 G. Morozovich, N. Kozlova, O. Susova, A. Berman, **Implication of Erk kinase signaling in integrin alpha-2/beta-1 dependent anoikis protection**
- BC7 J. Pinela, J.C.M. Barreira, A.L. António, L. Barros, S. Cabo Verde, A.M. Carvalho, M.B.P.P. Oliveira, I.C.F.R. Ferreira, **Does gamma-irradiation affect the quality of fresh-cut watercress?**
- BC8 E. Pereira, L. Barros, A.L. António, S. Cabo Verde, C. Santos-Buelga, I.C.F.R. Ferreira, **Effects of gamma irradiation on the phenolic compounds of *Ginkgo biloba* L.**
- BC9 J. Mladenovic, R. Pavlovic, J. Zdravkovic, J. Pantovic, M. Cvijovic, **Antioxidant activity ultrasonic extractand macerate colored vegetables**

- BC10 J. Mladenovic, R. Pavlovic, J. Zdravkovic, J. Pantovic, M. Cvijovic, *In vitro* antioxidative activity of onions growing in Serbia
- BC11 B. Laze, A. Mitre, Comparison of ECL and ELISA EUROIMMUN for detection of cytomegalovirus IGM antibodies

Biomedicine

Chairperson: Vladimir Jurišić

- BM1 O. Gorbacheva, N. Belosludtseva, M. Shigaeva, S. Kravchenko, G. Mironova, Study of respiration, ion transport and oxidative processes of rat brain and liver mitochondria in experimental epilepsy
- BM2 S. Sobajic, B. Djordjevic, M. Zrnica, T. Banovic, Nutritive protection of ocular phototoxicity
- BM3 Z. F. Biber Muftuler, B. Cekic, A. Yurt Kilcar, N. Gunay, S. Sakarya, P. Unak, Investigation of Broccoli extract as a new protective strategy against toxic effect of Stannous dichloride (SnCl₂)
- BM4 S. Pavelka, Radiometric enzyme assays
- BM5 S. Pejic, A. Todorovic, V. Stojiljkovic, Lj. Gavrilovic, N. Popovic, I. Pavlovic, S. Pajovic, Antioxidant enzymes in women with hyperplasia complex: relation with sex hormones

Biomaterials

Chairperson: Gordana Žauhar

- BR1 J. Šetrajčić, A. Šetrajčić - Tomić, Lj. Džambas, Core-shell models of nanostructured materials for medical applications
- BR2 I.-C. Brie, G. Dindelegan, G. Kacso, V. Bogdan, C. Popa, V. Cernea, Experimental model for the study of tissue tolerance to radiations in the presence of implanted biomaterials
- BR3 A. Bulut, S. Yusan, S. Aytas, S. Sert, Investigation of adsorptive removal of Sr(II) ions from aqueous solutions by Calcium and Hydroxyapatite (HAP) based Sea shell sorbents
- BR4 M. Ismaili, B. Korça, K. Jusufi, L. Këpuska, A. Berisha, V. Mehmeti, Integral and differential dispersion of clay pores in Goshica, Kosovo
- BR5 V. Le, V. Zhevnyak, V. Pak, V. Anan'ev, Influence of gamma radiation on physical and chemical properties of radiation sewed the ion-exchange polymer hydrogels
- BR6 P. Hajdu et al., Creation and investigation of gold nanoparticles on titanium surface for further biomedical usage

Biophysics

Chairperson: Gordana Žauhar

- BP1 M. Klimovich, D. Paramonov, V. Trofimov, M. Kozlov, L. Shishkina, Radiation-induced effects on liposomes - a tool for studying the mechanism under radiation action on the organism
- BP2 A. Gajta et al., The influences of the electromagnet radiation on the tear film
- BP3 E. Raeisi, Y. Lemoigne, L. M. Mir, The effect of phosphodiesterase inhibitor on the uptake of the cell electropermeabilization marker 2-NBDG in tumor cells

Plenary Session

Invited talk

Room B

Chairperson: Stanislav Pavelka

10:00

Elena Gershtein, Tumor biological markers as the basis for personalized medicine: history, present and future

Oral Session

Radioecology

Room A

Chairperson: Günseli Yaprak

10:30

E. Danutė Marčiulionienė, O. Jefanova, The accumulation of ¹³⁷Cs and ⁹⁰Sr in the cell of *Nitellopsis obtusa* algae

- 10:45 Th. Sawidis, K. Tsigaridas, L. Tsikritzis, **Cesium-137 monitoring using mosses and lichens from West Macedonia, Greece**
- 11:00 S. Geraskin, **Low level, chronic exposure related effects in plant populations**
- 11:15 T. Paramonova, E. Shamshurina, O. Komissarova, V. Belyaev, **Distribution of Cs-137 among above- and belowground parts of agricultural crops in the area of post-Chernobyl hot spot**
- 11:30 D. Kumar Gupta, F. Tawussi, L. Lütke, L. Hamann, C. Walther, **Oxidative stress generated by moderate uranium in *Pisum sativum* plants**
- 11:45 L. Shishkina, M. Klimovich, M. Kozlov, N. Khrustova, **Oxidative stress and development of the biological consequences under radiation action at the different extent**

Oral Session

Biomedicine, Biochemistry and Biomaterials

Room B

Chairperson: **Nikolay Kushlinskii**

- 10:30 Z. Becker-Kojic, A. Schott, I. Zipancic, **Human GPI-linked glycoprotein ACA and its role in promoting self-renewal and expansion of primitive human haematopoietic stem cells**
- 10:45 T. Dučić, B. Lai, S. Chen, M. Ninković, T. Paunesku, G. Woloschak, **Synchrotron radiation study on distribution of trace elements and structural change in glioma cells in situ**
- 11:00 V. Jurisic, A. Radovanovic, K. Mirjagic-Martinovic, T. Srdic, G. Konjevic, **Correlation of intracellular molecules expression in terms to golden standard, classical chromium release assay for evaluation of NK cytotoxicity**
- 11:15 S. Pavelka, **Effects of fluoxetine on thyroid hormone metabolism**
- 11:30 N. Djordjevic, **Antibiotic-loaded hydroxyapatite and calcium sulphate composite is a potent biomaterial for one stage treatment of the extensive infected bone defect**

Oral Session

Radiation Measurements

Room C

Chairperson: **Gennaro Conte**

- 10:30 H.-T. Chung, J. P. Chung, K. J. Chun, Y. K. Joo, D. J. Lee, **Development of standard references for Gamma knife radiosurgery facilities**
- 10:45 W. Bulski, K. Chełmiński, **A phantom for dosimetry audit of radiotherapy treatment planning systems**
- 11:00 M. Dybek, B. Kozłowska, **MOSFET detectors in verification of planned dose in radiotherapy**
- 11:15 S. Danzeca, M. Brugger, A. Masi, G. Spiezia, **A radiation tolerant Total Ionizing Dose Monitor module (TIDMon) based on combined Floating Gate and RadFets sensors**
- 11:30 S. V. Nikiforov, V. S. Kortov, M. G. Kazantseva, K. A. Petrovykh, A. N. Kiryakov, **Luminescence and dose response of monoclinic zirconium oxide after irradiation by pulsed electron beam**
- 11:45 A.-R. Paşcu, A. Timar-Gabor, V. Simon, **Unconventional materials as fortuitous retrospective luminescent dosimeters in case of a radiological emergency event**

Oral Session

Radioecology

Room A

Chairperson: **Stanislav Geraskin**

- 14:00 S. Karpenko, **Radiation-epidemiological estimates of the incidence and mortality of cerebrovascular disease among emergency workers of the Chernobyl accident**
- 14:15 A. Bolsunovsky, M. Medvedeva, **Radioecological consequences of the 50-year operation of the plutonium complex at the Yenisei river**
- 14:30 A. Oudalova et al., **Biological monitoring of the environment in a vicinity of the far-eastern center for radioactive waste treatment**
- 14:45 S. Artamonova, L. Rikhvanov, **Uranium and rare elements in technogenic aerosol of Siberian Chemical Combine region (Seversk, Russia)**

- 15:00 P. Bossew et al., **Estimation of the terrestrial gamma ray component in Europe**
- 15:15 Ş. Şahin, G. Yaprak, I. Sert, **Distribution of gamma-ray emitting radionuclides in the coastal environment of the Candarli gulf of Aegean Sea, Turkey**
- 15:30 P. Cakir, S. Inan, Y. Altas, **Sorption studies of strontium onto zirconium-antimony oxide/polyacrylonitrile (Zr-Sb oxide/PAN) composite using experimental design**
- 15:45 D. Krezhova, S. Maneva, A. Stoev, N. Petrov, **Remote sensing techniques for Earth observation - applications for preservation of plant ecosystems**

Oral Session

Radiation Measurements

Room B

Chairperson: Einar Sagstuen

- 14:30 P. Ulkowski, W. Bulski, K. Chelmiński, **Long-term stability of radiotherapy dosimeters calibrated at the Polish Secondary Standard Dosimetry Laboratory**
- 14:45 V. Ivanov, A. Loutchanski, S. Gushchin, V. Ogorodniks, **Personal radiation detector γ -tracer GT2-1 with CdZnTe detector**
- 15:00 D. Mrdja, K. Bikit, I. Bikit, J. Nikolov, I. Stankovic, S. Forkapic, **Study of sample matrix influence on HPGe detection efficiency by Monte-Carlo simulations**
- 15:15 J. Beinstein, J. Babor, P. Švrčula, **High activity spectrometry and tomography of irradiated materials in hot-cell**
- 15:30 I. Sandeva, H. Spasevska, M. Ginovska, L. Stojanovska-Georgievska, **Establishing a procedure for detection of irradiated food by photostimulated luminescence**
- 15:45 I. Sert, S. Edremit, E. Ozel, **Identification of lead sources in lake Karagol sediments using stable lead-isotope ratios**

Oral Session

Biomedicine, Biophysics and Biomedical Engineering

Room C

Chairperson: Kiril Krezhov

- 15:00 S. Pavelka, **Radiometric determination of thyrotoxic effects of some xenobiotics**
- 15:15 Č. Vasić, N. Djordjevic, **Challenges in application of the biomedical engineering techniques into the local medical facilities**
- 15:30 D. Adjei et al., **Design and characterization of a desk-top laser plasma X-ray source for radiobiology studies**
- 15:45 G. Laštovička-Medin, **Essay on the future of physics and scanning technologies: limits by four fundamental forces and quantum mechanics**

16:00-16:30

Refreshments

Oral Session

Radioecology

Room A

Chairperson: Peter Bossew

- 16:30 G. Yaprak et al., **Sedimentation rates and heavy metal pollution history in marine sediments from Aliğa Bay derived from ^{210}Pb and ^{137}Cs chronology**
- 16:45 H. Simon, L. Preoteasa, S. Kelemen, E. Reizer, B.-D. Burgehele, R.Cs. Begy, **Investigation of sediment accumulation in the northern part of Danube Delta (Romania)**
- 17:00 M. Melgunov, M. Kropacheva, A. Bolsunovsky, **Active particles in alluvial soils of the river Yenisei: isotope composition, morphology and structure**
- 17:15 Yu. Konevnik, E. Zakharova, K. Martynov, **Neptunium behavior in gneiss rock massive environment**
- 17:30 A. Safonov, V. Ilin, V. Tregubova, E. Zaharova, T. Nazina, **Biological in situ remediation of subsurface water horizons near to radioactive waste storage**
- 17:45 E. Nostar Aslan, Y. Altas, **Removal of Ba^{+2} and Sr^{+2} ions from aqueous solution using synthesized hydrated cerium dioxide**

Oral Session**Radiation in Medicine****Room B**Chairperson: **Ana Pejovic-Milic**

- 16:30 G. Magrin et al., **Diamond detectors for the radiation quality assessment of therapeutic ion-beams**
- 16:45 R. Bedogni et al., **New devices to determine field and dosimetric quantities in radiotherapy**
- 17:00 G. Kramberger et al., **Development of the in-vivo dosimetry for brachytherapy based on diamond and RADFET detectors**
- 17:15 G. Sevo, M. Tasic, O. Vasovic, A. Milicevic-Kalasic, D. Damnjanovic, **Therapeutic use of X-irradiation during the 1950s and its delayed health consequences: TC cohort in the making**
- 17:30 M. Casiraghi, R. Schulte, **Treatment plan optimization in particle therapy using nanodosimetric quantities**
- 17:45 B. Basaric et al., **High-dose rate (HDR) Ir-192 brachytherapy application of basal cell carcinoma**

Oral Session**Radiation Effects in Electronic Devices and Circuits****Room C**Chairperson: **Miguel Angel Carvajal**

- 16:30 V. Anashin, P. Chubunov, A. Koziukov, **Requirements and abilities for single event effect testing in Russia**
- 16:45 A. B. Boruzdina, A. V. Ulanova, A. V. Sogoyan, M. S. Gorbunov, A. V. Yanenko, A. Nikiforov, **Temperature dependence of CMOS SRAM sensitivity to single event effects**
- 17:00 J. Huran et al., **The effect of Xe ion and neutron irradiation on the properties of SiC and SiC(N) films prepared by PECVD technology**
- 17:15 I. Anfimov, S. Kobeleva, U. Abildaeva, G. Talasbek, T. Kritskaya, **Annealing temperatures and activation energies for recovery of the main parameters of electron irradiated FZ silicon**
- 17:30 K. Wolf, G. Belev, M. Ailavajhala, D. Tenne, M. Mitkova, **Wide range dose X-ray radiation induced effects in conductive bridge resistance change non-volatile memory devices and the materials building these devices**

18:15-19:45

Poster Sessions**Lobby****Radiation in Medicine**Chairpersons: **Michela Marafini, Herbert Lettner**

- RM1 M. Sofronievska Glavinov, S. Ristovski, T. Petrovska, A. Glavinov, **The change in radiation exposition in patients with renal colic; our experience for over a decade 2004-2014**
- RM2 K. Szkliniarz et al., **New results on the medical radioisotope ²¹¹At produced using the alpha particle beam**
- RM3 A. Brindhaban, B. Al Jameli, **Effect of quality reference mAs on image quality and radiation dose in pediatric Computed Tomography examinations**
- RM4 Lj. Bojic, A. Filipovic, M. Obradovic, S. Novosel, D. Dragasevic, **The value of dual - wash ^{99m}Tc-MIBI parathyroid scintigraphy and the utility of ultrasound in preoperative localisation of abnormal parathyroid glands in patients with primary hyperparathyroidismus**
- RM5 O. Girjoaba, A. Cucu, **The patient dose estimation from medical exposure for the period 2010-2013**
- RM6 R. Mineikyte, V. Atkocius, E. Janulionis, **Radiotherapy utilization rate for cancer in Lithuania 2011-2012**
- RM7 K. P. Kim, K. Kim, **Ionizing radiation exposure of Korean population from diagnostic radiation imaging**

- RM8 T. Vlasenko, L. Bulavin, V. Sysoev, K. Cherevko, **Structural and thermodynamic changes in the NaCl solutions under the irradiation**
- RM9 D. Štimac et al., **Comparison of dose and image quality of full field digital, computer radiography and film/screen mammography units**
- RM10 D.-J. Lee, H.-T. Chung, **Evaluation of 3-D real-time target positioning accuracy during spinal radiosurgery**
- RM11 B. Kiełtyka, K. Rawojć, K. Kisielawicz, I. Markiewicz, **Comparison of the usefulness of PBC and AAA in radiotherapy planning system**
- RM12 Z. Vukovic, K. Jacimovic, **Quality assurance of the medical linear accelerator using 2D detector array in clinical centre of Montenegro**
- RM13 M. Dimcheva, A. Jovanovska, S. Sergieva, **Assessment of radiation exposure of nuclear medicine staff**
- RM14 M. Wielgosz, M. A. Gryziński, M. Maciak, **Renaissance of the Boron Neutron Capture Therapy, BNCT**
- RM15 C. R. Ozbay, M. Cengiz, **Comparison of the dosimetric accuracy of intensity modulated radiation therapy plans with different dosimetric systems**
- RM16 M. Rajic et al., **The incidence of Hashimoto's thyroiditis and other benign and malignant thyroid diseases among patients underwent thyroidectomy due to differentiated thyroid carcinoma**
- RM17 S. Milišić, A. Selimović, S. Mesihović Dinarević, E. Mujičić, A. Hadžismailović, **Evaluation of chest tube drainage for a period of two years in patients with pneumothorax**
- RM18 A. M. Şenışık et al., **Synthesis and properties of radiolabeled glycyglycine with $^{99m}\text{Tc}(\text{CO})_3^+$ core**
- RM19 M. Ebrahimi, V. Changizi, M. R. Kardan, S. M. Hosseini Pooya, P. Geramifar, **Assessment of received dose by family members of in-patients treated with I-131**
- RM20 D. Arandjic et al., **Paediatric computed tomography: Assessment of radiation dose and risk awareness among staff involved in diagnostic process**

Pharmacological Aspects of Radiation
Chairperson: Michela Marafini, Herbert Lettner

- PR1 B. Pehlivanović, U. Suljić, **Radiopharmaceuticals in diagnosis and therapy**

Radiation Effects in Electronic Devices and Circuits
Chairperson: Aleksandar Jaksic

- RF1 P. K. Skorobogatov, A. V. Sogoyan, G. G. Davydov, A. N. Egorov, A. A. Pechenkin, **The nanooptics effects in laser DRE and SEE modeling in submicron modern ICs**
- RF2 A. Pechenkin, D. Savchenkov, A. Boruzdina, A. Vasilyev, **Methodical approach for SEE sensitivity estimation of different functional blocks on a single chip**
- RF3 G. S. Sorokoumov, D. V. Bobrovskiy, A. I. Chumakov, **Single Event transients' investigation in modern FPGA circuits**
- RF4 S. Iakovlev, V. Anashin, P. Chubunov, **Typical procedure for electronic component single event effect testing using low energy ion accelerators**
- RF5 M. S. Martínez García, A. Palma López, J. Torres del Río, J. Banqueri Ozáez, M. Á. Carvajal Rodríguez, **Calculation of radiation-induced oxide and interface charge in a general-purpose MOSFET**
- RF6 G. G. Davydov, L. N. Kessarinskiy, A. S. Kolosova, D. V. Boychenko, **Radiation behavior features of the modern transceiver ICs**
- RF7 A. Demidova, A. Pechenkin, A. Borisov, L. Kessarinskiy, D. Boychenko, A. Yanenko, **IC's chips uniformity identification by ionization response comparison for example OP1177**
- RF8 A. Borisov, M. Belova, L. Kessarinskiy, D. Boychenko, A. Nikiforov, **Analysis of total dose effects in modern linear analog ICs**
- RF9 M. Marjanović et al., **Modeling and PSPICE simulation of radiation stress influence on threshold voltage shifts in p-channel power VDMOS transistors**

- RF10 S. Kaya, A. O. Cetinkaya, A. Kahraman, H. Karacali, E. Yilmaz, R. Turan, Irradiation response of p and n type Sm₂O₃ MOS capacitors
- RS27 M. Nisti, A. Ferreira, C. Saueia, B. Mazzilli, Gross Beta activity in water by Cerenkov method
- RS28 C. Saueia, M. Nisti, B. Mazzilli, Determination of U, Th, rare earth and metals in soil around IPEN facilities

21:00-01:00

Conference Gala Dinner, Rondo Pool, Slovenska Plaza

Friday, June 12

08:00-17:30

Registration

08:15-09:45

Poster Sessions

Lobby

Radiation Measurements

Chairpersons: Mustafa Topaksu, Radmila Panajotovic

- RS1 M. Paluch-Ferszt, B. Kozłowska, M. Dybek, Thermoluminescence dosimetry for verifications of Treatment Planning Systems for conformal and VMAT radiotherapy techniques
- RS2 B. Šečerov, Estimation of absorbed dose during process interruption in radiation processing
- RS3 P. Žlebčik, P. Rulík, J. Škrkal, L. Dragounová, Results from testing of a new CdZnTe detector
- RS4 M. Sadel, P. Bilski, J. Swakon, A. Weber, Thermoluminescent detectors for measuring of proton doses in space and for accelerator beam dosimetry
- RS5 W. Gieszczyk, P. Bilski, B. Marczevska, D. Wróbel, M. Kłosowski, LiMgPO₄ high-sensitive OSL dosimeters prepared by micro pulling down crystal growth technique
- RS6 B. Canbaz Öztürk, G. Yaprak, N. F. Çam, O. Candan, Natural radiation levels in the granitic areas of the western Anatolia/Turkey: A case study from Çataldağ granitoid Pluton
- RS7 W. Choi, S. Y. Kim, C. G. Choi, K. P. Kim, Aerosol containing natural radionuclides in zircon industry
- RS8 M. Kłosowski, B. Obryk, K. Hodyr, Influence of dopant concentration on low and high-dose thermoluminescence of LiF:Mg,Cu,P powder
- RS9 R. Banjanac et al., Background spectrum characteristics of the HPGe detector long-term measurement in the Belgrade low-background laboratory
- RS10 I. Cespirova, L. Gryc, J. Helebrant, M. Slavickova, Modern detection device for remote mapping of the radiation field
- RS11 S. M. Hosseini Pooya, B. Arezabak, H. Alebrahim, Evaluation of dosimetric characteristics of a glass RPL personal dosimeter
- RS12 D. Kim, M. Joe, S. Lim, A microbial dosimetric system for gamma radiation using the radiation-resistant bacterium, *Deinococcus*
- RS13 M. Pérez Martínez et al., Natural radioactivity from building materials in Spain
- RS14 L. Gryc, I. Cespirova, J. Sury, Radiation monitoring vehicle of a new generation
- RS15 N. Antović, S. Andrukhovich, A. Berestov, Background in a test of detecting cooperative parapositronium annihilation by the 32-crystal spectrometer ARGUS
- RS16 J. Kaljevic, J. Stankovic, M. Zivanovic, S. Ceklic, Dj. Lazarevic, Build-up PMMA plate effect on calibration of TLD reader
- RS17 B. Obryk et al., Thermoluminescence measurements of mixed radiation field at the proton cyclotron facilities and experimental hall of the Cyclotron Centre Bronowice
- RS18 K. Tudyka, A. Walencik, B. Kozłowska, A. Gabryś, Measurement of α decay pairs in the environmental samples

- RS19 G. Pantelić et al., **Results from radionuclide interlaboratory intercomparison in sediment and fish**
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- RS21 J. Nikolov, T. Petrović Pantić, N. Todorović, J. Hansman, I. Stojković, **Radionuclides in thermal groundwaters in Serbia**
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- RS24 M. Andjelkovic, G. Ristic, **Real-time monitoring of gamma radiation dose rate using RADFET**
- RS25 M. Andjelkovic, G. Ristic, **Response of commercial silicon carbide Schottky diode to gamma radiation**
- RS26 O. Karadeniz, T. Ozbay, **Indoor radon measurements in the granodiorite area of Bergama (Pergamon)-Kozak, Turkey**

Radiation Detectors
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- RD1 G. Conte et al., **Buried graphite pillars in single crystal CVD diamond: Sensitivity to X-ray and electrons**
- RD2 S. Salvatori, G. Conte, M. Pacilli, P. Allegrini, V. Ralchenko, **Pixel array detectors based on CVD-diamond for UV and X-ray detection**
- RD3 K. Bernhardt, **Shielding of an X-ray collimator against interfering X-radiation**
- RD4 K. Bernhardt, **Penetration depth of X-Rays in cylindrical X-Ray collimators**
- RD5 Ya. Zhydachevskii, A. Luchechko, N. Martynyuk, M. Berkowski, S. Ubizskii, A. Suchocki, **TL/OSL detectors based on YAlO₃:Mn crystals and ceramics**
- RD6 V. Ivanov, A. Loutchanski, **CdZnTe detectors for various applications**
- RD7 A. Twardak, P. Bilski, **Comparison of various stimulated luminescence measurement methods in application to lithium aluminate**
- RD8 D. Wróbel, P. Bilski, B. Marczevska, M. Kłosowski, **Development of LiMgPO₄:Tb,B OSL material for personal dosimetry**
- RD9 I. Stojković, J. Nikolov, N. Todorović, **²²²Rn determination in drinking waters - RAD7 and LSC technique comparison**
- RD10 P. Kuča, J. Helebrant, I. Češpírová, L. Judas, L. Skála, **Optimised detector system for local government bodies and municipalities and for the Emergency Planning Zone of nuclear power plant**
- RD11 K. Tudyka, G. Adamiec, A. Bluszcz, A. Szymak, G. Poręba, **A new development in thick source alpha-counting**
- RD12 M. Yüksel, Z. G. Portakal, T. Dogan, M. Topaksu, E. Unsal, **Thermoluminescence glow curve properties of TLD-500 dosimeter**
- RD13 M. Topaksu, N. Kucuk, M. Yüksel, T. Dogan, **Effect of heating rate on thermoluminescence of La-doped Zinc borate**
- RD14 E. Ekdal Karalı, C. Harmansah, A. Akın, M. Ayvaciıklı, T. Karalı, N. Can, **Thermoluminescence glow curve structure of CaB₄O₇:Dy Phosphor**
- RD15 T. Karalı, C. Taskopru, E. Ekdal Karalı, C. Harmansah, N. Can, **Thermoluminescence characteristics of Bi₄Ge₃O₁₂ irradiated with UV-radiation**
- RD16 S. Stanković et al., **Experiments with RADFET dosimeter in electron-beams irradiation and numerical computation of the physical shielding factor**
- RD17 N. Vasovic, R. Duane, A. Jaksic, **Silicon photo-multiplier based radiation dosimetry system for security applications**
- RD18 G. Laštovička-Medin, **Advanced teaching with the embedded mini lab: Radiation sensor board for Arduino and Raspberry Pi**

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10:30	Keynote Paper: D. Trbojevic, Hadron cancer radiation therapy and gantries
11:00	M. Toppi et al., Measurement of charged particle yields from therapeutic beams in view of the design of an innovative hadron therapy dose monitor
11:15	M. Rabochova et al., Effectiveness of epithermal neutron beam and gamma radiation shielding for boron neutron capture therapy
11:30	H. Lettner, H. Tempfer, W. Hofmann, A. K. Hubmer, Is radon progeny deposition on the skin important in radon therapy?
11:45	A. Pejovic-Milic, E. Da Silva, In-vivo and ex-vivo elemental analysis of complex biological samples
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10:30	A. Kahraman, S. Kaya, A. O. Cetinkaya, A. E. Aktag, R. Turan, E. Yilmaz, The effects of package materials on the sensitivity of RADFET for electron and photon sources
10:45	A. Jaksic, N. Vasovic, S. Stankovic, Development of RADFET detector for personal dosimeter system for European astronauts
11:00	A. O. Cetinkaya, A. Kahraman, S. Kaya, R. Turan, E. Yilmaz, Monte Carlo analysis of radiation responses of MOS capacitors fabricated by some rare earth oxides
11:15	O. Van Hoey et al., Radiation dosimetry properties of smartphone CMOS sensors
11:30	M. A. Carvajal, M. S. Martinez Garcia, J. Torres del Rio, D. Guirado, F. Martinez Marti, A. J. Palma, A dosimetry system for real time dose measurements using a commercial MOS transistor
11:45	R. Radu, I. Pintilie, E. Fretwurst, G. Lindstroem, Study of electron-induced defects in n-type silicon detectors
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14:15	Đ. Milković, M. Ranogajec-Komor, I. Žagar, Thymus gland and radiation in pediatric X-ray diagnosis of respiratory diseases
14:30	E. Uçar, S. Teksöz, Ç. İçchedef, K. Arı, E. Ilker Medine, P. Ünak, Cellular uptake of radiolabeled nanostructured lipid carriers
14:45	O. Kozgus Guldu, V. Tekin, P. Unak, E. Ilker Medine, F. Z. Biber Muftuler, C. Ozyurt, Antibacterial activity and cell migration studies of radioiodinated zinc oxide nanoparticles
15:00	M. Filimonova et al., Nitric oxide synthase inhibitors as a new class of vasoactive radioprotectors
15:15	A. Grebenyuk, S. Aleksanin, N. Aksenova, N. Kalinina, A. Timoshevsky, Pharmacological aspects of the use of recombinant Interleukin-1 for radiation protection and treatment of radiation injures

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- 14:00 J. Moon, S.-H. Jung, J. G. Park, **Development of gamma radiation detection DAS for industrial process investigation**
- 14:15 L. Basiricò et al., **Direct X-ray detectors based on Organic Semiconducting Single Crystals**
- 14:30 B. Obryk, M. Kłosowski, K. Hodyr, **Dopants concentration and high-dose high-temperature thermoluminescence of LiF: Mg, Cu, P detectors**
- 14:45 K. Tudyka, A. Bluszcz, **A study on photomultiplier afterpulses in TL/OSL readers**
- 15:00 K. F. Oguz, E. E. Karali, T. Karali, M. Aslani, B. Falay, **Thermally stimulated luminescence properties of CaB₄O₇:Mn Phosphors**

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- RE1 D. Struminska-Parulska, K. Szymańska, B. Skwarzec, **Polonium ²¹⁰Po in Calcium supplements**
- RE2 K. Szymańska, D. I. Strumińska-Parulska, B. Skwarzec, **Polonium ²¹⁰Po and radiolead ²¹⁰Pb in edible mushrooms collected in northern Poland**
- RE3 D. Struminska-Parulska, B. Skwarzec, **Plutonium ²⁴¹Pu inflow with the Vistula and the Odra Rivers**
- RE4 J. Ajtić et al., **Predictability of lead-210 in surface air based on multivariate analysis**
- RE5 R. Mikalauskienė, J. Mažeika, O. Jefanova, P. Szwarzczewski, **Investigation and assessment of lead-210 and caesium-137 chronology of Lacustrine sedimentation**
- RE6 N. Andryushchenko, **Ways of safety barriers creation using silicate compounds**
- RE7 D. Jasaitis, A. Moisejenkova, M. Pečiulienė, **Variation of specific activity of ¹³⁷Cs in the bottom ground of water reservoirs and waterside soil in Vilnius city, Lithuania**
- RE8 J. Nikolic, M. Rajacic, D. Todorovic, M. Jankovic, N. Sarap, G. Pantelic, **Calibration of HPGe detectors for environmental samples using GEANT4 simulation**
- RE9 S. Başoğlu, H. Tel, **Utilization of TBP-impregnated silica-gel for the removal of uranium from acidic waste solutions**
- RE10 H. Tel, B. Özkaynak, **Strontium removal from aqueous solutions by D2EHPA-impregnated amberlite XAD2 resin**
- RE11 S. Inan, E. Nostar, **Synthesis, characterization and sorption behavior of zirconium antimonates for strontium**
- RE12 M. Yıldız, Y. Altas, **Synthesis of silica SBA-15 with mesoporous structure and investigation of its uranium sorption**
- RE13 D. Todorović, M. Janković, M. Rajačić, J. Nikolić, N. Sarap, G. Pantelić, **Content of radionuclides in materials (used for construction) from Sri Lanka**
- RE14 D. Riekstina, J. Berzins, T. Krasta, O. Skrypnik, J. Rudzitis, J. Alksnis, **Assessment of radionuclide content in Latvian environment**
- RE15 L. Popov, **Origin and fallout concentrations of ^{238,239+240,241}Pu, ²⁴¹Am, ^{134,137}Cs and ⁹⁰Sr in soils from Bulgaria**
- RE16 T. Paramonova, A. Tunik, **Cs-137 in aggregate fractions of arable Chernozems: Plavsk radioactive hot spot, Russia**
- RE17 A. Puzas, R. Gvozdaite, J. Šapolaitė, R. Druteikienė, V. Remeikis, **A recent update on plutonium radioecological monitoring technique in Lithuania, Eastern Europe**
- RE18 M. Rajačić, D. Todorović, M. Janković, J. Nikolić, N. Sarap, G. Pantelić, **Correlation between beryllium-7 in atmospheric deposit and ground level air in Serbia in 2014**
- RE19 M. Đurašević et al., **Analysis of radionuclides content in soil samples from area of Aleksandrovačka Župa, Serbia**

- RE20 B. Lukšienė et al., Investigation of plutonium and cesium activity concentrations in the profiles of lake bottom sediments in Lithuania
- RE21 M. Kropacheva, M. Melgunov, I. Makarova, Monitoring of ^{137}Cs and ^{90}Sr isotopes content in biogeocenosis of Yenisey river floodplain
- RE22 I. Antović, N. Svrkota, D. Stojanović, M. Hadžibrahimović, R. Žižić, G. Laštovička-Medin, Soil and vegetation from Novi Pazar (Serbia) and Rožaje (Montenegro): radioactivity impact assessment
- RE23 A. Safonov, A. Alexandrovskaya, A. Kluev, V. Andreev, A. Vergun, Biosensor with immobilized microbial cell for researching toxic effects of radioactive waste components
- RE24 G. Dursun, G. Yaprak, Ş. Şahin, Epiphytic lichen (*Xanthoria parietina*) as biomonitors of ^{210}Po in the Cataldag granitoid area, Western Anatolia/Turkey
- RE25 G. Olszewski, A. Boryło, B. Skwarzec, Uranium (^{238}U , ^{234}U , ^{235}U), polonium (^{210}Po) and lead (^{210}Pb) contamination of soil and river water collected in the area of phosphogypsum stockpile in Wiślinka near Gdańsk (Northern Poland)
- RE26 G. Romańczyk, A. Boryło, B. Skwarzec, Levels of ^{210}Po and ^{210}Pb activity in urine samples of inhabitants of Gdańsk (Northern Poland)
- RE27 A. Boryło, G. Romańczyk, B. Skwarzec, Polonium ^{210}Po in sweat and nails samples of Gdańsk agglomeration volunteers
- RE28 M. Ismaili, A. Berisha, B. Korça, K. Jusufi, F. Sopjani, L. Këpuska, Measurements of heavy metals in several river sediments in Kosovo with SAA
- RE29 M. Ismaili, B. Korça, A. Berisha, K. Jusufi, F. Sopjani, L. Këpuska, Determination of heavy metals in numerous river sediments in Kosovo using the ICP-OES technique
- RE30 K. Jusufi, B. Korça, A. Berisha, M. Ismaili, Determination of pollution in the Sitnica river as a result of coal contamination from Kosovo's power plants
- RE31 B. Korça, K. Jusufi, A. Berisha, M. Ismaili, Measurements of different pollutants sedimented in the river Drini i Bardhë in Kosovo
- RE32 B. Korça, K. Jusufi, M. Ismaili, A. Berisha, Determination of heavy metals in ashes released from Kosovo's coal power plants
- RT9 Z. Sagozen, G. Yaprak, O. Candan, Ş. Şahin, Mapping of the geogenic radon potential in Çine region as representative of West Anatolia

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- 49 Igralnica



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- RECEPCIJA
- RECEPTION
- RESTORAN
- RESTAURANT
- BAZEN
- POOL
- TENISKI TEREN
- TENNIS COURT
- MINI CLUB
- WELLFIT AREA
- WELLFIT AREA
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- Market
- Market

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- Ambulance
- Ambulance
- Boutique
- Boutique
- Souvenir shop
- Souvenir shop
- Boutique
- Retail store
- Retail store

- Konferencijska sala
- Conference room
- Super market
- Super market
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- Perionica / Laundry
- Restoran Del Mare
- Restoran Del Mare
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- Touristic agency
- Cocktail bar
- Cocktail bar

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- Restaurant 4*
- All inclusive bar
- All inclusive bar
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- Cafe pizzeria Raspudin
- Restoran 3*+
- Restoran 3*+
- All inclusive 3*+
- All inclusive 3*+

PLAŽA / BEACH

- Shop
- Shop
- Boutique
- Boutique
- Shop
- Shop
- Konferencijska sala
- Conference room
- Perionica / Laundry
- Perionica / Laundry
- Galerija
- Galerija

PREPARED BY Goran Ristić, Jugoslav Karamarković,
and Saša Trenčić

DESIGN AND TECHNICAL EDITING Vladan Nikolić

PRINTED BY Medinvest, Niš

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Niš, June 2015

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