Sunday, June 11

10:00-20:00 Registration

Monday, June 12

08:00-09:30 Registration

10:00-19:00 Registration

09:30 Official Opening Room B

10:00 **Invited Lecture** **Room B**

Alexey Moskalev, Mechanisms of radiation hormesis

10:30 Oral Session: Radiation Measurements Room A

J.-G. Park, S.-H. Jung, J. Moon, Y. Kim, Determination of detection distance and minimum detectable activity for radiation monitoring system in water

J. Kim, Monte Carlo approach to absorbed dose to teeth of patients at total body irradiation treatments for *in-vivo* EPR applications

B. Kozłowska, The transfer of radionuclides from the reservoir rocks to the groundwater on the example of Mt. Etna volcano

Ş. O. Gürdal, S. S. Keskin, M. Tombakoğlu, Dust effect on optically stimulated luminescence dosimetry

V. Pintilie, L.-P. Georgescu, A. Ene, Gross alpha and gross beta activities from natural supplements

A. Yüksel, M. Tombakoğlu, A time-dependent Monte Carlo approach for the determination of chance coincidence effects on the HPGe spectrum at high count rates

10:30 Oral Session: Radiobiology Room B

S. Tapio et al., A dose-dependent perturbation in cardiac energy metabolism is linked to radiation-induced ischemic heart disease in Mayak nuclear workers

V. Monich, A. Bavrina, S. Malinovskaya, K. Sokolova, Low level photodiode therapy of the heart muscle affected by gamma-radiation

S. Lauk-Dubitsky, V. Brumberg, T. Astrelina, A. Gordeev, Yu. Bushmanov, Novel method of preliminary cryopreservation of human cadaveric vascular allografts for safety radiation sterilization

N. Maznyk et al., The investigation of the outcome of cytogenetic effects in oncogynecological cancer patients undergoing external and internal radiotherapy

R. Vazirov, S. Sokovnin, M. Ulitko, Radiomodification of cell cultures of line Hela by cerium oxide nanoparticles to X-ray irradiation

N. Koltovaya, A. Kokoreva, N. Zhychkina, N. Shvaneva, Mutagenic effects induced by accelerated ^{11}B ions with energy of 30 MeV/n and LET 45 and 60 keV/mkm on yeast *Saccharomyces Cerevisiae*

N. Kudryasheva et al., Toxic and activation effects of low-level radiation via bacterial luminescent assay. Description in terms of hormesis and threshold models

A. Bolsunovsky, D. Dementyev, T. Zotina, E. Trofimova, T. Frolova, O. Sinitsyna, Evaluation of radiosensitivity of plant and bacterial bioassays exposed to low doses

A. Suponkina, M. Zhukovsky, A. Krivonogova, K. Moiseeva, Comparison of effects of two pulsed electron accelerators

10:30 Oral Session: Microwave, Laser, RF and UV radiations

Neutron and Heavy Ion Radiation Room C

J. Huran, N. I. Balalykin, A. A. Feshchenko, P. Boháček, J. Arbet, Laser-driven photoelectron source based on P-doped SiC thin film transmission photocathode

M. Abbak, M. Bugu, A. Kibar, H. Falakalioglu, M. A. Bakirli, Compact antenna for LTE tablet computer

T. Ulaş Gürbüz, B. Aslanyürek, A simple and fast method for TM electromagnetic scattering from arbitrary shaped magnetic cylinders

O. Kara, B. Yaniktepe, C. Ozalp, A study of determining a model for the prediction of solar radiation

B. Yaniktepe, O. Kara, C. Ozalp, Estimation of solar radiation model using measured data in specific region

C. Mekik, S. Inyurt, O. Yildirim, Investigation of seasonal ionospheric variations from GNSS and IRI-2012

R. Sagaidak, Durability of targets and foils irradiated by intense heavy ion beams in experiments on synthesis of super-heavy nuclei

T. Bayram, S. Akkoyun, On the nuclear properties of even-even ytterbium isotopes

H. K. Namburi, J. Soltes , J. Krejci, Application of neutron radiography for detection of hydrogen distribution in nuclear fuel claddings at Research Centre Řež

14:00 **Invited Lecture** **Room B**

Radojko Jaćimović, Applicability of k0-method for environmental samples

14:30 Oral Session: Radiation Detectors Room A

A. Kahraman, E. Yilmaz, The determination of gamma irradiation response of Gd_2O_3 MOS capacitors at a low frequency

S. Kaya, E. Yilmaz, Characterizations of Co-60 gamma irradiation of HfO_2 NürFETs

H. J. Kim, G. Rooh, H. Park, S. Kim, New heavy Tl-based elpasolite scintillators for radiation detection

J. González Guerra, Comparison of experimental vs Monte Carlo efficiency calibrations of an HPGe spectrometer

M. A. Carvajal Rodriguez, NFC tag for readout of MOSFET dosimeters

F. Mattea, J. Vedelago, C. Gómez, M. Strumia, M. Valente, Synthesis of silver nanoparticles for X-ray dosimetry

G. Montarou et al., Construction and first tests of a PET-like detector for hadrontherapy beam ballistic control

D. Meskauskaite, E. Gaubas, T. Ceponis, L. Deveikis, J. Pavlov, K. Pukas, Evolution of GaN-based sensor characteristics during proton irradiation

14:30 Oral Session: Radiobiology Room B

A. Kaur, N. Vemalapally, G. Severson, J. Gulani, D. Bolduc, M. Moroni, Countermeasure testing in a pediatric model of hematopoietic acute radiation syndrome (H-ARS) using the Gottingen minipig (*Sus scrofa domestica*)

N. Koshlan, R. Govorun, I. Koshlan, P. Blaha, E. Krasavin, *Macaca mulatta* monkeys' response to head irradiation with protons and accelerated carbon ions

M. Malakyan, A. Dallakyan, S. Bajinyan, Study of radioprotective activity of pyridinecarboxaldehydes and L-tyrosine derived schiff base copper complexes

S. Sreetharan et al., *In-utero* low dose irradiation effects on post-natal growth and blood pressure in C57Bl mice

T. Szatmári et al., MicroRNA cargo of extracellular vesicles is altered by *in vivo* radiation and can be a mediator of radiation-induced bystander effects

H. Hegyesi, N. Sándor, V, Léner, V. Lovas, G. Sáfrány, Local cranial or thorax radiation-induced non-targeted effects in bone-marrow-derived endothelial progenitor cells in ApoE deficient model

V. Singh, Biomarkers for assessing radiation injury and efficacy of radiation countermeasures

A. Grebenyuk, B. Lukashin, N. Aksenova, V. Zatsepin, A. Timoshevsky, Radiation protection with Heparin and Interleukin-1

14:30 Oral Session: Radiochemistry Room C

T. Trifonova, G. Simeonova, S. Ivanova, P. Biyachev, I. Ivanov, A way to increase the ^{18}F-FDG yield on a “Dose on demand”® cyclotron by optimizing the synthesis time

K.B. Karatay, A. Yurt Kilçar, E. Derviş, F. Z. Biber Muftuler, Isolation and radiolabelling of ginger components: 6-gingerol and 6-shogaol

A. Zaitsevskii, A. Oleynichenko, L. Skripnikov, A. Titov, Effective states of heaviest atoms in compounds: local and global approaches

Yu. Demidov, A. Zaitsevskii, Stability of astatine – carbone bounds in compounds with small biomolecules

A. V. Titov et al., Theoretical study of chemical shifts of x-ray emission spectra and effective states of Nb in niobates and Yb in fluorides

J. F. Facetti-Masulli, P. Kump, J. C. Cabello, L. Lescar, Manganese as an origin indicator of *Ilex paraguayensis* SH from Paraguay by EDXRF and INAA

P. Szajerski, A. Bogobowicz, Leaching characteristics of sulfur polymer concrete (SPC) regarding immobilized Cs-137 and Co-60 radionuclides

E. Dervis, A. Yurt Kilcar, E. Ilker Medine, V. Tekin, F. Z. Biber Muftuler, Radioiodination and *in vitro* evaluation of phenolic phytochemical in clove extract

16:00 Refreshments

16:30 Oral Session: Radiation Measurements, Radiation Effects Room A

J. Semkova et al., Space radiation doses and fluxes measured aboard on the ExoMars Trace Gas Orbiter during the transit and in Mars orbit

Md Shamsuzzaman et al., Characterization of radiation measuring instruments in terms of standardized gamma radiation field for radiation protection in Bangladesh

R. Lok, E. Yilmaz, S. Kaya, A. E. Aktag, H. Karacali, Effects of gamma-ray irradiation on characteristics of $Al/ZrSiO_4/P\text{-}Si$ (MOS) capacitors

B. Demirköz et al., Space radiation effects and irradiation tests of semiconductor devices in Turkey

E. Tereschenko et al., Complementary techniques based on the synchrotron and neutron radiation and electron microscopy for cultural artifact studies

16:30 Oral Session: Radiobiology Room B

A. Ristic Fira et al., On formation of DNA double strand breaks after irradiation of human malignant cells with therapeutic proton and carbon ion beam

I. Petrović et al., Radiobiological validation of GEANT4-DNA simulation toolkit through evaluation of DNA DSBs

V. Nugis, M. Kozlova, V. Nikitina, The problem of the relationship of cytogenetic indices in peripheral blood lymphocyte cultures with the risk of diseases, in particular, after the exposure

S. Vasilyev et al., LINE-1 methylation and frequencies of chromosome aberrations and aneuploidy in lymphocytes of plutonium workers

B. Arslan, N. Aras, U. Yas, A. Akar, The effects of 1800 MHz radiofrequency radiation on gene expression levels in rat brain tissue

V. Jurisic, J. Mrdjanovic, Changes in blood cells, micronuclei and 8-hydrosy-2'-deoxyguanosine in hospital workers occupationally exposed to ionizing radiation

A. Cebulska-Wasilewska, M. Krzysiek, G. Krajewska, A. Stepien, Influence of low iodine-131 doses on susceptibility to ionizing radiation and biomarkers of health risk

A. Sen, The forward genetic approach combined with gamma ray mutagenesis to enhance drought tolerance in agricultural plants

16:30 Oral Session: Radiation and Environmental Chemistry Room C

N. Shchepina, V. Avrorin, G. Badun, R. Shchepin, Generation of nucleogenic phenyl cations - new approach for their application in organic chemistry, biochemistry and pharmaceutics

A. Banyasz et al., Base-pairing effect on UV-induced adenine radicals in DNA A-tracts

G.-N. Kim, S.-S. Kim, J.-W. Choi, Real-scale washing-electrokinetic decontamination for uranium removal from soil

I. Pozdnyakov et al., Mechanism of As(III) photooxidation by Fe(III) ions and humic substances in aqueous solutions

A. Ene, M. Frontasyeva, F. Sloata, L. Moraru, S. Pavlov, Major and trace elements in soils around iron and steel industry facilities

18:15-19:45 Poster Sessions Lobby

Radiochemistry:

M. Maslova, L. Gerasimova, N. Ryzhuk, Performance characteristics of a sorbent based on titanium phosphate in Liquid Radioactive Waste treatment systems

S. Kulyukhin, Yu. Nevolin, M. Gorbacheva, A. Gordeev, Conversion of oxygen-containing compounds of Sr, Mo, Zr, and U(VI) in nitrating media

Ly. Podrezova, V. Volk, K. Dvoeglazov, S. Veselov, The development of the liquid chromatography process for the spent nuclear fuel reprocessing technology

P.V. Nazarova, V.I. Volk, K.N. Dvoeglazov, Reagentless catalytic oxidation of organic derivatives of hydrazine and Pu(III) with nitric acid

E. Pavlyukevich, K. Dvoeglazov, A. Shadrin, Dissolution of uranium and noble metals intermetallic compounds in nitric acid solutions

K. Dvoeglazov, O. Zavalina, E. Pavlyukevich, P. Nazarova, Kinetics of the interaction of Pu(VI) and Np(VI) with carbohydrazide in nitric acid solutions

V. Vidanov et al., Hot test of separation technique of americium and curium

J. Strišovská, D. Galanda, D. Tatárová, Separation of samarium in nitric acid medium using extraction chromatography

S. Inan, B. Cetinkaya, B. Ozkan, Column studies of strontium adsorption by zirconium-antimony oxide/PAN composite

M. Dymecka, K. Rzemek, T. Pliszczyński, J. Ośko, Determination of ^{90}Sr in environmental samples – comparison of two methods

M. Mihon, C.-S. Tuta, C. Manea, D. Niculae, Improved radioanalytical methods for quality control of ^{68}Ga radiolabeled peptides

V. M. Shakhova et al., Calculation of chemical shift of X-ray emission Kα lines for ytterbium fluorides

Radiation Chemistry:

S. Matveeva, E. Glebov, I. Pozdnyakov, A. Melnikov, Primary photochemical processes for hexachloroplatinate(IV) and hexacloroosmate(IV)

E. Belova, I. Skvortsov, A. Rodin, Study of radiation-thermal extractant stability based on diamide 2,6-pyridinedicarboxylic acid in FS-13

M. Kadyko, I. Skvortsov, E. Belova, Products of the extraction system destruction based on diluent FS-13 in the conditions of radiation, chemical and thermal loads

A. Meléndez-López, A. Paredes-Arteaga, A. Heredia, S. Ramos-Bernal, A. Negron-Mendoza, The stability of guanine adsorbed in a clay mineral under a high radiation field

L. Ramírez, A. Heredia, S. Ramos-Bernal, A. Negrón-Mendoza, M. Colín-García, Radiolysis of alpha keto-glutaric acid in aqueous solution

R. Michalski, A. Sikora, M. Hardy, J. Adamus, A. Marcinek, In search for better probes for the detection of the superoxide radical anion in biological systems – A pulse radiolytic study of one-electron oxidation of hydroethidine derivatives

A. Sikora et al., The pulse radiolytic study of one-electron oxidation of hydroethidine, the probe for the detection of the superoxide radical anion

Environmental Chemistry:

L. Gerasimova, A. Nikolaev, M. Maslova, Radioecological assessment of the titanite sulphuric acid technology

N. Alov, P. Sharanov, Total reflection X-ray fluorescence analysis of copper-zinc ores using nonaqueous suspensions

A. Negrea, V. F. Minzatu, P. Negrea, M. Ciopec, O. Grad, M. Vajda, Removing cesium and strontium from hazardous wastewater by electrocoagulation

F. Sloata, A. Ene, Mercury in highly contaminated soils from a derelict chlor-alkali plant

K. Jusufi, B. Korça, J. Halili, A. Berisha, V. Citaku, X. Kuka, Wood used as a bio-indicator in the monitoring of atmospheric pollution

K. Jusufi, M. Vasjari, B. Korça, Determination of heavy metal pollution in food: Cabbage samples

V. Mehmeti, F. I. Podvorica, The effect of the concentration and the chain length of the n-alkanoic acids on the corrosion inhibition of brass in the aqueous acid medium

V. Mehmeti, F. Podvorica, K. Kalcher, A. Berisha, The formation kinetics and anticorrosive efficacy of the n-phosphonic acid SAMs onto the mild steel surface

B. Adnadjevic, D. Rankovic, J. Jovanovic, Hydrodynamic cavitation-assisted formation of OH-radicals in aqueous solution

N. Avramović, I. Karadžić, Cr(VI) removal capacity of rhamnolipids produced by *Pseudomonas aeruginosa* NCAIM(P), B001380

N. Avramović, I. Karadžić, Application of spectroscopic methods in studies of rhamnolipid-Cr(VI) complex formation and influence of Cr(VI) on rhamnolipid congener distribution produced by *Pseudomonas aeruginosa* NCAIM(P), B001380

A. Mihailović et al., A study of lead contamination in the urban soil of Novi Sad

A. Mihailović et al., Concentration of As, Co, Cr and Ni in urban soil in Novi Sad, Serbia

Environmental Physics:

E. Lukaj, F. Vila, F. Mandia, Impact of atmospheric ions on aerosol size distribution

M. Čargonja, G. Žauhar, I. Orlić, Analysis of aerosols in indoor working environment by X-Ray Fluorescence technique (XRF)

Neutron and Heavy Ion Radiation:

G. Ryazantsev, M. Khaskov, The neutron matter as “the beginning” and “the end” of the D.I. Mendeleev periodic system of chemical elements

A. Gusev, I. Martin, Outdoor near ground thermal neutrons of the terrestrial origin

M. A. Menezes et al., Neutron activation technique: a reliable tool to determine the mineral composition in agro industrial products

P.-M. Potlog, Integrated online system for simulation and analysis of high energy neutron interactions

T. Chuvilskaya, Nuclear reaction ^{41}K(alpha,n)^{44mg}Sc and isomeric cross section ratios

K. Krezhov, Oxygen-deficient perovskites for improved performance of electrodes in intermediate-temperature solid-oxide fuel cells: Structural details

A. V. Glushkov, V. V. Buyadzhi, O. Yu. Khetselius, A. A. Svinarenko, V. B. Ternovsky, Resonance phenomena in heavy ion collisions and optimal laser ionization schemes for separating long-lived actinides and fission products in nuclear fuel

21:00-24:00 Conference Cocktail

Tuesday, June 13

08:00-19:00 Registration

08:15-09:45 Poster Sessions Lobby

Radiation Measurements:

M. Andjelkovic, M. Nenadovic, V. Petrovic, M. Krstic, R. Kraemer, Evaluation of pulse stretcher for detection of very short single event transients

M. Natić, D. Dabić Zagorac, D. Filipović, Carbon stable isotope analysis of archaeological plant remains

Y. Karakirova, N. Yordanov, The development of a new type of radiation sensitive material on the basis of sucrose for solid state/EPR dosimetry

M. Sahagia, Study of influence of radionuclidic impurities in radionuclide metrology

N. Todorovic, J. Nikolov, I. Stojkovic, B. Tenjovic, Direct method for gross alpha/beta determination in water samples by LSC

F. Bautista, W. Rodríguez, E. Fajardo, J. Gomez Muñoz, D. Flechas, F. Cristancho, Comparison of measurement of NORM by gamma-ray spectroscopy using detectors of Ge, CsI, NaI and BGO

L. A. P. Ochoa Parra, W. Rodriguez, E. Fajardo, F. Cristancho, F. Bautista, The extended source efficiency correction and optimization of the sample position to measure the concentrations using a HPGe detector.

J. Nikolov et al., Biogenic component determination in liquid fuels – comparison of different LSC methods

R. Shoshina, G. Lavrentyeva, B. Synzynys, A. Oudalova, The calculation of the exposure dose of radionuclide Sr-90 for small biological objects

S. Samardžić, M. Milošević, I. Maksimović, U. Kozmidis Luburić, ^{90}Sr and ^{137}Cs activity determination in water from spent fuel storage basins using Monte Carlo simulation

N. Mirzajani, S. de Souza Lalic, F. d'Errico, Monte Carlo simulations of thin films loaded with OSL detectors

N. Antović, S. Andrukhovich, N. Svrkota, Background double coincidences at a multidetector gamma spectrometer

N. Svrkota, N. Antović, J. Mijušković, The registration of Cs-134 by gamma detector pairs at an angle of 90°

T. Dogan, M. Yüksel, Z. G. Portakal, S. Balcı Yegen, S. Akça, M. Topaksu, Calculation of activation energy using VHR method for low temperature peak of gypsum mineral

Sz. Kelemen, Cs.-R. Begy, D. Vasilache, The examination of the changes in the Sacalin Lagoon's (Romania) sedimentation rate with the Lead-210 dating method

A. Jancar, Z. Kopecky, F. Mravec, Z. Matej, Neutron digital spectrometer

N. Kolobylina, Electron microscopy studies of cultural heritage objects

Radiation Detectors:

M. S. Martinez-Garcia et al., MOSFET radiation sensors for the QB50-URSA MAIOR CubeSat

A. J. Palma López et al., Response of different electrical parameters of irradiated pMOSFET

Y. Tamakuma et al., A portable radioactive plume monitor based on a silicon photodiode

H. Park, K. Kang, H. Jeon, S. Lee, A silicon photo-strip detector coupled with a CsI(Tl) crystal

W. Gieszczyk, P. Bilski, Response of differently doped lithium magnesium phosphate crystals to neutrons, protons and alpha particles

Y. Zhydachevskyy et al., Pulsed OSL readout of detectors based on YAlO3:Mn crystals

N. Bobina, A. I. Nepomnyashchikh, V. Ph. Ivashechkin, DTG-4 single-crystal thermoluminescent detectors: 30 years of use

S. Balcı Yegen et al., Thermoluminescence (TL) dose response characteristics and reusability properties of natural muscovite mineral

A. Saymbetov et al., Semiconductor detector based on Al-αSi-i-Au heterostructures for nuclear radiation spectrometry

F. Mattea, D. Chacón, M. Strumia, M. Valente, Effect of inorganic salts on polymer gel dosimetry based on acrylamide

Radiation Effects:

M. Andjelkovic, A. Ilic, Z. Stamenkovic, M. Krstic, R. Kraemer, An overview of the current models for the circuit-level simulations of single event transients

G. Davydov, P. Skorobogatov, Behavior of the modern integrated circuits after the latch-up parrying

A. Antonova, P. Skorobogatov, Modeling of the bipolar structures under pulse ionizing radiations

S. Kay et al., Influence of irradiation on interface state and series resistance characteristics of Sm_2O_3 MOS capacitors

E. Vlasenkov, P. Chernikov, T. Kombaev, I. Zefirov, N. Khamidullina, Radiation environment on board of the descent module and rover of "ExoMars 2020" spacecraft

P. H. Kang, J. P. Jeo, Y. C. Nho, J. M. Yun, D. H. Koo, Electron beam irradiation-induced structural changes of CNT fiber

Medical Imaging:

T. Manici, E. Ebru Altunsoy, H. O. Tekin, C. Ekmekci, U. Kara, Assessment of x-ray spectrum calculation and comparison for different target-filter combinations in mammography by using MCNPX

D. Lee, K. Park, G. Cho, Detector shift method to further increase spatial resolution at a photon-counting detector under charge sharing

P. Liaparinos, N. Kalyvas, E. Katsiotis, I. Kandarakis, Monte Carlo study of particle packing effects of powder phosphors for medical imaging purposes

D. Glotsos, S. Kostopoulos, P. Ravazoula, C. Stefanoudakis, P. Bavela, D. Cavouras, Creation of synthetic microscopic images for evaluation of Computer Aided Diagnostic Histopathology systems

Microwave, Laser, RF and UV radiations:

P. Pál Necz, I. Gresits, N. Nagy, G. Thuróczy, Indoor RF exposure assessment in urban area conducted by personal RF exposimeter

L. Dimitrievici, D.-E. Constantin, A. Rosu, L. Moraru, A perspective view over the worldwide O_3 and NO_2 evolution during 2002-2016 using UV-Vis observations from space

J. Huran, A. Kleinová, V. Sasinková, A. P. Kobzev, J. Arbet, Electromagnetic energy absorption potential of PECVD silicon carbide films in the 0.2-1.8 THz frequency range

J. Jovanovic, T. Djajic, B. Adnadjevic, Nicotinamide release from PAM xerogel into water solution under isothermal microwave conditions: Kinetic study

V. Barna, Highly efficient laser action from free-shape dye-doped soft matter systems

M. Stoynovska, R. Toncheva, Particularity of thermal-radiation factor in the work environment and eye health prevention among Bulgarian metallurgy workers

Mini Symposia Room B

Radiation Research and Protection in Europe – HORIZON 2020

09:00 Soile Tapio on behalf of PROCARDIO consortium, Understanding the response of the heart to low dose radiation

09:30 Rafi Benotmane on behalf of CEREBRAD consortium, Cognitive and cerebrovascular effects of low dose radiation

10:00 Nataša Anastasov on behalf of the DARK.RISK consortium, A new era of molecular epidemiology requires biological markers: The dark matter of the genome emerges into the light

10:30 Michael Rosemann on behalf of RISK IR consortium, The radiation biology of the stem cell

11:00 Michael Atkinson on behalf of SOPRANO consortium, A coordinated systems biology approach to low dose radiation effects

10:00 Oral Session: Radiation Protection Room A

H. Baysson, S. Dreuil, F. De Zordo-Banliat, M.O. Bernier, Risk of cancer associated with cardiac catheterization procedures: The French “Coccinelle” study

F. Sudbrock, K. Schomäcker, T. Fischer, A. Drzezga, Radiation exposure from patients after radioiodine therapy for thyroid cancer

M. Filimonova, Lj. Shevchenko, V. Makarchuk, E. Chesnakova, A. Filimonov, S. Ulyanenko, The development of new approaches to the prevention of complications of radiation therapy in oncology

U. Kara, Y. Kara, H. O. Tekin, P. Karabacak, F. Eroglu, Mobile X-ray unit ionizing radiation dose measurement and medical staff protection in intensive care unit

J. Kubinyi, J. Sabol, J. Hudzietzová, Radiation risk communication to the patients

Z. Mirkov, Quality control in dental radiology in Serbia: preliminary results

L. Stadnyk, I. Yavon, I. Smirnova, E. Kurguzov, Results of centralized personal dose monitoring of medical staff in Ukraine

L. Stadnyk, O. Nosyk, O. Shalopa, Study of patient doses in conventional diagnostic radiology

10:00 Oral Session: Medical Imaging Room C

S. Baranovskii, O. Bubon, K. Jandieri, S. Kasap, A. Reznik, Columnar recombination in x-ray detectors based on a-Se

L. Moraru, L. Dimitrievici, A. Ene, S. Moldovanu, Magnetic field gradients and their effects on the diffusion tensor derivate measures

T. Manici, E. Ebru Altunsoy, H. O. Tekin, C. Ekmekci, U. Kara, A prediction study on absorbed dose amounts in different kind of breast model by using MCNPX and artificial neural network (ANNS) modeling

H. O. Tekin, U. Kara, T. Manici, E. Ebru Altunsoy, Assignation of basic principles for mammographic investigations and breast dosimetry - use of MCNPX Monte Carlo code

E. Ebru Altunsoy, T. Manici, U. Kara, H. O. Tekin, C. Ekmekci, A study on the effect of the glandular/adipose tissue rate on the magnitude of the backscattered dose in mammography: A Monte Carlo study

N. Dukov et al., Development and implementation of an algorithm for segmentation of irregular lesions in Digital Breast Tomosynthesis and CT images

D. Ustundag, Reconstruction of MaxEnt images from PET camera

Special talk **Room B**

13:00 Sofia Guedes Vaz, NUCLEU2020 – A network of Horizon 2020 National Contact Points (NCP)

Mini Symposia **Room B**

Administrative organization of EU Project Proposals

13:30 Sisko Salomaa, A European network of excellence in low dose risk

14:00 Sonja Pavlovic, European research funding: A Serbian perspective

14:30 Geza Safrany, A Hungarian perspective on EURATOM research partnerships

15:00 Michael Atkinson, Sisko Salomaa, The CONCERT European Joint Project, joining and partnering

15:30 Michael Atkinson, Sisko Salomaa, Geza Safrany, So you want to write, coordinate, participate in a EURATOM project proposal

14:00 Oral Session: Radiation Protection Room A

Y. Lee, An easy method for the monitoring of radioactive contamination near radiation facilities

C. Tuca, R. Deju, A. Stochioiu, The assessment of the radioactive inventory for the radioactive solid wastes resulting from reactor decommissioning

I. Iorga, R. Deju, Role played by the operational radioprotection for the cutting activities of the aluminum vessels for the VVR-S Nuclear Research Reactor from Bucharest - Magurele, Romania

A. L. Casimiro, J. M. Sampaio, P. Gonçalves, Assessment of radiation exposure in manned missions to Mars for three mission profiles

C. Kurnaz, B. Korunur Engiz, A. Turgut, Monitoring of long term RF radiation from cellular base stations

C. Kurnaz, D. Yıldız, S. Karagol, Determining the effect of establishment of 4G systems on electromagnetic radiation levels in a pilot district

V. Finta, Á. Kiss, Measurements of public exposure to radiofrequency electromagnetic fields in Hungary

16:00 Refreshments

16:30 Oral Session: Radiation Protection Room A

S. Musicki, D. Vasovic, S. Markovic, Radiation hazards and radiation protection practices observed from different perspectives

J. Sabol, B. Šesták, Assessing the real threat and risk of a terrorist use of radiological weapons

J. Sabol, B. Šesták, Quantification of the risk-reflecting stochastic and deterministic radiation effects

V. Finta, S. Rácz, Radiation protection of firefighters in radiological emergencies

P. Švrčula, O. Srba, M. Zimina, Test of biological shielding of hot cells with high active source ^{60}Co (300 TBq)

M. E. Erturk, C. Kocar, M. Tombakoğlu, S. Gürdallı, A pencil beam kernel model for flattening filter free X-ray beams

16:30 Oral Session: Radon and Thoron Room C

P. Vukotic et al., Maps of indoor radon in Montenegro

L. Dobrzyński, K. Fornalski, J. Reszczyńska, Collective data analysis of correlation between lung cancer incidences and residential radon concentration

A. Mladenov, K. Krezhov, Radon concentration measurements at the IRT-Sofia research reactor site

P. Miklyaev et al., Preliminary results of the unified project for radon monitoring in different regions of Russia

J. Vaupotič, M. Bezek, The effect of air filtration on the fraction of unattached radon products

E. Ghanim, A. Azeem Hussein, H. El Samman, H. Donya, M. Shehata, Spectrometric properties of makrofol DE1-1 nuclear track detectors and their use in radon concentration measurement and dose evaluation in some dwellings in Egypt

18:15-19:45 Poster Sessions Lobby

Radiation Protection:

I. Cheshyk, D. Suchareva, A. Nikitin, Impact of microbiological preparations on radioactive cesium excretion rate under condition of its chronic ingestion

A. Cheshyk, A. Rozhko, E. Nadyrov, I. Veyalkin, Medical effects of the Chernobyl disaster in the Republic of Belarus: 30 years after

O. Nosyk, L. Stadnyk, Estimation of effective doses in computed tomography by thermoluminescent dosimetry

J. Merešová, G. Wallová, Z. Kulichová, Evaluation of long-term data of gross alpha and beta activities and volume activity of radon in Slovakia

B. Mitrović, J. Ajtić, B. Vranješ, D. Sarvan, V. Andrić, M. Stojanović, Natural radionuclides in bottled mineral water at the Serbian market

E. Hernandez, R. Contreras, The creation of the National Committee of medical physics in Guatemala, Central America

M. Vićentijević, D. Vuković, V. Vuković, S. Vuković, B. Mitrović, D. Živanov, RH control of ^{137}Cs in animal food and animal products

S. Dineva, A. Pavlova, Factors affecting the radiation exposure of patients

E. Lee, C. Lee, G. Cho, Preliminary shielding analysis for the BNCT facility

N. Ivanova, S. Ivanova, Consequences of the radiation accident in 2012 in "Polymers" AD Denya, Varna region

S. Ivanova et al., On site “dose on demand”® cyclotron dose rate measurements and radiation exposure of personnel

L. Coreţchi, A. Cojocari, Health consequences in the descendant population of the participants in the diminution of the Chernobyl disaster

A. Cojocari, Evaluating the health of category A specialists, involved in radiological practices

E. Ionescu, D. Gurau, R. Deju, A. Zorliu, The management of materials that arise from decommissioning the vessels of the VVR-S reactor

U. Kara, Y. Kara, H. O. Tekin, P. Karabacak, F. Eroglu, Radiation exposure of patients in intensive care unit from portable X-ray unit

N. Tkatchenko, EPR dosimetry on human fingernails: study of the variability of the endogenous signal and dose response subjected to gamma rays and sunlight exposure

N. A. Niba, M. Mahmutovic, Determination of layer-thickness using X-ray fluorescence analysis

Y. N. Kim, S. K. Kim, A preliminary study on photoneutron shielding calculation in a medical accelerator room using an empirical formula for dose estimation

T. Adamíková, O. Srba, P. Švrčula, Construction of hot cells

N. Gan, K. Cen, N. Wang, Evaluation of the gamma exposure dose rate of the public in Xiangshan Uranium Deposit of China

E. Ebru Altunsoy, T. Manici, U. Kara, H. O. Tekin, A study on shielding of Tc-99m in nuclear medicine by using the Monte Carlo method: The effect of the boron-carbide as a material for radiation shielding

V. N. Gulbin, A. V. Martsenyuk, N. S. Kolpakov, Nanostructured aluminum-matrix composites

M. Prusińska, M. Dymecka, K. Rzemek, T. Pliszczyński, Determination of polonium (^{210}Po) in urine samples

Ts. Shalamanova, I. Topalova, V. Zaryabova, M. Israel, P. Ivanova, Evaluation of EMF field levels in urban areas

V. Zaryabova, M. Israel, Ts. Shalamanova, H. Petkova, Electronic register of sources of electromagnetic radiation in residential areas

F. Mihai, A. Stochioiu, C. Stochioiu, Study on the personal passive dosimeters regarding the measurement accuracy of the limit doses recorded in different radiation exposure conditions

A. Stochioiu, Assessment of derived emission limits for radioactive effluents from Horia-Hulubei national institute for R&D in physics and nuclear engineering

F. Ciupagea, C. Sima, D. P. Munteanu, A. I. Demetriu Coroianu, G. Rosca Fartat, A case study on the use of an x-ray inspection system for a safe screening of passenger vehicles and vans with a minimal effect on the traffic flow

C. Popescu, G. Rosca-Fartat, N. Pana, D. Fluerasu, The remote control robot for the horizontal fuel channels decommissioning from the nuclear reactor

S. Boneva, N. Mikhajlov, M. Manolova, Dry storage of spent nuclear fuel – Analysis of fuel properties during long time storage

M. Mitev, M. Manolova, Preservation and transition of specific VVER knowledge for non-nuclear professionals through CORONA academy

Radon and Thoron:

L. Coreţchi, I. Plăvan, Monitoring and control of radon in waters of Moldova in order to prevent public exposure to ionizing radiation

I. Plăvan, Health risk assessment resulting from exposure to ionizing radiation

X. Shilova, N. Ryzhakova, A. Udalov, H. T. Tuan, Analytical review: Assessment methods for radon risk

A. A. Salem Awhida et al., Merits and demerits of different methods for radon exhalation measurements

A. Gusev, I. Martin, Capture of atmospheric radionuclides by raindrops

N. Wang, X. Meng, Radon potential mapping in the southern cities of China

T. Li, N. Wang, Preliminary investigation of radon concentration in surface and drinking water in some regions of Beijing

T. A. Przylibski, M. Kaczorowski, D. Kasza, L. Fijałkowska-Lichwa, R. Wronowski, Testing the possibility of ^{222}Rn application for recognizing, characterizing, and predicting tectonic events observed by gauges in an underground geodynamic laboratory of the Space Research Centre in Książ (the Sudetes, SW Poland)

F. P. Carvalho, J. M. Oliveira, M. Malta, Radon in a uranium bearing region of Portugal

C. Taşköprü, M. İçhedef, M. M. Saç, H. Sözbilir, Preliminary results of soil gas radon levels around Manisa fault

A. Ion, Geological control of radon potential in Olteț river basin, Romania

P. Miklyaev, T. Petrova, V. Makeev, The strong abnormal radon exhalation rate in Moscow

A. V. Glushkov, Yu. A. Kruglyak, O. Yu. Khetselius, V. V. Buyadzhi, E. V. Ternovsky, New non-linear approach to analysis, modelling and prediction of chaotic variability of atmospheric radioactive radon ^{222}Rn concentration in atmosphere environment

21:00-24:00 Conference Cocktail

Wednesday, June 14

09:00-19:00 Conference Excursion

21:00-24:00 Conference Cocktail

Thursday, June 15

08:00-19:00 Registration

08:15-09:45 Poster Sessions Lobby

Radiobiology:

I. Nikitsina, A. Gritsuk, Respiration of rats' thymus tissues under the exposure to ionizing radiation

A. Brech, G. Kubinyi, Zs. Németh, E. Laczkovich-Szaladják, J. Bakos , G. Thuróczy, Genotoxic effects of intermediate frequency magnetic field on dog and human blood leukocytes in vitro

Zs. Németh et al., Genotoxic effects of ultraviolet (UV) radiation on human 3D skin model in vitro

M. Sokolov, R. Maass-Moreno, R. Neumann, Stress-responsive gene expression alterations in human embryonic stem cells after ultra low dose diagnostic CT scan procedures

S. Koryakin et al., The photon capture therapy model for *in vivo* and *in vitro* studies using Au nanocomposites with the hyaluronic acid based compounds

A. Cebulska-Wasilewska, M. Krzysiek, B. Glazar, Z. Dobrowolski, Studies on vulnerability of lymphocytes to ionizing radiation in prostate cancer and BPH patients

E. Makarenko, V. Hronina, A. Oudalova, Morphometric indices in the second generation of Scots pine trees from the Chernobyl exclusion zone

I. Koshlan et al., HPRT mutant analysis in V79 cells induced by ionizing radiation of various LET

E. Kazakova, P. Volkova, S. Geras'kin, Oxidative stress and changes in the genetic structure of chronically irradiated Scots pine populations

M. Ohgami, N. Takai, Y. Aikawa, S. Maeda, S. Nakamura, Y. Ohba, Effect of N-methyl-D-aspartate receptor antagonist on radiation-induced gut injuries in mice

S. Bitarishvili, P. Volkova, S. Geras'kin, Effects of pre-sowing seed irradiation on the endogenous phytohormones content in barley seedlings

E. Beketov, E. Isaeva, S. Koryakin, S. Ulyanenko, A. Solovev, A. Lychagin, The study of biological effectiveness of U-70 accelerator carbon ions using melanoma B-16 clonogenic assay

A. Shemyakov et al., The study of biological effects induced by accelerated ^{12}C ions with an energy of 450 MeV/n on mice *in vivo*

F. Raeisi, E. Raeisi, D. Shahbazi-Gahrouei, E. Heidarian, M. Amiri, F. Amini, Y. Lemoigne, L. M. Mir, The response of various cancer cells to X-ray radiation using MTT assay

N. Takai, M. Ohgami, S. Maeda, S. Nakamura, Y. Ohba, K. Ando, The focal brain proton beam irradiation insult in rats - induced memory disturbance related change in acetylcholine receptor binding

I. Pavičić, A. M. Marjanović Čermak, Cytotoxic and intracellular biomarkers of response to non-ionizing radiation evaluated in neuronal cells

I. V. Kozhukharova, A. P. Domnina, I. I. Suvorova, N. N. Nikolsky, The effects of X-ray irradiation on the inherent stemness of human embryonic stem cells and human mesenchymal stem cells

K. Wakimura, M. Kato, Motility of *Escherichia coli* after irradiation with gamma-rays

O. Nesterenko, M. Danchenko, K. Klubicova, M. Mazur, N. Rashydov, M. Hajduch, Crosstalk of osmotic and ionizing radiation stress: Insights from comparative proteomics of pea seedlings

O. Nesterenko, V. Majercikova, L. Nesterenko, N. Rashydov, M. Hajduch, Analysis of LTR-retrotransposon mobility of pea seedlings with coacting stress factors

E. Evstratova, A. Khraychkova, O. Pereklad, M. Podobed, The relative biological effectiveness of alpha particles in the manifestation of heritable late damages

E. Chesnakova et al., The possibility of using NOS inhibitors as radioprotective agents and in the therapy of combined radiation injuries

E. Pimenov, A. Pavlov, N. Vasilyeva, A. Morozova, L. Voronin, R. Mikailova, Radiobiological effects of radiation processing of dried herbs and flavourings by means of different ionizing radiation types

V. Druzhinin, A. Fučić, A. Larionov, V. Volobaev, A. Timofeeva, The study of the rogue human lymphocyte phenomenon from the positions of exposure to the radiation with high linear energy transfer

Cancer Research:

F. Raeisi, E. Raeisi, D. Shahbazi-Gahrouei, E. Heidarian, Y. Lemoigne , L. M. Mir, The anticancer effect of pineapple extract on the colony formation of breast cancer cell, 4T1

I. Gresits, I. Szabó, F. Simon, G. Thuróczy, Localised hyperthermia with magnetic nanoparticles: temperature measurements and development of laboratory devices

T. Korneeva et al., Antitumor efficacy of combined use of NOS-inhibitor and electron-affinic compound

A. Samsonova et al., Antitumor activity of NOS inhibitor is due to antiangiogenic mechanism of action

O. Mihaljevic, S. Zivancevic-Simonovic, I. Majstorovic, O. Milosevic-Djordjevic, I. Kostic, L. Mijatovic-Teodorovic, Production of IL-12p70 correlates with radioiodine-induced micronuclei frequency in patients with papillary thyroid carcinoma

J. Marjanović Vićentić et al., Combined effect of radiation and miR-21 downregulation on glioblastoma cell fate changes

Radiation Effects:

N. Pomortseva, D. Gudkov, A. Kaglyan, A. Nazarov, Changes in haematological parameters of fishes in the gradient of radioactive contamination of water bodies within the Chernobyl exclusion zone

T. Grinchuk, Z. Kovaleva, M. Shilina, N. Nikolsky, Sublethal dose of X-ray irradiation induces genetic instability in endometrial mesenchymal stem cells at the karyotypic level

M. Shilina, Z. Kovaleva, N. Nikolsky, T. Grinchuk, Comparison of X-ray and heat shock effects on genetic stability of stem cells in culture

10:00 **Invited Lecture** **Room B**

Pablo Antonio Giuseppe Cirrone, Hadrontherapy: from the conventional to the laser-driven approach

10:30 Oral Session: Radioecology Room A

S. Geras'kin, Effects of ionizing radiation on populations and ecosystems

Y. Kutlakhmedov, Modern problems of radioecological reliability and radiocapacity of different ecosystems

G. Pretzsch, A. Artmann, V. Krasnov, Radioecological situation at the Chernobyl NPP cooling pond

L. Chunikhin, I. Cheshick, A. Chekhovsky, D. Drozdow, The situation with radiation in the Republic of Belarus due to the Chernobyl contamination and radon volume activity

D. Ganzha, C. Ganzha, A. Nazarov, B. Sploshnoi, The evaluation of observation uncertainty in ecosystems during the regional contamination monitoring of the Chernobyl exclusion zone

A. Zlobina, The location of natural radioactive formations and some medico-biological problems in these areas

J. Madykova, A comparative analysis of cancer rates due to environmental radioactive contamination within the identified zones in the town of Mailu-Suu in the period from 2006-2015

A. A. Chandrasekaran, Spatial distribution of natural gamma radiation and associated health hazards in Rameshwaram Island, Tamilnadu, India with statistical approach

10:30 Oral Session: Cancer Research, Radiation Effects Room B

K. Schomäcker, T. Fischer, F. Sudbrock, A. Drzezga, Radioiodinated Diethylstilbestrol (DES) for therapy of breast cancer: chemical preparation and studies of cell survival after treatment

T. Paunesku, Use of radioactive TheraSpheres on research models of hepatocellular carcinoma

G. Woloschak, Use of irradiated animal data to evaluate effects of protracted radiation exposures

F. Novelli, M. Vadrucci, E. Benvenuto, C. Pioli, Effects of *in vivo* proton irradiation on mouse spleen cells

S. Sorokina, S. Zaichkina, O. Rozanova, H. Smirnova, A. Malkov, V. Pikalov, The effect of accelerated carbon ions with an energy of 450 MeV/n on the cognitive functions in mice *in vivo*

S. Sokovnin, R. Vazirov, M. Balezin, Surface irradiation of chicken eggs by nanosecond electron beam

S. Litvinov, N. Rashydov, Transgenerational transmission of radiation-induced activation of *Arabidopsis thaliana* L. *RAD51* and *Rad1* genes

D. Gudkov et al., Aquatic biota of the Chernobyl exclusion zone: long-term radiation impact on different levels of biological organization

10:30 Oral Session: Radiation Physics, Radiotherapy Room C

S. Di Maria, A. Belchior, Yu. Romanets, P. Vaz, The energy deposition distribution at the micro and nano-scale for molecular targeted radiotherapy: Comparison between ^{125}I, ^{99m}Tc and ^{64}Cu

M. Sawicki, J. Łyczek, Ł. Kowalik, D. Kazalski, Comparison of 3D and 2D methods with the use of three-dimensional images in HDR endobronchial brachytherapy

S. V. Akulinichev, V. I. Derzhiev, S. A. Chaushansky, I. A. Yakovlev, Ytterbium sources for brachytherapy

R. Augusto et al., On the feasibility of using radioactive ion beams for hadrontherapy

R. Leanza et al., Innovative approaches in the absolute and relative dosimetry for the ELIMED beam line

G. Petringa et al., The proton-Boron fusion therapy: a new clinical treatment and a powerful online imaging technique

14:00 **Invited Lecture** **Room B**

Nese Ilgin (Karabacak), Clinical applications of PET/MR and technical considerations

14:30 Oral Session: Radioecology Room A

D. Vasovic, S. Musicki, J. Malenovic Nikolic, Importance of radionuclide monitoring with particular regard to environmental impact assessment

M. Konstantinova, B. Lukšienė, N. Tarasiuk, E. Maceika, Long-term comparative analysis of ^{137}Cs migration velocity

R.-Cs. Begy, D. Vasilache, Sz. Kelemen, Practical aspects of Lead-210 dating method from sample preparation to age depth model

J. Paatero, B. Veleva, J. Hatakka, E. Hristova, The measurements of lead-210 activity concentration in the ground-level air in Finland and Bulgaria

S. Gordeev, S. Konstantinov, The experience of radioactive aerosol monitoring in the lower atmosphere of Moscow

M. Zhukovsky, A. Ekidin, A. Vasilyev, M. Vasyanovich, Radioactive atmospheric emissions of the European and Russian nuclear plants

M. Vasyanovich, A. Ekidin, M. Zhukovsky, Experimental assessment of atmospheric emissions of Russian NPP with different kinds of reactors

D. Turchenko, S. Lukashenko, O. Lyahova, A. Kruglykhin, Character of contamination of air basin of Semipalatinsk test site (STS) and adjacent territories

14:30 Oral Session: Nuclear Medicine, Radiology Room B

Y. Gholami, R. Maschmeyer, D. Bailey, L. Josephson, G. El Fakhri, Z. Kuncic, A novel radio-nanomedicine platform for PET-MRI

J. Popić Ramač, Safety of radiographic imaging in pregnancy

Yu. Stepanova, Radiology of rare cystic formations of the pancreas

Yu. Stepanova, I. Timina, O. Chekhoyeva, M. Morozova, A. Teplov, D. Kalinin, Diagnostic efficacy of contrast-enhanced ultrasound for renal cell carcinoma

D. Obad-Kovačević, J. Popić-Ramač, I. Kardum-Skelin, V. Vidjak, Correlation between sonographic features and cytology findings in thyroid gland nodules

E. Petrova, Relationship between impairments of $FEF_{50\%}$ and lung emphysema among workers exposed to mineral dusts

I. V. Di Molfetta, S. Del Monte, A. Guerrisi, A. Forbidussi, B. Lippi, Low radiation and contrast medium dose in 64 multidetector CT angiography of thoracic aorta

A. Vehabović-Delić, H. Schoellnast, Volume Computed Tomography Perfusion (VCTP) imaging of metastasizing RCC: Comparison between changes in perfusion and changes in size in the early follow up after targeted therapy – Preliminary results

N. A. Pasare (Tudor), R. Mutihac, Statistical differentiation of stages in Parkinson's disease by Magnetic Resonance Imaging

14:30 Oral Session: Radiation Physics Room C

Keynote talk: I. Bikit, D. Mrdja, K. Bikit, Advances in cosmic muon imaging

D. Mrdja, K. Bikit, S. Forkapic, I. Bikit, Backscattering of terrestrial-origin gamma radiation in atmosphere at sea level

H. Nettelbeck et al., Nanodosimetry paving the way for a new concept of radiation quality

A. Selva, V. Conte, P. Colautti, Towards a portable nanodosimeter

S. Akkoyun, T. Bayram, Neural network estimations for stopping power, radiation yield, CSDA range and density effect parameter for electrons

R. Mehra, S. Kaur, Assessment of physico-chemical properties and radiological dose due to uranium in water samples belonging to Solan and Shimla districts of Himachal Pradesh, India

16:00 Refreshments

16:30 Oral Session: Radioecology Room A

Y. Kutlakhmedov, Problems of environmental standardization of radiation factor for biota ecosystems

H. Renard et al., Tritium transfer modeling in a grassland ecosystem in response to 3H releases: A new methodology based on *in situ* and lab results

A. Nikitin, O. Shurankova, The impact of heat stress on the plants' root uptake of ^{137}Cs

A. Nikitin, E. Tankevich, R. Spirov, O. Shurankova, Impact of mycorrhizal fungi on ^{137}Cs accumulation by barley biomass

T. Tugay, V. Zheltolnozhsky, M. Zheltonozhskaya, L. Sadovnikov, A. Tugay, Investigation of transfer factor for americium uptake from fuel particles into biomass of *Cladosporium cladosporioides* with radioadaptive properties

Z. Žukauskaitė, B. Lukšienė, V. Filistovič, E. Maceika, N. Tarasiuk, Mosses as a potential biosorbent for ^{137}Cs and $^{239,240}Pu$ sorption and modelling

D. K. Gupta, W. Schulz, G. Steinhauser, C. Walther, Plants and mushroom in remediation of radioactively contaminated areas

M. Zheltonozhskaya, N. Kulich, A. Lipskaya, D. Myznikov, Non-destructive method of ^{90}Sr measurement in small animals

B. Vranješ, B. Mitrović, V. Andrić, J. Ajtić, M. Vranješ, Radioactivity in monocalcium phosphate and complete feed mixtures for pigs

16:30 Oral Session: Biomedicine, Pharmaceutical Sciences Room B

S. Hausdorfer, Non-surgical lift and control of inflammation with photobiomodulation

P. d'Alessio, J.-F. Bisson, A. Rossi, M. Mirshahi, A new anti-inflammatory molecule mastering tissue repair and anti-angiogenesis

E. Ozcan, I. Kus, O. Karaca Saygili, B. Gulcen, T. Karlidere, B. Keyik, Evaluation of the volume of basal ganglia in the patients with major depression by stereological methods

B. Zama, T. Kalo, M. Schumacher, Necrotizing fasciitis of the right arm caused by *Staphylococcus aureus*, status post-chemotherapy

R. Kállai et al., Major and trace elements in dental calculus measured by various physical methods

K. Schomäcker, T. Fischer, F. Sudbrock, A. Drzezga, Radiolabelled porphyrins as possible pharmaceuticals for the treatment of cancer: Radiochemical preparation, quality control and biodistribution studies

O. V. Storchylo, The use of milk thistle fruits for the correction of the results of γ-irradiation of parents in 2 generations of their posterity *in vivo*

A. Antsiferova, M. Kopaeva, P. Kashkarov, M. Kovalchuk, The influence of silver nanoparticles on mammal behavior

16:30 Oral Session: Radiation Physics, Radiation Effects Room C

N. Çelik, U. Çevik, B. Küçükömeroğlu, N. Damla, Monte Carlo determination of the effect of dead-layer thickness of a coaxial HPGE detector on full energy peak efficiency

E. Savchenko et al., Electrostatic charging of "Nitrogen ices"

E. Suraud, P. G. Reinhard, M. Dinh, Towards the microscopic description of the irradiation of biomolecules

V. Laguta, M. Buryi, M. Nikl, Electron Spin Resonance study of paramagnetic defects and related charge carrier traps in complex oxide scintillators

E. Zabelina, N. Kozlova, A. Kozlova, A. Siminel, O. Buzanov, D. Spassky, Influence of electron irradiation on optical and electrophysical properties of $La_3Ga_{5,5}Ta_{0,5}O_{14}$ crystals

M. E. Turgay, Density assessment of different metals and alloys by gamma-ray transmission technique using Co-60 radioactive source

18:15-19:45 Poster Sessions Lobby

Biochemistry:

N. Kushlinskii et al., Receptor activator of nuclear transcription factor NF-kappaB (RANK), its ligand (RANKL) and natural inhibitor osteoprotegerin (OPG) in blood serum of primary bone tumor patients: Association with clinicopathological features and inflammatory cytokines levels

S. Mandal, A. Causevic, S. Semiz, Molecular markers for precise diagnosis and therapy of Type 2 diabetes

T. Andriichuk, N. Raksha, S. Lugova, L. Ostapchenko, The role of xanthine oxidase system in rat's lymphocytes apoptosis under X-ray exposure

N. Popović et al., Relationship between behaviors and catecholamine content in prefrontal cortex and hippocampus of chronically stressed rats

A. Tugay, T. Tugay, G. Ponomarenko, O. Polischuk, N. Poyedinok, Lipid peroxidation and enzyme activity of superoxide dismutase and catalase in three post-radiation generations of *Cladosporium cladosporiodes* under delimitation carbon source

M. Temelie, N. Moisoi, D. Savu, DNA-damage induced stress response in bleomycin-treated or bystander cells is modulated by PINK1 in neuronal and non-neuronal cells

Biomedicine:

A. Stanković, A. Stanković, M. Nikolić, Biological agents and health effects in pregnancy

I. Robo, S. Heta, P. Papa, E. Sadiku, N. Alliu, The impact of smoking on the health of periodontal tissue

S. Heta, I. Robo, H. Heta, Hemangiomas of the OMF region: Treatment with propranolol expressed in the comparative results

S. Thomaj, B. Nonaj, Pregnancy outcomes for women with homozygous hemoglobinopathy diagnosis

V. Stojiljković et al., Superoxide dismutase and lipid peroxidation in children affected by celiac disease

M. Stanković, J. Živković, V. Tadić, I. Arsić, Skin protection against solar UV radiation by natural plant products: extracts from elder fruit (*Sambucus Nigra* L.)

L. Fakhranurova, E. Mironova, R. Khramov, The determination of the action spectrum of light-induced cell viability damage in eye cells

V. Diomidova, O. Zaharova, Elastography and shear wave elastometry-based values of Young's modulus of endometrium in healthy women of reproductive age

Yu. Stepanova, D. Ionkin, O. Ashivkina, A. Chzhao, S. Kungurtsev, Possibilities of ultrasonography at the stages of the surgical combined treatment of widespread liver alveococcosis

S. Lukic, M. Mijailovic, Endovascular technique: Embolization of intracranial aneurysms

M. Mijailovic, S. Lukic, Endovascular treatment of acute cerebral infarction - methods and techniques

V. Monich, The system of optical correction of oxidative stress processes in the brain

V. Boyko, Yu. Ivanova, E. Mushenko, A. Korobov, O. Sukachova, D. Voloshyna, Photodynamic therapy and psychological support of patients with diabetic foot syndrome (clinical case)

V. Boyko et al., Phototherapy and psychotherapy in treatment of patients with obliterative lesions of lower extremity vessels

D. Stanojević, G. Antonijević, V. Milanović, V. Jurišić, Significance of fluoroscopically-guided trans-bronchial biopsy for diagnosis of solitary lung nodules

G. Antonijević, D. Stanojević, I. Milivojević, N. Jonić, V. Jurišić, Can a multi-slice CT scan help to resolve a dilemma: Pulmonary tuberculosis or sarcoidosis

M. Surcel, D. Surcel, S. Toader, M. Butan, Electromagnetic field therapy and immune mechanisms which are involved in anti-inflammatory response

Radiology:

Đ. Milković, D. Batinić, B. Nogalo, V. Nogalo, Radiological rational approach to imaging of urinary tract infections in children

F. Sandrucci, I. V. di Molfetta, A. Cortese, M. Atzori, S. Valdarchi, G. Regine, A new protocol for CT colonography

F. Sandrucci, I. V. Di Molfetta, S. F. d'Andrea, S. Valdarchi, Colonbody: Can this new protocol become the standard in the staging of patients with colon or rectum neoplasm?

V. Opančina, M. Mijailović, S. Lukić, Radiation exposure during interventional neuroradiology procedures

M. Marković, M. Petrović, A. Dagović, V. Jurišić, Problems of differential diagnosis between tuberculosis and lung cancer using CT scan

Nuclear Medicine:

A. Pavlova, S. Dineva, The role of nuclear medicine in the differentiation of the inflammatory process in rheumatology

Ts. Yordanova, Zh. Dancheva, P. Bochev, B. Chaushev, S. Ivanova, A. Klisarova, Diagnostic value of 18F-FDG PET/CT in patients with cervical lymph nodes metastases of unknown primary cancer

T. Dehghani, M. Moslehi, Z. Alirezaei, Focal hot spot induced by a central subclavian line on bone scan

T. Steinberger, J. Antoš, Proposals for improvements of the synchronizer OHM 002SYNC for the easier exchange of the ECG TRIGGER without additional data manipulation

I. Sazdova, A. Peshevska, B. Andonovski, A. Ugrinska, Comparison of glomerular filtration rate by gates method with CKD-EPI creatinine equation in patients with different GFR values

Radiation Oncology:

I. Stojkovski, D. Poposka, B. Petreska, M. Risteski, Impact of irradiated brain volume on recurrence and survival of patients with *glioblastoma multiformae*

Biopharmaceuticals:

O. Milosevic-Djordjevic et al., Cytotoxic and apoptotic effects of *Artemisia alba* Turra and *Artemisia vulgaris* L. ethyl acetate extracts on SW-480 colon cancer cells

D. Grujicic, M. Radovic Jakovljevic, A. Ciric, M. Stankovic, D. Marinkovic, O. Milosevic Djordjevic, Phenolic profile and *in vitro* genotoxic activity of methanolic extract of *Teucrium polium*

21:00-01:00 Conference Gala Dinner

Friday, June 16

10:00-17:00 Registration

08:15-09:45 Poster Sessions Lobby

Medical Physics:

Z. Alirezaei, R. Kamran-Samani, P. Kaviani, S. Lashkari, F. Maghsoodinia, P. Shokrani, Assessment of Reference levels for cardiac interventional fluoroscopically guided procedures in Isfahan province in Iran

M. Jeremic, M. Matovic, S. Pantovic, D. Nikezic, D. Krstic, Compartment biokinetic model for ^{90}Y-DOTATOC

D. Krstic, Z. Jovanovic, D. Nikezic, J. M. Gomez Ros, P. Ferrari, Assessment of absorbed dose in some organs of ORNL and voxel phantom due to application of radiopharmaceutical ^{99m}Tc

Radiation Physics:

N. Tkatchenko, EPR dosimetry of human fingernails: study of the variability of the endogenous signal and dose response subjected to gamma rays and sunlight exposure

Yu. Lysak, B. Narkevich, V. Klimanov, Development of clinical approach to absorbed dose assessment in RNT, based on Monte Carlo method simulation of patient scintigraphy

L. Dobrzyński, K. Fornalski, J. Reszczyńska, Low dose radiation response: Modeling of irradiated cell transformation

K. Mukashev, A. Muradov, G. Yar-Mukhamedova, Radiation-stimulated bulk and surface effects in materials

V. T. Gritsyna, Yu. G. Kazarinov, Effects of transition-metal-doping on the radio-luminescence properties of magnesium aluminate spinel crystals

A. Zolotarjovs, L. Grigorjeva, K. Smits, D. Millers, Thermoluminescence and dosimetric characteristics of ZnO:In nanopowders and ceramics

S. Akça et al., The effects of annealing on the thermoluminescence glow peaks of the natural muscovite mineral

M. Yüksel, T. Dogan, Z. G. Portakal, S. Balcı Yegen, S. Akça, M. Topaksu, A preliminary study of TL and OSL traps for the aragonite mineral

M. Topaksu et al., Analysis of thermoluminescence kinetic parameters of apatite with CGCD method

E. Konovalova, Yu. Demidov, M. Kozlov, Calculation of thallium hyperfine anomaly

P. Szajerski, A. Gasiorowski, Phase composition effect on thermoluminescence behavior of Dy^{3+} and Tb^{3+} doped phosphate glassy crystalline materials

A. Petrova, A. Lukonina, N. Kudryasheva, Effect of low-dose beta- and gamma-radiation on photoluminescence of coelenteramide-containing fluorescent protein obelin from *Obelia longissima*

Lj. Budinski-Petković, I. Lončarević, A. Mihailović, S. B. Vrhovac, Impact of defect concentration on percolation in discrete irreversible deposition

Radiation Effects:

O. Shpotyuk, A. Ingram, M. Shpotyuk, R. Szatanik, Positronics of radiation effects in chalcogenide semiconductor glasses

O. Shpotyuk, M. Shpotyuk, S. Ubizskii, Radiation-induced optical effects in chalcogenide semiconductor glasses

S. Ubizskii, A. Kozdras, O. Shpotyuk, D. Chalyy, M. Shpotyuk, Natural and radiation-induced physical ageing in Ge-As-Se chalcogenide glasses

A.-I. Cadis et al., Studies regarding $CuInS_2$ powders prepared by ultrasound-assisted precipitation method with different Cu/In ratio

E. Pajuste, S. Yu. Sokovnin, G. Kizane, J. Prikulis, I. Igaune, V. G. Il'ves, Radiation induced luminescence of carbon-doped Al_2O_3 nanopowders produced by pulsed electron evaporation

S. Jovanović et al., Irradiation resistance of elastomers based on ternary rubber blends reinforced by nano filler

M. Marinović-Cincović et al., Gamma irradiation ageing study of elastomers based on ethylene/propylene/5-ethylidene-2-norbornene rubber

J. Budinski-Simendić et al., The assessment of gamma irradiation ageing of elastomeric materials filled with recycled rubber powder

D. Kojić et al., Thermal degradation of gamma irradiated elastomers based on different network precursors

Radiotherapy:

I. A. Yakovlev, S. V. Akulinichev, Yu. K. Gavrilov, R. D. Ilić, The way to improve conformity of proton and ion therapy with passive scattering

T. Ungvári et al., In vivo radiation therapy by MeV electrons

D. Jaros, Setup component of PTV margin in preoperative radiotherapy of rectum carcinoma

Biotechnology:

S. P. Barbu, M. Ciuca, A. Giura, Gamma irradiation for useful wheat genetic variability

L. Izrael Živković, Lj. Živković, *Candida rugosa* lipase immobilized onto titania: improved thermal stability and reuse potential

L. Izrael Živković, Lj. Živković, V. Beškoski, K. Gopčević, D. Radosavljević, I. Karadžić, The *Candida rugosa* lipase immobilized onto titania as nanobiocatalyst in organic solvent

G. Toncheva, G. Antova, Comparative investigation of changes of trace metal content in cocoa butter and food industry fats due to technological process

P. Petrov, B. Mitrovski, D. Belichovska, The impact of soil and foliar fertilization on the content of macrobiogen elements in cauliflower

10:00 **Invited Lecture** **Room B**

Fernando Carvalho, Uranium mining legacy and radiation protection

10:30 Oral Session: Medical Physics Room A

T. Hanušová, I. Horáková, I. Koniarová, Establishing radiochromic film dosimetry for IMRT plan verification in radiotherapy

W. Bulski, K. Chelminski, Multileaf collimator performance audit in Poland

K. Chelminski, W. Bulski, Dose delivery quality audit for IMRT technique in Poland

M. Gumeniuk, S. Odarchenko , K. Gumeniuk, O. Zinvaliuk, D. Synchuk, Specific approaches to planning of patients with primary and secondary brain tumors using the TomoTherapy Planning System

P. Shokrani, F. Felfeliyan, M. Atarod, A. Amouheidari, S. Noshadi, Application of beam spoilers for dose uniformity in abutting low energy electron fields: A Monte Carlo simulation study

K. Karadzic, V. Karadzic, Estimation of mean glandular dose in mammography using voxel phantom and Monte Carlo simulation

10:30 Oral Session: Radioecology Room B

L. Mtsariashvili et al., The radioactivity of soil structures in the Black Sea coastal strip (Georgia)

Q. Wu, Y. Feng, X. Wang, G. Liu, Radioactivity assessment in rare earth mining sites in China

L. Nedzveckienė, B. Lukšienė, N. Tarasiuk, R. Gvozdaitė, The distribution of ^{137}Cs and Pu isotope activity concentrations in the soil profiles of the lake shores

A. Safonov, K. Boldirev, T. Babich, E. Zakharova, K. German, Biogeochemical aspects of U and Tc migration modelling in sand aquifers

M. E. Turgay, Primordial and artificial radioactivity levels for soil samples of Hatay region, Turkey

M. Hegedűs, E. Tóth-Bodrogi, J. Somlai, T. Kovács, Radiological investigation of red mud: Th and Po leaching studies

Yu. Konevnik, K. Martynov, Temperature-dependent changes of radionuclide sorption behavior on crystalline rock samples of the Yeniseisky site (Nizhne-Kansky rock massive, Krasnoyarsk region, Russia)

D. Vasilache, R.-C. Begy, C. Baciu, The evaluation of deforestation effects on the sedimentation rates of anthropogenic lakes in Romania using radiometric dating methods

10:30 Oral Session: Radiation in Medicine, Medical Devices,

Radiation Oncology Room C

M. Vadrucci et al., Irradiation activity with the top-implant proton linear accelerator

V. Massaut, R. Benotmane, The BR2 reactor and other facilities at SCK•CEN - usage for science, training, education and medical applications

V. Panteleev et al., Target development for medical radionuclide production at radioisotope complex RIC-80 at PNPI

A. Madumarov, G. Bozhikov, V. Semin, N. Aksenov, Methods for production and separation of platinum isotopes

Yu. Kovalenko, I. Myronova, S. Miroshnichenko, Ya. Zarutsky, Use of tele-roentgen-diagnostic complexes for improving medical care of patients

F. Toslak, A. F. Kocamaz, E. Dönmez, Designing and developing a voice controlled laser printer to code microscope slides which are used in pathology laboratories

S. Golub, G. Panshin, V. Sotnikov, V. Solodkiy, Role of radiotherapy in treatment of patients with gastric non-hodgkin lymphoma - single center experience

P. Cisek et al., The assessment of the biochemical parameters of the liver after the CT-guided brachytherapy of metastasis to the liver

14:00 **Invited Lecture** **Room B**

Tibor Kovács, Screening method for radiological characterisation of reused by-product in building materials

14:30 Oral Session: Medical Physics Room A

K. Gumeniuk, S. Odarchenko, M. Gumeniuk, O. Zinvaliuk, D. Synchuk, TomoTherapy in Ukraine - general analysis of first treatment results

D. Otašević, D. Ćirić, G. Nišević, B. Radojičić, Data beam comparison measured by RF Daily QA and Matrixx Evolution

D. Segota, A. Diklic, S. Jurkovic, E. Grgurevic Dujmic, V. Kos, A model of establishment and implementation of the quality assurance programme in diagnostic radiology in a multi-facility region

D. Ivanov, K. Bliznakova, I. Buliev, Z. Khalaf, New materials as tissue substitutes for use with physical breast phantoms dedicated to x-ray based imaging techniques

W. Kozlowska et al., The development of the “LET painting” idea using the FLUKA Monte Carlo Code

T. Vural, H. Şahintürk, B. Aslanyürek, Microwave brain stroke detection by using machine learning techniques

L. Traikov, T. Bogdanov, S. Abarova, R. Hadjiolova, M. Gradinarova, J. Petrova, Measurement of Arterial Wall Shear Stress in cases of asymptomatic carotid stenosis and restenosis in human carotid arteries *in vivo*

P. Teles, J. Costa, R. Parafita, A. Canudo, D. Costa, P. Vaz, *In vivo* measurements of biokinetic parameters and Monte Carlo simulations of absorbed dose in renal nuclear medicine paediatric patients.

14:30 Oral Session: Radioecology Room B

D. Dementyev, A. Bolsunovsky, S. Kosinenko, Co-60 microparticles as markers of the redistribution of artificial radionuclides in the bottom sediments of the Yenisei River floodplain (Russia)

S. Cankurt, A. Uğur Görgün, Measurement of ^{210}Po and ^{210}Pb activity concentration in sediments at İzmir Gulf and modelling of their accumulations

N. Andryushchenko, A. Safonov, Yu. Konevnik, A. Kondrashova, Sorption characteristics of materials for permeable reactive barriers

A. Walencik-Łata, B. Kozłowska, T. Przylibski, Hydrochemical behavior of dissolved uranium in selected groundwaters of the Sudety Mountains

M. Aktayev, Pollution mechanisms of groundwater and surface water at the Balapan site in the territory of Semipalatinsk test site

A. Nazarov, D. Gudkov, S. Kireev, A. Kaglyan, S. Obrizan, The dynamics of the natural purification processes in aquatic ecosystems within the Chernobyl exclusion zone

N. Damla, R. Kaya, H. Taskin, B. Kucukomeroglu, N. Celik, Natural radioactivity levels in waters and consequent population doses

G. Bátor, A. Bednár, E. Tóth-Bodrogi, T. Kovács, The validation of the radiocarbon sample preparation method and LSC measurements on the environmental samples

14:30 Oral Session: Biophysics, Biomaterials, Bioengineering Room C

K. Leiger, A. Freiberg, Modification of spectral properties of photosynthetic light-harvesting complexes by intense optical irradiation

S. Brkić, Biocompatibility of CdSe quantum dots

D. Krezhova, K. Velichkova, N. Petrov, The effect of plant diseases on hyperspectral leaf reflectance and biophysical parameters

A. Ponomarenko, A. Pereira Jr., V. Nunes, V. Zaporozhan, Perception, feelings and neuroregulatory signals as music-like patterns embodied in ionic waves induced by proteins

N. Kamanina, The optical limiting effect in the organics doped with nanoparticles

R. C. Popescu et al., Fabrication and testing of novel multifunctional nanosystems for chemo- and radio-sensitization of tumor cells

16:15-17:45 Poster Sessions Lobby

Biophysics:

A. Šetrajčić-Tomić, Lj. Džambas, J. Šetrajčić, M. Vojnović, I. Šetrajčić, Optical specificity of thin shell for nano-delivery model

S. Vučenović, J. Šetrajčić, M. Vojnović, A. Šetrajčić-Tomić, Lj. Džambas, Physiological processes when an electrical current passes through the tissues

N. Kamanina, Erythrocytes and DNA study via optical- and bio-technology

Yu. Chukova, Radioactivity in the light of the fundamental law of physics

K. Velichkova, D. Krezhova, Sensitivity of remotely-sensed spectral reflectance to biophysical variables of plants

Biomaterials:

V. Kolokoltsev, G. Folmanis, M. Fedotov, Obtaining an aqueous colloidal solution of selenium by mechanical dispersion

Radioecology:

Y. H. Ryu, K. R. Dong, M. Y. Kim, E. J. Choi, W. K. Chung, Comparative analysis of regional soil components and radioactivity

L. Yalkovskaya, V. Bol'shakov, Z. Borowski, Species-specific reaction of rodent genomes to chronic radiation exposure

O. Shurankova, A. Nikitin, Peculiarities of $^{239+240}$Pu and ^{241}Am from Chernobyl fallout accumulation in meadow vegetation

A. Zubareva, A. Nikitin, A. Kravtsov, S. Zotov, Contamination of water objects in Chernobyl exclusion zone by long-lived radionuclides and possibilities of their cleaning with complex filtering material

M. Kropacheva, M. Melgunov, I. Makarova, Determination of artificial and natural isotope distribution in sedge (*Carex* L.) biomass by sequential elution technique

A. Dvornik et al., The assessment of radiation doses for firefighters and population during forest fires at the contaminated zone

Yu. Vosel, S. Vosel, M. Melgunov, I. Makarova, Three authigenic U(IV) phases in lake sediments (Olkhon region)

M. Melgunov, B. Sherbov, M. Rubanov, ^{210}Pb, ^{7}Be and ^{137}Cs in snow deposits in different landscape zones of the south of Western Siberia

D. Galanda, D. Tatárová, J. Kuruc, J. Strišovská, Bioremediation of ^{137}Cs and ^{60}Co in seawater

A. Kaglyan, D. Gudkov, A. Nazarov, L. Yurchuk, The radioactive contamination of fish in the cooling pond of the Chernobyl NPP at the drawdown stage

J. Ajtić et al., Beryllium-7 in surface air multidecadal measurements in Serbia and Slovenia

O. Jefanova, E. Danutė Marčiulionienė, D. Montvydienė, J. Mažeika, Z. Žukauskaitė, B. Lukšienė, The ecotoxicological impact of the nuclear facilities effluent and ^{137}Cs on the test organism *Lepidium sativum*

C. Cantaluppi, F. Ceccotto, A. Fasson, Three years' monitoring of gamma-emitting radionuclides in fishing products arising from main FAO fishing areas

B. Kucukomeroglu, S. U. Duran, N. Damla, N. Celik, Investigation of radioactivity levels in soils and drinking waters of Andon region (Rize city, Turkey)

O. Momot, B. Synzynys, Radiological risk assessment at consumption of tritiated water

N. Todorovic, J. Nikolov, S. Bjelovic, S. Lucic, I. Stojkovic, Radionuclides in drinking water and risk assessment

R. Mikailova, V. Kurtmulaeva, Prediction of radiation doses for members of public and non-human biota in vicinity of nuclear facilities by means of contemporary software tools

Z. Serzhanova, A. Aidarkhanova, S. Lukashenko, The speciation of tritium in the soil of the places of nuclear tests of the Semipalatinsk test site

M. Modorov, M. Ranyuk, Colonial rodents is useful model for prediction of strontium transfer to terrestrial mammals

Ya. Ershova, E. Zakharova, A. Pryadko, E. Tyupina, V. Krupskaya, Sorption of fission products and actinides on monocationic types of bentonite clays

A. Safonov et al., Permeable biological reactive barriers for nitrates and radionuclides in environment

S. Ostalkevich, A. Safonov, A. Kolokolcev, I. Zinicovscaia, K. German, T. Khijniak, U and Tc bioreduction by haloalkaliphilic bacteria

A. Aidarkhanova, S. Lukashenko, N. Larionova, Investigation of distribution of radioactive contamination in the "Water – Sediments – Plants" system of the Semipalatinsk Test Site territory

Z. G. Portakal et al., Determination of gamma-emitting radionuclides in pistachio samples from southeastern Anatolia region, Turkey

A. Oudalova, Bioassay of natural waters impacted with radioactive waste storage facilities

G. Lavrentyeva, R. Shoshina, B. Synzynys, The impact of pollution of land ecosystems with radionuclide Sr-90 on the biological indicators of the system "soil-plant-land mollusk"

A. Angeleska et al., The presence of natural radioactivity in the soil and crops in the surroundings of the Zelezara factory – Skopje (Macedonia)

Z. Ćurguz et al., Measuring the current state of radioactivity of air, water and soil in the city of Novi Grad, Republic of Srpska

VIRTUAL SESSION

Radiobiology:

N. Shamal, Features of influence of gamma-radiation on the plants and their functioning in extreme conditions

R. Korol, Accumulation of main dose-forming radionuclides in liver of wild animals inhabiting the Polessie state radiation and ecological reserve

A. Kolesnikova, T. Konakova, A. Taskaeva, A. Kudrin, Soil fauna on the area contaminated with radium production waste

E. Grigorkina, S. Rakitin, G. Olenev, O. Tarasov, A low level of prolonged exposure can induce an increased instability of microsatellite loci in rodent populations

M. Kryvokhyzha, The effect of ionizing radiation on the genes of the plant *Arabidopsis thaliana* within the ontogenesis of the flowering phase

N. Shimalina, E. Antonova, V. Pozolotina, Allozyme variability and quality of seed progeny in *Plantago major* L. populations from East-Ural radioactive trace area

A. Karapetyan, The morbidity study of the liquidators of Chernobyl Power Plant disaster consequences living at high altitudes

N. Hovhannisyan, A. Karapetyan, V. Grigoryan, The assessment of cytogenetic indices of Chernobyl Power Plant disaster liquidators

A. Solovev, A. Chernukha, V. Potetnya, S. Uliyanenko, The Monte-Carlo based survival prediction for *in vitro* studies with various cell types in carbon ion fields

L. P. Blinkova, L. G. Stoyanova, Yu. D. Pakhomov, Appearance and resuscitation of VBNC bacteria induced by different factors

J. Czub et al., Effect of irradiation of CHO-K1 cells by dual ion beam

Radiation Chemistry:

G. Nikolova, V. Gadjeva, Ya. Karamalakova, *Lemna minor* L. (duckweed) antioxidant and antiradical activity caused by gamma radiation

Radiation Physics:

H. Vasylyeva, I. Myronyuk, O. Vasylyev, Measurement of neutron flux in (γ,n) reaction on zirconium nuclei

Radiation in Medicine:

O. Shtcherbatykh, N. Metlyaeva, Mental adaptation effectiveness at patients with local radiation injuries as a result of radiation incidents in medicine

Radiation Protection:

E. Klementjeva, S. Ovsiannikova, A. Dvornik, Evaluation of the content of lead-210 and polonium-210 radionuclides in diet and their contribution to the dose of the Gomel region residents

V. Stevanovic, Lj. Gulan, A. Valjarević, Measurements of ambiental dose equivalent rates in municipality of Kursumlija, Serbia

M. Tanić, Lj. Janković Mandić, M. Daković, The assessment of the potential risk to human health due to natural radionuclides in surface soil around "Nikola Tesla A" coal-fired power plant, Serbia

J. Davidovic, Practical issues in implementation of radiation protection in healthcare institutes

Radioecology:

C. Betsou, E. Tsakiri, J. Hansman, M. Krmar, A. Ioannidou, Radionuclide concentrations in mosses

M. Nadri, C. Khiari, A. Ioannidou, Vertical profile of ^{210}Pb, ^{40}K and ^{137}Cs in Reggane and Ghardaia regions, Algeria

E. Ioannidou, A. Ioannidou, G. Vargemezis, Radioactivity monitoring of contaminated sites in Northern Greece by *In Situ* gamma spectrometry

T. Paramonova, O. Komissarova , L. Turykin , N. Kuzmenkova, Comparative distribution of Cs-137 and mineral nutrients in above- and belowground biomass of grassy ecosystems

V. Starichenko, N. Lyubashevskiy, The migration activity of rodents in the territory of EURT: Comparison of estimations

T. Paramonova, Homo/heterogeneity of Cs-137 distribution within ploughed horizon of arable chernozems - 30 years after Chernobyl accident

Radon and Thoron:

A. S. Silva, M. de Lurdes Dinis, Variability of indoor radon level accumulation: A study in Portuguese thermal spas

Ch. Aliev, A. Feyzullaev, R. Baghirli, F. Mahmudova, The estimation of radon concentration in dwellings and geological environment on the territory of Azerbaijan

O. Symkanych, S. Sukharev, O. Glukh, S. Delegan-Kokayko, N. Svatyuk, V. Maslyuk, Measurement of radon content using CR-39 solid state track detector

Lj. Gulan, Indoor radon concentration in Dragaš municipality, Kosovo and Metohija, Serbia

Lj. Gulan, L. Spasović, Outdoor and indoor ambient dose equivalent rates in Berane town, Montenegro

Radiation Detectors:

W. Wagner, V. Oeser, H.-R. Dörfel, Th. Streil, An analytic method for in situ nuclide identification in mobile gamma spectrometers

A. Tanushevski, D. Sokolovski, Structural and optical properties of CdTe thin films obtained by electrodeposition

H. Arahmane, E.-M. Hamzaoui, R. C. el Moursli, The identification and characterization of the fission chamber output signal using the non-negative matrix factorization

Radiation Effects:

N.A. Metlyaeva, A.Yu. Bushmanov, V.I. Krasnyuk, O.V. Scherbatich, M.V. Bolotnov, Assessment of the adaptation of patients with ARS, the victims of ChNPP and different radiation accidents, past psychophysiological examination

Lj. Lioshyna, O. Bulko, S. Pchelovska, S. Litvinov, N. Pushkarova, N. Kuchuk, Effect of chronic γ-irradiation on Ri-transformant and hairy roots of *Digitalis purpurea* L. *in vitro*

Lj. Lioshyna et al., Effects of different spectrum LED-lighting on several medical plants

S. Litvinov, N. Rashydov, DNA repair response and post-radiation development of Arabidopsis thaliana L. msh2-/- plants under influence of X-rays

Radiology:

M. Dakovic Bjelakovic, J. Popovic, D. Stojanov, T. Dzopalic, J. Ignjatovic, Morphometric characteristics of the infraorbital foramen on volume rendered CT scans

Radiotherapy:

V. Klisarovska, Dosimetric evaluation of two different brachytherapy techniques for inoperable uterine cervix cancer

P. Chakalaroski, V. Klisarovska, N. Dimitrovska, D. Nikolovski, Dose comparison of organs at risk in cervical cancer intracavitary brachytherapy: Organ wall versus whole organ contour

E. Maslyukova, L. Korytova, A. Bondarenko, The comparison of the doses to the heart and the left anterior descending coronary artery for various modes of radiation treatment of the breast cancer patients

L. Korytova, E. Maslyukova, A. Bondarenko, The estimatation of the radiation dose to the left lung for various modes of conformal radiation therapy of the breast cancer patients

Radiation Oncology:

S. Milyukov et al., Influence of total radiation dose on progression free survival rate of patients with infiltrative supratentorial low-grade gliomas WHO Grade II

Cancer Research:

S. Milyukov et al., Influence of surgery type and adjuvant chemotherapy in complex treatment protocols of infiltrative supratentorial low-grade gliomas WHO Grade II

N. Lyubimova, Yu. Timofeev, M. Toms, A. Mitrofanov, A. Bekyashev, N. Kushlinskii, Glial fibrillary acidic protein and s100b as biochemical markers of brain tumour

Environmental Chemistry:

M. Jakubiak, M. Asztemborska, The application of neutron-activated silver nanoparticles in the studies of nanosilver bioaccumulation by mycelia of macrofungi: *Pleurotus eryngii* and *Trametes versicolor*

Environmental Physics:

J. Velevska, M. Pecovska - Gjorgjevich, N. Stojanov, Electrochromic nickel oxide thin films for solar light modulation

Medical Imaging:

O. Slesarev, S. Abul'khanov, N. Kazanskiy, Automatic processing of temporomandibular joint X-ray images using parameterization technique

Pharmaceutical Sciences:

H. Harbatsevich, K. Nabebina, N. Loginova, G. Ksendzova, N. Osipovich, Redox-active nickel(II) complexes with 1,2-dihydroxybenzene derivatives

H. Harbatsevich, S. Stakhevich, N. Loginova , G. Ksendzova , N. Osipovich, SOD-like activity of sulfur-containing *ortho*-diphenols and their metal complexes

Biomedicine:

A. Selimović, S. Milišić, E. Mujičić, Z. Cecunjanin, Assessment of hematological parameters, acid-base status and arterial blood gas test before and after management of acute bronchiolitis in children

N. Bagdasaryan, V. Erichev, T. Aksyonova, M. Mitropanova, Y. Ovcharenko, P. Bagdasaryan, The effectiveness of the complex treatment of patients suffering from chronic gingivitis

Y. Ovcharenko, V. Erichev, T. Aksyonova, N. Bagdasaryan, Immunological and microbiological aspects of hygiene effectiveness for the oral cavity in patients suffering from inflammatory parodontium diseases

O. Slesarev, D. Trunin, I. Bayricov, S. Abul'khanov, N. Kazanskiy, Appealability structure in patients with temporomandibular disorders

R. Peskovets, S. Shtarik, A. Evsyukov, Anxiodepressive disorders and arterial hypertension among adult population of industrial center of Eastern Siberia

V. Stevanovic, Lj. Gulan, A. Valjarević, Analysis of bioclimatic characteristics of Niška Banja

S. Milišić, M. Lika Pranjić, Evaluation of cyclocryotherapy during 7 years

Biochemistry:

Ya. Karamalakova, V. Gadjeva, G. Nikolova, UV / γ irradiation: Activation and antioxidant activity after low-level irradiation of Bulgarian essential oils

V. Dimova, M. S. Jankulovska, QSAR modeling of antimicrobial activity of some substituted hydrazones

L. G. Stoyanova, S. Dbar, L. P. Blinkova, Induction of biochemical activity of *Lactococcus lactis* ssp. *lactis* under the influence of ultraviolet radiation

Biophysics:

A. A. Oleshkevich, Directed impact of therapeutic ultrasound on physiological state of animal platelet

S. A. Komarova, A. A. Oleshkevich, V. E. Novikov, Pelage alkaline hydrolysates' redox change via light flash

S. A. Komarova, A. A. Oleshkevich, V. I. Maksimov, Spectrophotometry research of fleece alkaline hydrolysates

I. Shpachenko, N. Brandt, A. Chikishev, Calculation of chemical reaction rates based on Raman and FTIR spectral data

Biomaterials:

S. Petrović, J. Zvezdanović, S. Savić, D. Cvetković, Chlorophyll stability to continual UVA, UVB and UVC irradiation inside the liposomes

J. Zvezdanović, S. Petrović, J. Stanojević, D. Cvetković, A. Lazarević, UHPLC-MS/MS analysis of hematoporphyrin derivatives mixture

D. Kiradzhiyska, R. Mantcheva, Overview of biomaterials for medical applications: Advantages and disadvantages

Biomedical Engineering:

J. Czub et al., Experimental setup using low energy X-rays for radiobiological studies

Biotechnology:

A. A. Oleshkevich, Effects of modulated ultrasound on growth and emission processes

M. Alili, G. Munim, A. Abdelwahab, Study of dextranase properties produced by *Streptomyces sp*. AM

Bioinformatics:

D. Voloshyna, Electronic survey as effective data collection tool for research, particularly to study predictors of alcohol addiction among youth in Ukraine

Physical Chemistry:

M. S. Jankulovska, V. Dimova, I. Spirevska, Investigation of acid-base properties of aromatic hydrazones in basic media at constant ionic strength

Other topics:

K. Doraci, A. Hasanaj, The optimising force balance exercised in the wheel – profile contact force during the curved path. An experimental approach of using curvilinear profiles

K. Doraci, A. Hasanaj, Optimization of wheel – rail profile combinations in terms of accurate wear prediction