



FOURTH INTERNATIONAL CONFERENCE ON RADIATION AND APPLICATIONS IN VARIOUS FIELDS OF RESEARCH

May 23 - 27, 2016 | University of Niš | Faculty of Electronic Engineering | Niš | Serbia

RAD 2016 Preliminary Programme

Monday, May 23

08:00-09:30 Registration

09:30-10:00 **Official Opening** Amphitheater A

10:00-11:00 **Plenary session:**

Invited lectures Room A

10:00-10:30 Luisa Torsi, Organic electronic biosensors for label-free femtomolar protein detection

10:30-11:00 Ištvan Bikit, Low level nuclear spectroscopy in environmental protection

11:00-11:30 **Refreshments**

11:30-13:00 **Oral sessions**

Biomaterials, Radiation Effects, Biomedical Engineering Room A

R. C. Popescu, E. Andronescu, A. M. Grumezescu, I. Petcu, D. Savu, Low dose radiotherapy improvement using functionalized magnetite nanoparticles

V. A. Spirescu, A. M. Grumezescu, E. Andronescu, Nanostructures based on ZnO and phytochemical substances with cosmetic applications

M. Nestic et al., Photoacoustic characterization of thin polylactide samples of different crystallinity

J. Gasic, R. Barac, J. Popovic, A. Smiljkovic, A. Mitic, M. Nikolic, The effect of extreme temperatures on micro and nano hybrid dental composites: An experimental forensic study

E. Savchenko et al., Modification of solid nitrogen by an electron beam

V. Anan'ev, M. Miklin, E. Dyagileva, V. Pak, D. Yakubik, VUV photolysis of crystalline alkali nitrates

P. Szajerski, A. Gasiorowski, J. Celinska, H. Bem, Radiation effects in sulphur polymer concrete (SPC) matrix under high dose irradiation

Lj. Korugic-Karasz, M. Tonga, P. Taylor, E. Wilusz, P. Lahti, F. Karasz, The thermoelectric energy harvesting systems iodine-doped MEH-PPV with carbon nanotubes

Radiation Protection

Room B

V. Singh, M. Hauer-Jensen, The development of gamma-tocotrienol as a radiation countermeasure for the acute radiation syndrome

A. Volchkova, E. Shishkina, B. Schwarz, W. Bolch, E. Tolstykh, M. Degteva, Organ dose rates due to $^{137}\text{Cs}/^{137\text{m}}\text{Ba}$ contamination of soil depend on depth of radionuclide deposition and age of a person

S. Lovachev, Estimation of individualized radiation risk of chronic occupational exposure due to inhalation intake of U^{234}

E. Shishkina, A. Volchkova, M. Degteva, B. Napier, B. Schwarz, W. Bolch, Air kerma-to-organ dose conversion coefficients for humans staying on the contaminated soil

Z. Jovanović et al., The study of the radiation scatter in interventional cardiology through Monte Carlo simulations: The EURADOS working group No.12 approach

S. Papanov, E. Petkova, V. Grudeva, Use and antioxidant characteristics of coffee

13:00-14:30 **Lunch**

14:30-16:00 **Oral sessions**

Radiation Protection

Room A

J. Sabol, B. Sestak, Education in radiation protection and radiation risk communication with the public

J. Haglund, Developing a culture of radiation protection in the hospital environment

A. Samoilov, A. Bushmanov, A. Kretov, Prevention of medical contraindications at work
- New aspect of occupational health system

A. Mladenov, Ts. Nonova, D. Dimitrov, K. Krezhov, Radioactive waste management at
the nuclear scientific and experimental centre of INRNE-BAS

C. Popescu, G. Rosca Fartat, C. Stanescu, The horizontal fuel channel pressure tube
decommissioning in the CANDU 6 nuclear reactor

D. Stojiljković, I. Arsić, V. Tadić, Oil extracts of wild apple fruit as active substances in
UV protection preparations

Radiobiology

Room B

D. Firsanov, Lj. Solovieva, V. Soukhov, M. Svetlova, Radiomimetic drug bleomycin
causes different responses in normal young and presenescent Syrian hamster cells

N. Koltovaya, N. Zhuchkina, A. Kokoreva, N. Shvaneva, Kinetics of UV-induced gene and
structural mutations

S. Vasilyev et al., Effects of spontaneous γ H2AX level on gene expression in human
somatic cells

V. Nugis, M. Kozlova, The cytogenetic dose evaluation after non-uniform irradiation

Q. T. Minh et al., Study of DNA damages induced by UV radiation

S. Zunic, Lj. Rakic, Petkau effect is a wave phenomenon

M. Vujović, D. Maksin, M. Vujisić, Microdosimetric simulations for testing cell
radiosensitivity

A. Antsiferova, V. Demin, P. Kashkarov, M. Kovalchuk, Prolonged administration
biokinetics of Ag nanoparticles in mammal organisms

16:00-16:30 **Refreshments**

16:30-18:00 **Oral sessions**

Radiation Measurements

Room A

M. Karetnikov, Application of tagged neutron technology for research, industry, and
global security

S. Akkoyun, G. Koçak, T. Bayram, Half-lives of the titanium isotopes from photonuclear
reactions

A. I. Apostol, I. A. Maliuk, O. Sima, Methodological triangulation approach for age determination of plutonium sample by high resolution gamma spectrometry

S.-K. Park, J.-M. Park, Y.-S. Min, Y.-S. Cho, Qt-based control platform for the radiation dose data measured in KOMAC

M. Vasyanovich, A. Ekidin, M. Rogozina, I. Russkikh, N. Fomina, Size distribution assessment of radioactive aerosols at research reactor

A. S. Mollah, Md. A. Alam, S. Sattar, M. A. Hossain, A. Z. M. Salahuddin, Robot-based system for monitoring of ionizing radiation in the nuclear environment

Radiobiology

Room B

N. Koltovaya, N. Zhuchkina, N. Shvaneva, Proton induction of gene mutations

A. Suponkina, M. Zhukovsky, A. Krivonogova, K. Shcherbakova, K. Moiseeva, Radiation sensitivity of bacteria contaminating food

N. Kudryasheva, T. Rozhko, O. Guseynov, On the mechanism of biological activation by radionuclide solutions

E. V. Antonova, N. A. Orekhova, V. N. Pozolotina, Correlation between physiological and biochemical status of *Silene latifolia* seedlings from Kyshtym accident (Russia, Urals)

G. Woloschak, S. Raha, T. Paunesku, Native regulation of micro RNA mmu-miR1195 is necessary for radiation resistance in mouse thymic lymphoma cell lines

Ž. Milosavljević, N. Krstić, B. Mitrović, M. Lazarević Macanović, Effects of experimentally irradiated pituitary gland on some morphological parameters of rats' head, body and tibia

V. Demin, A. Antsiferova, V. Demin, Y. Buzulukov, P. Kashkarov, Selenium biokinetics study both by terms of nuclear-physical method and numerical modeling

18:00-19:30 **Poster session**

Lobby

Radiation Protection

S. Karaca, Ö. Şimşek, Ö. Yeşiloğlu, The views and thoughts of primary School Students About Radiation

N. Tomić-Petrović, The risk and protection from ionizing radiation at work and in everyday life

M. Malek Mohammadi, S. M. Hosseini Pooya, B. Firoozi, Performance characteristics of a home-made TLD reader; preliminary results

- G. Rosca Fartat, C. Popescu, C. Stanescu, The horizontal fuel channel in the CANDU 6 nuclear reactor - Part IV: Dismantling main steps with the decommissioning device
- G. Rosca Fartat, C. Popescu, C. Stanescu, The horizontal fuel channel in the CANDU 6 nuclear reactor - Part V: Decommissioning device operating presentation
- C. Popescu, G. Rosca Fartat, C. Stanescu, The horizontal fuel channel pressure tube decommissioning in the CANDU 6 nuclear reactor - Part I: cutting and extracting device presentation
- C. Popescu, G. Rosca Fartat, C. Stanescu, The horizontal fuel channel pressure tube decommissioning in the CANDU 6 nuclear reactor - Part II: cutting and extracting device functioning presentation
- C. Popescu, G. Rosca Fartat, C. Stanescu, The horizontal fuel channel pressure tube decommissioning in the CANDU 6 nuclear reactor - Part III: operating the cutting and extracting device
- A. Gapeyev, N. Lukyanova, S. Gudkov, Dependence of radiation protective effects of extremely high-frequency electromagnetic radiation on exposure parameters
- H Harrass, M.A. Misdaq, A. Mortassim, J. Ouguidi, The determination of alpha radiation dose to skin due to the application of different radiopharmaceuticals
- N. Todorovic, N. Golubovac, J. Nikolov, M. Krmar, Structural shielding design for radiographic room by scattered radiation measurement
- N. Todorović, S. Lučić, D. Marić, D. Golubović, J. Nikolov, M. Krmar, Radiation exposure of nuclear medicine staff working with radionuclides ^{99m}Tc and ^{131}I
- N. Todorovic et al., Different methods for ^{90}Sr determination in water
- J. Ziliukas et al., Regional East European and Central Asian ALARA Network (RECAN): networking for improving the occupational radiation protection
- Yu. Lysak, B. Narkevich, V. Klimanov, The reason for the feasibility of outpatient radionuclide therapy
- P. Atta Amoah, A. Mensah, R. Agalga, Nuclear security culture: Evaluation of concept and implementation (Case study: Two facilities at the Ghana Atomic Energy Commission premises)
- M. Długosz-Lisiecka, Collections of radioactive minerals in geological museums
- P. E. de Oliveira Lainetti, Surface radioactive decontamination by molten salt stripping

Biopharmaceuticals

A. Stankov, S. Gateva, G. Jovtchev, F. Gregan, The investigation of the antigenotoxic potential of *Papaver Rhoeas l.* and *Salvia Officinalis l.* extracts against an oxidative stress inducer

Biotechnology

N. Poyedinok, O. Mykchaylova, A. Negriyko, Low-intensity laser radiation in biotechnology cultivation of culinary-medicinal mushrooms

T. Tugay, N. Poyedinok, A. Tugay, O. Mykchaylova, A. Negriyko, Prospects for using low-intensity ionizing and laser radiation to enhance the melanin biosynthesis with fungi

B. Cekova, V. Bezhovska, I. Limani, F. Jovanovski, Microbiological composition of dehydrated agricultural products from the Republic of Macedonia

B. Cekova, F. Jovanovski, V. Bezhovska, The role of microorganisms in the preservation of some gardening products

P. Petrov, V. Markoska, B. Mitrovski, The influence of foliar fertilizing on some chemical parameters of the broccoli (*Brassica oleracea L. var. botrytis*)

S. Petrović, S. Savić, J. Zvezdanović, D. Cvetković, D. Marković, A lipid microenvironment impact on liposomes with incorporated pigments

L. Zelena, I. Gretskey, T. Kachur, Estimation of yeast flocculation under ultrahigh frequency electromagnetic radiation

S. Savić, S. Petrović, Z. Petronijević, Immobilization of horseradish peroxidase on hydrophobic carriers

Biomaterials

P. Kachesova, I. Goroshinskaya, O. Polozhentsev, V. Borodulin, O. Losev, The effect of zinc oxide nanoparticles on the growth of rat lymphosarcoma

G. Ciobanu, O. Ciobanu, Radio-opaque materials based on hydroxyapatite and bismuth

H. Saito, Gelation of DNA and bovine serum albumin (DNA-BSA gel) by gamma irradiation as bio-absorbent for acridine orange

K. Jusufi et al., Potential application of apple peels as bio sorbents in the removal of organic molecules from wastewater

K. Jusufi et al., Removal of dyes from wastewater using plant-based biosorbent derivate from potato peels

J. Halili, A. Berisha, A. Halili, V. Mehmeti, K. Jusufi, T. Demelezi, Direct (in situ) electrochemical determination of supercritical CO₂ extracted ascorbic acid from aqueous solutions onto Pt electrodes

Radiation Effects

A.-I. Cadis, L. E. Muresan, I. Perhaita, L. Barbu-Tudoran, E. Indrea, Studies on ZnS:Mn²⁺ prepared by microwave-assisted solvothermal decomposition of single-source molecular precursors

A. Ogurtsov, O. Bliznjuk, Kinetic study of synchrotron radiation induced rare-gas crystals modification by exciton self-trapping

J. Budinski-Simendić et al., The performance assessment of gamma irradiated elastomeric nanocomposites

G. Marković et al., The high energy irradiation ageing of reinforced elastomers based on rubber blends

S. Jovanović, G. Marković, S. Samaržija-Jovanović, M. Marinović-Cincović, V. Jovanović, J. Budinski-Simendić, The influence of gamma-irradiation on mechanical properties of nano-silica reinforced ternary NR/BR/SBR rubber blend

I. Khyzhniy, Radiation-induced species monitoring in nitrogen solids

A. Barabashov, E. Savchenko, I. Khyzhniy, Electron-stimulated desorption of excited atoms from solid nitrogen

I. Alekseev, The amorphization of metallic aluminium under the action of ⁵⁷Co recoil nuclei

E. Pereira et al., Impact of gamma irradiation on the cytotoxic properties and phenolic composition of *Thymus vulgaris* L. and *Menta x piperita* L

B. N. Van, Q. T. Minh, D. T. Bang, S. H. Dang, T. H. Phuong, T. N. Thi, Low molecular weight xanthan prepared by gamma irradiation and their effects on seedlings

Â. Fernandes, A. L. Antonio, M. B. P.P. Oliveira, A. Martins, I. C.F.R. Ferreira, Gamma radiation preserves chemical and bioactive properties of *Boletus edulis* wild mushrooms

J. Reszczyńska, L. Dobrzyński, K. Fornalski, Y. Socol, Low dose radiation response: from life span studies to mathematical models

Radiobiology

A. Solovev, A. Chernukha, V. Potetnya, S. Uliyanenko, Towards accurate simulation of RBE and radiation-induced damage in carbon ion beams using Geant4

E. V. Koryakina, V. I. Potetnya, R. M. Baykuzina, M. V. Troshina, Cytogenetic evidence of hrs/irs effects in Chinese hamster cells following Carbon-12 ions irradiation

T. Andriichuk, N. Raksha, S. Lugova, L. Ostapchenko, ATP- dependent steps of radiation-induced apoptosis

S. Belkina, Optimizing the efficiency of the sequential thermoradiation therapy in oncology

A. Ylli, I. Stamo, L. Binxhija, Influence of mutagens on decorative plants

A. Ylli, M. Karcini, L. Binxhija, Induced mutagenesis applied in bean seeds

N. Giliano et al., Efficacy of ytterbium sources to induce lethal and cytogenetic damages in human cells in culture

F. Cutanda, S. Vargas Castrillón, A mathematical approach to the composition of tumour control probabilities for hypofractionated schedules and replanned treatments

20:30-23:30 Conference Cocktail

Tuesday, May 24

08:30-10:00 Oral sessions

Radiation Measurements

Room A

A. Mortassim, M. A. Misdaq, A. Chaouqi, J. Ougidi, A. Chaib, The measurement of ^{238}U and ^{232}Th in petrol, gas-oil and lubricant samples by using nuclear track detectors and resulting radiation doses to the skin of mechanic workers

I. Iliev, Airborne gamma-spectrometry mapping

M. Valente, R. Figueroa, F. Malano, P. Perez, M. Santibañez, J. Vedelago, Fricke gel dosimeter layers optically analyzed for quality assurance in stereotactic radiosurgery

D. Chacón, F. Mattea, M. Valente, Development and characterization of a novel polymer gel dosimeter based on itaconic acid fixed to a gel matrix with glutaraldehyde

S. Vargas Castrillon, F. Cutanda Henriquez, On the use of a parallel plate ion chamber for FFF photon PDDs measurements

R. Mehra, Measurement of uranium concentration in water samples for the assessment of the hazard quotient

Radiobiology, Radiation Effects

Room B

V. Hadjidekova, J. Vasileva, E. Sultanov, The effect of ionizing radiation on the embryo and fetus. Real case studies

T. Paunesku, B. Haley, G. Woloschak, The dose rate effectiveness factor calculations using animal archive data

J. Pinela et al., From the field to the table: Ionizing radiation as a feasible postharvest treatment for fresh and dried plant foods

A. Egorkin, A. Chasovskikh, N. Khamidullina, D. Zakharenko , The improvement of food shelf life with ionizing irradiation

N. Shimalina, E. Antonova, V. Pozolotina, Quality of *Plantago major L.* seed progeny growing within radioactive or chemical contaminated areas

S. Sorokina et al., Use of cytogenetic endpoints to evaluate influence of proton irradiation on mice *in vivo*

V. Antonic, G. Ganga, I. L. Jackson, T. Shea-Donohue, Z. Vujaskovic, Development of novel murine model of combined radiation and peripheral tissue trauma injury

T. Shea-Donohue, V. Antonic, N. Desai, I. L. Jackson, Z. Vujaskovic, The role of impaired mucosal barrier function in irradiation-induced chronic Gastrointestinal (GI) syndrome

10:00-10:30 Refreshments

10:30-11:30 Plenary session

Invited lectures Room A

10:30-11:00 Martin Hauer-Jensen, Radioprotective properties of tocotrienols

11:00-11:30 Marko Markov, Biophysical bases of magnetotherapy

11:30-13:00 Oral sessions

Microwave, Laser, RF and UV radiations; Biophysics Room A

A. Aguirre, Wide-bandwidth measurements of non-ionizing radiation: their errors versus the mobile phone system operating level

D. Jelovac et al., The influence of mobile phones radiation on the occurrence and development of head and neck tumors

A. Guridov, E. Deshevaya, S. Shashkovsky, D. Zakharenko, N. Khamidullina, N. Novikova, The development of pulsed UV units and regimes of air and surface decontamination in a landing module

M. Israel, I. Topalova, Ts. Shalamanova, M. Ivanova, V. Zaryabova, Data of EMF measurements in urban areas with high density of sources and such with "Sensitive places and buildings"

J. K. Kim, J.-H. Kim, V. G. Petin, Biological actions of ionizing radiation combined with another factor: Numerical approach

S. Todosijević, Z. Šoškić, S. Galović, Measurement of optical and thermal properties of biological tissues and analysis of transport processes in them

S. Brkić, M. Pinjuh, Quantum dots as biological markers

Radiation Measurements

Room B

S. Mittal, A. Rani, R. Mehra, R.C Ramola, Estimation of natural radionuclides hazards and annual effective dose measurement in soil samples of Northern Rajasthan, India

Ö. Karadeniz, F. Çoban, H. Karakurt, R. Çakır, Determination of radiocesium levels in forest soils of mount Ida in Turkey

B. Canbaz Öztürk, N. F. Çam, G. Yaprak, O. Candan, The natural radioactivity in the beach sand - Canakkale, Western Anatolia / Turkey

J. Madunic, S. Brkic, Contaminated areas of southern Bosnia and Herzegovina

R. Mehra, S. Kaur, R. Jakhu, P. Bangotra, The measurement of uranium concentration in water samples for the assessment of the radiological dose in Patiala and the Fatehgarh district of Punjab

13:00-14:30 **Lunch**

14:30-16:00 **Oral sessions**

Biomedicine, Cancer Research, Radiation Oncology

Room A

Z. Becker-Kojic, A. Schott, I. Zipancic, V. Hrabaza, V. Herranz Perez, J. M. Garcia Verdugo, Neuronal differentiation of ACA-generated pluripotent stem cells and their potential application in cell replacement therapy

G. Babić, S. Marković, Z. Dolićanin, N. Đorđević, J. Milošević, Estradiol improves mean arterial pressure through reductions of oxidative stress in women with preeclampsia

S. Shubeska Stratrova, G. Petrovski, S. Markovik Temelkova, Central obesity index and its estimated values relationship in Cushing's syndrome

N. Anastasov, Three-dimensional microtissues as phenotypic models to categorize activity of radiation modifiers

L. Grzybowska-Szatkowska, B. Ślaska, J. Rzymowska, Missense mutations in mtDNA in breast cancer

Radiation Detectors

Room B

E. Yilmaz, S. Kaya, R. Lok, A. Aktag, H. Karacali, A. Jaksic, Newly-generated Nuclear Radiation Sensing Field Effect Transistor (NürFET) for irradiation detection

M. A. Carvajal Rodriguez, S. Martínez García, D. Guirado Llorente, A. Martínez Olmos, A. J. Palma Lopez, Thermal compensation for DMOS transistors used as real time dosimeters in electron beams

N. Japashov et al., Development of silicon strip detectors of nuclear radiation with orthogonal field

G. Georgiev, V. Kozhuharov, L. Tsankov, The PADME tracking system

L. Basiricò, A. Ciavatti, T. Cramer, P. Cosseddu, A. Bonfiglio, B. Fraboni, Flexible organic X-ray detectors

G. Georgiev, V. Kozhuharov, L. Tsankov, Plastic scintillations resembling LED driver

G. Medin, The new emerging technologies and materials: Graphene based sensors

16:00-16:30 Refreshments

16:30-18:00 Oral sessions

Radiochemistry, Environmental Chemistry

Room A

Yu. Demidov, A. Rusakov, A. Zaitsevskii, Interaction of superheavy elements (copernicium and flerovium) with selenium surface: Relativistic density functional study

N. Shchepina, V. Avrorin, G. Badun, R. Shchepin, Nuclear-Chemical method - New way for synthesis of tritium labeled radiotracers with fluorine substituted heterocyclic structure

Z. Žukauskaitė, B. Lukšienė, O. Jefanova, Investigation of Pu (III) sorption by minerals (Wustite/Magnetite and Hematite) and soil from aquatic solutions using Am (III) as an analogue

V. Pintilie, L.-P. Georgescu, L. Moraru, A. Ene, C. Iticescu, Natural radioactivity in drinking water from Galati and Vrancea areas, Romania

A. Banyasz et al., UV induced one-photon ionization of DNA and oxidative damage

I. Shtangeeva, M. Â. de B. C. Menezes, Is bromine a toxic trace element or is it an essential nutrient?

G.-N. Kim, S.-S. Kim, J.-W. Choi, The removal of uranium from the contaminated soil by electrokinetic technology

Radiation Detectors, Radiation Effects, Heavy Ion and Neutron Radiation Room B

A. Kahraman, E. Yilmaz, A. Aktag, Ş, Kaya, A detailed study of the radiation response of Er₂O₃ MOS capacitor under zero gate bias

J. Bi, The Body Bias Effects on the Single-Event-Transient of Silicon-On-Insulator CMOS Technology

V. Anan'ev, M. Miklin, V. Pak, D. Yakubik, Paramagnetic centers formation under radiolysis of crystalline potassium picrate

K. Krezhov et al., BaCe_{0.85}Y_{0.15}O_{3-δ} based materials for solid oxide fuel cells: neutron diffraction study

P. Chubunov, V. Anashin, S. Iakovlev, Estimation of heavy ions LET for SEE testing of electronic components using Roscosmos test facilities

N. Can, M. Ayvacikli, Y. Karabulut, L. Muresan, A. Canimoglu, Luminescence properties of Mg and rare earth doped yttrium aluminate based phosphors

N. Kamanina, Refractive properties of bio- and nano-structured materials as indicators of the model matrix macro parameter modification

18:00-19:30 **Poster session**

Lobby

Biomedicine and Pharmacology

A. Selimović, S. Milišić, E. Mujičić, Analysis of cystic fibrosis in Federation of Bosnia and Herzegovina

M. Čolović, V. Vasić, U. Kortz, D. Krstić, The influence of synthesized polyoxometalates on Na⁺/K⁺-ATPase activity

M. Čolović, V. Vasić, U. Kortz, D. Krstić, Interaction of some polyoxotunstates with acetylcholinesterase

I. Pavlović et al., The antioxidant capacity of the kidney tissue in patients with renal cell carcinoma

T. Dzopalic et al., Effect of silicon dioxide enriched water during chronic ingestion of aluminum on functional characteristics of peritoneal macrophages

T. Novaković, Z. Dolićanin, G. Babić, N. Đorđević, A correlation between hematological changes and fetal cells micronuclei in pregnant women with hypothyroidism

S. Shubeska Stratrova, G. Petrovski, S. Markovik Temelkova, Dual-energy X-ray absorptiometry determined body mass density and its relationship to bone turnover markers

K. Andreevska, D. Grekova, S. Gueorguiev, V. Madjarov, R. Kiskinova, E. Petkova, Penetration of tiotropium bromide on the Bulgarian COPD market

E. Petkova, V. Petkova, G. Petrova, S. Gueorguiev, Economic analysis of children with type 1 diabetes on continuous subcutaneous insulin infusion

I. Robo, S. Heta, The side effects of a group of antibiotics that are used the most in periodontal treatments

Biochemistry

B. Resulaj, R. Veseli, A. Rama, Differences in the accuracy between laboratory biochemical tests, and the extralaboratory ones

V. Zupunski, V. Spasic Jokic, M. Vasic, A. Savic, Z. Mitrovic, I. Zupunski, Estimation of uncertainty of trypsin inhibitor activity measurement in legume crops

Y. Gluhcheva, J. Ivanova, I. Vladov, K. Kamenova, Subacute cadmium intoxication and subsequent detoxification with chelating agents - a hematological study

Y. Gluhcheva, E. Pavlova, I. Vladov, Chronic exposure to cobalt chloride and murine erythrocytes - an in vivo study

Biophysics

D. Krezhova, I. Moskova, S. Maneva, N. Petrov, A. Stoev, Remote sensing of plant biophysics variables using hyperspectral reflectance measurements

D. Krezhova, S. Maneva, N. Petrov, A. Stoev, I. Moskova, Remote sensing of the influence of environmental changes on plant biophysical variables

S. R. De Luka, A. Ž. Ilić, S. Ćirković, D. M. Djordjević, J. L. Ristić-Djurović, A. M. Trbovich, Static magnetic field effects on biochemical reactions involving reactive oxygen species

A. Setrajcic-Tomić, Lj. Dzambas, J. Setrajcic, Optical core-shell model for nano-delivery applications

S. Mihajlovic, M. Cukavac, R. Čop, V. Antonic, The solar and magnetic weather-geoeffective impacts

M. Kato, Y. Okubo, The effect of gamma-ray irradiation on the motility and chemotaxis of *Escherichia coli*

J. Vujin, Dj. Jovanovic, R. Panajotovic, Physico-chemical characterization of lipid-2D-materials self-assembly for biosensors

Biomedical Engineering

S. Gajić, S. Ćirković, J. Ristić-Djurović, A. Ilić, D. Djordjević, V. Spasić-Jokić, Exposure system with homogeneous static and ELF magnetic fields in experimental volume

O. Ciobanu, G. Ciobanu, An application of kinect based 3D scanning in biomedical engineering

Cancer Research

E. Raeisi, S. M. Reza Aghamiri, N. Rahmatpour, A. Bandi, S. A. Kafi-Abadi, L. M. Mir, The antitumor efficiency of repeated electrochemotherapy with cisplatin on a breast cancer tumor model in mice

A. Berman, G. Morozevich, N. Kozlova, N. Gevorkian, Implication of akt kinase signaling in integrin alpha-2/beta-1 dependent anoikis resistance in human melanoma cells

G. Morozevich, N. Kozlova, N. Ushakova, N. Gevorkian, O. Susova, A. Berman, Implication of alpha-2/beta-1 and alpha-5/beta-1 integrins in drug resistance of human breast carcinoma cells

Radiation Oncology

P. Chakalaroski, V. Klisarovska, I. Stojkovski, J. Djundeva, Hypofractionated superficial high dose rate brachytherapy in treatment of non-melanoma skin cancers

V. Klisarovska et al., Single institution experience of two-dimensional versus three-dimensional intracavitary brachytherapy in locally advanced cervical carcinoma

I. Stojkovski, M. Risteski, V. Klisarovska, P. Chakalaroski, Comparison of doses and volumes of targets and organs at risk in patients with high grade glioma irradiated with two different techniques

J. Mahmood, R. Pavlovic, I. Jackson, Z. Vujaskovic, The molecular mechanism involved in radiation-induced erectile dysfunction (RiED)

L. Kastrati, G. Nafezi, G. Shehi, The penumbra of irradiations in linear accelerators, its use in radiotherapy of cancer diseases, negative effects, and the possibilities of reducing them

R. Mineikyte, V. Atkocius, Radiotherapy in Lithuania - from Cobalt to LINAC

V. Atkocius, Second primaries (SP): impact of HDR ²⁵²Cf brachytherapy neutron irradiated volume and dose

S. Georgieva, I. Payanova, R. Lazarov, Z. Spassova, I. Apostolova, Adjuvant radiotherapy of Malignant Triton Tumors (MTT)

Nuclear Medicine

S. Nakamura, Case study of improved imaging on DAT scan after deep brain stimulation in Parkinson's disease

J. Haglund, Preparing for a clinical drift of PET/CT, an example from Norway

Radiotherapy

P. Shokrani, M. Khorami, An investigation of dosimetric characteristics of composite shields for electron therapy: A Monte Carlo study

I. Scarlatescu, A. Chis, M. Spunei, C. Avram, Dose distribution in ArcCheck under the influence of positioning errors

V. Klimanov, A. Moiseev, M. Kolyvanova, The dose kernels for pencil beam and differential pencil beam of photons with the spectrum of the treatment machine with ⁶⁰Co source and their analytical approximations

Microwave, Laser, RF and UV radiations

Z. Podrascanin, Z. Mijatovic, A. Firanj, Trends of UV index measured in Novi Sad from 2004 to 2013

A. Berisha et al., The evaluation of the short term photostability of the Alprazolam drug

D. Dabala, V. Dabala, D. Surcel, E. Surducan, V. Surducan, Experimental model of risk assessment and management in occupational exposure to radiofrequency/microwave radiation

J. Pop-Jordanov, N. Pop-Jordanova, B. Gjoneska, Influence of mobile phones on brain functioning

M. Ivanova, Ts. Shalamanova, M. Israel, V. Zaryabova, H. Petkova, Occupational and environmental exposure to magnetic fields in residential buildings with built-in transformers

Ts. Shalamanova, M. Ivanova, R. Petrova, I. Topalova, P. Ivanova, M. Dimitrova, The EMF exposure of the general public after the digitalization of broadcast technology

N. Đorđević et al., Behavioral effects of low frequency electromagnetic field mediated by nitric oxide in rats' hypothalamus

Radiation Measurements

Ş. Turhan, Radioactivity levels in soils from the Cappadocia Region (Nevşehir city, Turkey)

Ş. Turhan, Determination of tritium activity concentrations in natural water samples

I. Pliopaitė Bataitienė, R. Mikalauskienė, Investigation of redistribution of artificial (^{137}Cs , ^{90}Sr) and natural (^{40}K) radioisotopes in different usage soils

M. Kuqali et al., A preliminary study of the distribution of environmental radioactivity in the urban area of Tirana city, Albania

V. Ivanov, A. Loutchanski, V. Ogorodniks, V. Fjodorovs, The use of a new generation of silicon photomultipliers in portable gamma radiation scintillator based detectors

T. Hülber, E. Kis, C. Pesznyák, K. Lumniczky, G. Sáfrány, First validation step of an automatic micronucleus counter: Comparison of manual and automatic micronucleus X-ray dose-effect curves

S. Stanković, R. Ilić, D. Nikolić, B. Lončar, MSV signal processing system and calculation of ratio ($Q_{\text{neutron}}/Q_{\text{gamma}}$) for BF₃ ionization chamber in Cf-252 field

M. S. Martínez García, A. Palma, J. Torres del Río, F. M. Martí, A. Jaksic, M. Á. Carvajal Rodríguez, The analysis of the radiation response of electrical parameters of different MOSFET models

B. Elouardi, M.A. Misdaq, A. Mortassim, Alpha radiation doses to the eyes of individuals wearing optical glasses

A. Aitayoub, M.A Misdaq, A. Mortassim, A. Chaouqi, The analysis of ^{238}U , ^{232}Th and ^{222}Rn in various fish samples and resulting radiation doses to the consumers

A. Matrane, M.A Misdaq, A. Mortassim, H. Erramli, ^{238}U and ^{232}Th concentrations measured in different medical drugs by using solid state nuclear track detectors and resulting radiation doses to the skin of patients

N. Antović, S. Andrukhovich, Asymmetry in experiments testing CPT in ortho-Ps decays

P. Atta Amoah et al., Radiation dose rate measurements around a nuclear installation

20:30-23:30 **Conference Cocktail**

Wednesday, May 25

09:00-19:00 **Conference Excursion**

20:30-23:30 **Conference Cocktail**

Thursday, May 26

08:30-10:00 Oral sessions

Radiation in Medicine Room A

J. Sabol, J. Hudzietzová, B. Sestak, The assessment of the exposure of radiation workers in nuclear medicine in the Czech Republic

V. Sukhov, D. Firsanov, K. Zaplatnikov, Dosimetry in nuclear medicine (PET/CT)

M. Kuranova, X-ray irradiation in the diagnosis of rare genetic diseases

A. Meštrić, Z. Rifatbegović, S. Kunosić, S. Kunosić, Radiofrequency ablation in liver tumor therapy

G. Sevo, M. Tasic, D. Paspalj, O. Vasovic, A. Milicevic-Kalasic, D. Damnjanovic, Serbian TC Cohort: 2016 Update - Therapeutic use of X-irradiation during 1950s and its delayed health consequences

S. Knezevic, B. Matejic, Z. Terzic Supic, P. Bulat, Exploring risk perception and behavior concerning occupational safety practices among the professionals in radiology services

Radioecology Room B

M. Długosz-Lisiecka, Unusual Po-210 and Pb-210 activity ratios in the air

M. Rajačić, D. Todorović, J. Krneta-Nikolić, M. Janković, G. Pantelić, N. Sarap, Radionuclide Loading Indices (RLI) for ^7Be and ^{210}Pb in Serbia in 2015

B. Mitrović, S. Grdović, B. Vranješ, M. Vićentijević, J. Ajtić, D. Sarvan, Radioecological investigation in the environment of Belgrade city, Serbia

B. Vranješ, B. Mitrović, V. Andrić, S. Grdović, Radioactivity in environment of Stara Planina mountain, in area of summer school for mountain animal breeding

R.-C. Begy, S. Kelemen, B.-D. Burghel, The investigation of the sedimentation rate in Cuibida and Isac lakes from the Danube Delta (Romania) by using ^{210}Pb dating methods

M. Varbeva, P. Kovacheva, The impact of rapid warming on the bioaccumulation of radionuclides and their transfer within the food chain

10:00-10:30 Refreshments

10:30-11:30 Plenary session

Invited lectures Room A

10:30-11:00 Renata Longo, Medical imaging with synchrotron radiation

11:00-11:30 Kei Yamada, Recent advances in diffusion weighted imaging

11:30-13:00 **Oral sessions**

Radiology

Room A

Keynote talk: J. Mihailović, FDG PET/CT physical aspects and clinical applications in medicine

J. Popić Ramač, V. Garay Vrhovac, The dynamic MR imaging of mediastinal tumors

E. Petrova, The significance of lung HRCT for the early diagnosis of pneumoconiosis

D. Stojanov, J. Ignjatovic, M. Dakovic Bjelakovic, D. Benedeto Stojanov, M. Djordjevic, N. Ignjatovic, Localisation, diffusion-weight imaging and apparent diffusion coefficient in preoperative assessments of brain abscesses

J. Ignjatovic, D. Stojanov, M. Dakovic Bjelakovic, D. Benedeto Stojanov, M. Djordjevic, N. Ignjatovic, Apparent Diffusion Coefficient (ADC) and localization in determining subtypes of meningiomas

W. Bulski, K. Chelminski, Nationwide audit of small field output calculations in Poland

Radioecology

Room B

M. Melgunov, The problem of the mobility of induced radionuclides in contaminated alluvial soils of the Yenisei river

A. Bolsunovsky, D. Dementyev, T. Zotina, M. Melgunov, The effect of radioactive particles on the Yenisei river ecosystem

D. Dementyev, A. Bolsunovsky, R. Borisov, S. Kosinenko, Distribution of radionuclides and heavy metals in bottom sediments of the Yenisei River (Russia)

L. Bondareva, The estimation of the toxicity and genotoxicity of water, sediments and submerged macrophyte *Elodea Canadensis* of the Yenisei river in the presence or absence of Americium-241

P. Sharagin, E. Shishkina, E. Pryakhin, I. Popova, D. Osipov, The concentration ratio of ^{137}Cs in the body of a fish found in the Techa river in comparison with the results of other water bodies

J. Nikolov et al., Isotopes ^3H , $\delta^2\text{H}$ and $\delta^{18}\text{O}$ in groundwaters from Vojvodina region

13:00-14:30 **Lunch**

14:30-16:00 **Oral sessions**

Medical Physics, Radiotherapy, Medical Devices

Room A

Keynote talk: R. Papineni, Radiobiophotonics and image guided radiation therapy

J. Haglund, Shielding requirements for PET/CT using the AAPM Task Report 108

A. Duraković, S. Fazlić, A. Nuhan, E. Avdić, Comparison of CTDI measurements in standard PMMA and in-house fabricated MDPE phantom

F. Ghareeb, S. Silva, J. Lencart, F. Borges, J. Santos, Comparison of measured and calculated out-of-field doses in a paediatric anthropomorphic phantom - out of the body scatter contribution evidence

Md. S. Rahman, Md. A. Sattar, M. N. Sharmin, AKM M. H. Meaze, Dosimetry of high energy photon and electron beams from medical linear accelerator: Study of international protocols with various ionization chambers

T. Hanušová, S. Buryšková, Impact of calibration curve precision on results of IMRT verification with EBT3 films

K. Chelminski, P. Sobotka, B. Buczek, E. Gruszczynska, W. Bulski, A phantom for brachytherapy treatment planning system verification with the ArcCHECK® device

M. Valente, R. Figueroa, Converay®: A device for convergent beam radiotherapy

O. Bockeria et al., Modeling of heart kinematics in experiments on the conversion of heartbeats into electrical energy to power epicardial pacemakers

Radioecology

Room B

P. Bossew, G. Cinelli, T. Tollefsen, M. De Cort, Towards a European map of terrestrial gamma radiation

I. Krajcar Bronić et al., Ten years of monitoring ¹⁴C activity in atmospheric CO₂ and biological samples around the Krško Nuclear Power Plant, Slovenia

Yu. Kutlakhmedov, Radioecological reliability and radiocapacity of different ecosystems

A. Jr. Dvornik, I. Cheshik, A. Dvornik, Assessment of air pollution by ¹³⁷Cs during forest fires

S. Karpenko, Radiation-epidemiological study of the incidence and mortality of cardiovascular disease among emergency workers of the Chernobyl accident

M. Cvijovic, S. Stankovic, B. Tanovic, Validation method for pesticide residue after gamma irradiation

16:00-16:30 **Refreshments**

16:30-18:00 Oral sessions

Medical Imaging

Room A

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

A. M. Şenışık et al., Comparison of the biological behavior of radiolabeled [^{18}F] FDG-Glycylglycine and $^{99\text{m}}\text{Tc}(\text{CO})_3^+$ - glycylglycine

V. Shchedrenok, O. Moguchaya, T. Zakhmatova, I. Zuev, K. Sebelev, The transformation of the brachiocephalic artery tortuosity at the verticalization of a patient

V. Antic, J. Haglund, Need for revising patient dose protocols in PET medical imaging - based on novel technology improvements

M. Dakovic Bjelakovic, D. Stojanov, J. Ignjatovic, J. Popovic, T. Dzopalic, Evaluation of variability of supraorbital notches and foramina using three-dimensional computer tomography volume rendering

J. Popović, M. Daković Bjelaković, J. Gašić, M. Spasić, M. Nikolić, R. Barac, The mental foramen position in relation to the radiographic apex of the mandibular second premolar

Radioecology

Room B

P. Bossew, G. Cinelli, M. Hernandez, T. Tollefsen, M. De Cort, Gamma radiation from "Radon peaks" - association with factors related to geogenic radiation sources and meteorology

Yu. Kutlakhmedov, I. Matveeva, The environmental standardization of radiation factors for the biota ecosystems

T. Paramonova, V. Belyaev, Cs-137 versus stable K in root uptake from radioactively contaminated soils: Field observations

D. Ganzha, C. Ganzha, Changes in fractal dimension of *Phragmites australis* leaves under chronic radiation exposure

T. Tugay, V. Zheltonozhsky, M. Zheltonozhskaya, A. Tugay, L. Sadovnikov, Decomposing radioactive hot particles found in the Chernobyl exclusion zone by microscopic fungi *Cladosporium cladosporioides*

D. Kumar Gupta, L. Hamann, C. Walther, Does nanomolar plutonium concentration generate oxidative stress in *Solanum tuberosum* L. (Potato) plants?

M. Krmar, D. Radnovic, M. Mesaros, J. Hansman, Z. Medic, Spatial distribution of some radionuclides in mosses collected in Serbia

Radiochemistry

A. Zlobina, L. Rikhvanov, N. Wang, I. Matveenko, The nature of high soil radioactivity in the Chinese province of Guangdong

B. Cetinkaya, S. Inan, Y. Altas, H. Tel, The synthesis of hydrous (Zr-Si)O₂ spheres by the sol-gel method and the investigation of column parameters for simulated waste solutions

R. Mikalauskienė, J. Mažeika, Investigation of different radiochemical procedures using Anion Exchange Resin Column for determination of Lead-210 by Liquid Scintillation Counter

L. Nedzveckienė, B. Lukšienė, Determination of plutonium sorption capacity in different type of soil

B. Tenjovic, N. Todorovic, J. Nikolov, I. Stojković, J. Spasojević, Determination of ⁹⁰Sr via Cherenkov radiation on Quantulus 1220 liquid scintillation counter after microwave digestion preparation of milk samples

J. Strišovská, D. Galanda, S. Dulanská, J. Kuruc, Separation procedure for the determination of neptunium and plutonium isotopes by extraction chromatography

A. Negron-Mendoza, S. Ramos-Bernal, M. Colin-Garcia, A. Heredia, Chemical evolution: An approach from radiation chemistry

A. Negron-Mendoza, E. Aguilar-Ovando, J. Cruz-Castañeda, T. Buhse, Radiolysis of aqueous glyceraldehydes at different irradiation temperatures

J. Krstic et al., Antibacterial Ag-poly (vinyl alcohol)/ws chitosan hydrogel synthesized by gamma irradiation

N. Dzhakipbekova, A. Issa, A. Alzhanova, Radioprotective technology to produce construction materials for nuclear power based on the sulfur binding

Environmental Chemistry

N. Masalitina, A. Ogurtsov, The investigation of the influence of Mn-Bi-Cu-Ce-O catalyst on the environment-friendly green process of low-temperature ammonia oxidation to nitrous oxide

L. Këpuska, V. Mehmeti, M. Ismaili, A. Berisha, V. Thaçi, K. Jusufi, Physicochemical characterization of the Goshica's clay and its use for nitrogen adsorption

L. Këpuska, V. Mehmeti, M. Ismaili, A. Berisha, K. Jusufi, V. Thaçi, Decolourization of oil by the Goshica's clay: A study of adsorption isotherms and bleaching kinetics

L. Këpuska, V. Mehmeti, M. Ismaili, A. Berisha, V. Thaçi, K. Jusufi, The evaluation of the pore size and pore distribution for the Goshica (Kosovo) clay modified with quaternary ammonium ions

A. Berisha et al., A comparative study of the organic molecule removal performance of the biosorbents derived from agricultural peels

A. Berisha et al., The removal of organochlorine pesticides from the organic or aqueous model system through the adsorption onto covalently-modified carbon powder

K. Jusufi, J. Halili, A. Berisha, A. Halili, V. Mehmeti, B. Korça, Determination of heavy metals in numerous rivers in Kosovo during a one-year period

J. Halili, A. Berisha, A. Halili, V. Mehmeti, K. Jusufi, Color removal from aqueous solutions containing dissolved organic molecules using the material derived from cucumber peels as a low cost bio-sorbent

J. Halili et al., The evaluation of dithizone performance as a complexing reagent for the supercritical CO₂ extraction of heavy metals from aqueous solutions

V. Mehmeti, K. Kalcher, F. Podvorica, A. Berisha, Corrosion inhibition of mild steel in aqueous sulfuric acid solution using heterocyclic mercapto compounds

V. Mehmeti, K. Kalcher, A. Berisha, F. Podvorica, Experimental and theoretical (DFT/B3LYP) studies on corrosion behavior of some mono and polyhydroxy aromatic derivatives on copper

V. Mehmeti, K. Kalcher, A. Berisha, F. Podvorica, The corrosion inhibition performance of the covalently bonded poly(bromophenylene) layers onto mild steel

J. Velevska, N. Stojanov, M. Pecovska-Gjorgjevich, M. Najdoski, Visible light modulation using chemically deposited electrochromic thin films

L. Binxhija, A. Ylli, Medical plants in different soils with heavy metals

L. Bondareva, A. Kuzmin, The influence of oil on the rye grain culture of *S. cereale* (L)

M. Mihajlović et al., Effect of KOH activation on hydrochars: FT-IR spectroscopy analysis

S. Bijelovic, N. Dragic, E. Zivadinovic, J. Nikolov, N. Todorovic, Gross *alpha* and *beta* particle activities in public wells in the territory of the AP of Vojvodina

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

Radiation Detectors

M. Yüksel, Z. G. Portakal, T. Dogan, M. Topaksu, Luminescence study of neodymium-doped calcium sulfate

M. Yüksel, Thermoluminescence properties of anhydrous sodium sulfate

M. Topaksu, M. Yüksel, T. Dogan, Determination of natural calcium fluorite trap depths

T. Onodera, K. Hitomi, T. Shoji, Thallium bromide semiconductor crystals grown via vertical traveling molten zone method for fabricating gamma-ray detectors

S. Mallows, Predicting the radiation levels in the CMS experimental cavern

Radiation Effects

A. Sogoyan, G. Davydov, A. Artamonov, A. Kolosova, Y. Ozhegin, A. Kameneva, The identification of microelectronic devices during the incoming control stage

E. Yilmaz, R. Lök, S. Kaya, H. Karacali, Total-dose radiation response of hafnium-silicate MOS capacitors

A. Demidova, A. Kessarinsky, Heterogeneous radiation behavior of different samples of Honeywell SS495A magnetic field sensor

A. Demidova, M. Koroteev, A. Borisov, Dose rate induced danger parameter deterioration of the logic level converters in the switched-off mode

Neutron and Heavy Ion Radiation

G. Ryazantsev, M. Khaskov, Neutron matter and its place in the Periodic system of elements

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

Radiation in Medicine

N. Metlyaeva, A. Bushmanov, V. Krasnyuk, E. Zapadinskaya, O. Scherbatic, M Bolotnov, The valuation of the adaptation effectiveness of the military personnel and personnel of ChNPP, who participated in the liquidation of the ChNPP Accident in 1986 and 1987

M. V. Troshina et al., Radiochromic film dosimetry in high energy ion beams

S. Kadiri et al., Evaluation of X-ray beam quality based on measurements in some medical treatment centers

H. Harrass, M.A. Misdaq, A. Mortassim, Determination of beta radiation dose to thyroid from the ingestion of radioiodine (^{131}I) by patients for diagnostic and therapeutic purposes

S. Rafajlovic, P. Bozovic, D. Arandjic, S. Ceklic, Dj. Lazarevic, O. Ciraj-Bjelac, Mammography in Serbia: image quality and radiation dose

Z. Brnić, I. Bušić-Pavlek, S. Schmidt, T. Krpan, Old and outdated radiology equipment in Croatia - radiation safety and economical consequences

A. Petres, S. Stojanovic, P. Bozovic, D. Arandjic, V. Til, O. Ciraj-Bjelac, Radiation exposure to patients and interventional radiology staff during peripheral vascular angiography and intervention

E. Dautović, U. Suljić, Radioimmunotherapy in the treatment of cancer

Medical Physics

E. Sukhikh, L. Sukhikh, E. Malikov, P. Filatov, Evaluation of measurement dose uncertainty of Gafchromic EBT3 because of local inhomogeneity

E. Sukhikh, I. Khassenova, L. Sukhikh, E. Malikov, Investigation of dose buildup region from electron beam by of polymer films and ionization chamber

Y. N. Kim, S. K. Kim, Feasibility of using artificial neural network algorithm to estimate dose distribution for radiation treatment

S. Stepanov, V. Byakov, Yu. Perfiliev, L. Kulikov, The application of the positron annihilation and emission Mössbauer spectroscopy for detection of chemical carcinogens

R. Georgiev, I. Payanova, Z. Spasova, Lj. Iliev, S. Georgieva, R. Lazarov, CT and MRI image fusion to improve target positioning for Stereotactic Radiosurgery (SRS) treatment planning

N. Jovancevic, B. Andjelic, M. Milakovic, M. Krmar, New application of unfolding technique in estimation of energy spectra of therapy photon beams

S. Rafajlović, G. Nišević, Proposal of tests that should be conducted before the treatment, periodically and during radioactive source replacement, with the aim of introducing quality control and quality assurance in brachytherapy

S. Boujemaa, H. Bosmans, F. Bentayeb, Preliminary study on mammography quality control in Moroccan hospitals

K. Bliznakova, Development of breast software phantom dedicated for research and educational purposes

R. Longo, R. Padovani, L. Bertocchi, A medical physics training opportunity for young physicists in Italy

20:30-02:00 **Conference Gala Dinner**

Friday, May 27

08:30-10:00 Oral sessions

Radon and Thoron

Room A

F. Cardellini, M. Capogni, L. Quintieri, The Italian thoron reference measurement system

P. Miklyaev, T. Petrova, A. Marennyy, A. Tsapalov, S. Kiselev, Experience in mapping geogenic Radon potential in Russia

A. E. A. Elzain, Dose assessment of inhalation exposure to indoor radon in Sudan using SSNTDs

M. Mostafa, M. Vasyanovich, M. Zhukovsky, Prototype of radon concentration standard with closed system

M. Prasad, P. Bossew, R. Mishra, R.C. Ramola, The study of radon, thoron, attached/unattached progeny, unattached fractions, equilibrium factors and the radiation doses in the indoor environment of Garhwal Himalaya

Radiation Physics

Room B

A. Selva, V. Conte, P. Colautti, B. Grosswendt, Experimental nanodosimetry of 25 MeV protons at DNA scale

D. Mrdja, K. Bikit, I. Bikit, J. Slivka, S. Forkapic, Optimization of the HPGe detector shield by Monte-Carlo simulations

T. Bayram, S. Akkoyun, N. Çelik, E. Hacıslamoğlu, S. Uruk, Ş. Şentürk, Photo-nuclear reaction products of Xe-131

M. Valente, R. Figueroa, F. Malano, M. Santibañez, Monte Carlo simulations to optimize the setup for the detection of Au nanoparticles in tumors

R. Panajotovic, J. Vujin, Dj. Jovanovic, Electron-beam damage from SEM to lipid-(graphene, MoS₂, WS₂) heterostructures

A. Kozlova, N. Kozlova, E. Zabelina, D. Spasskiy, M. Voronova, K. Shcherbachyov, Radiation-induced defects and dichroism in La₃Ga_{5,5}Ta_{0,5}O₁₄ crystals

M. Thakurdesai, S. Survase, CdTe nanophase formation using swift heavy ion irradiation

10:00-10:30 Refreshments

10:30-11:00 **Plenary session**

Special talk **Room A**

Vladimir Jurišić, Methods for estimation of innate immune system function

11:00-12:30 **Oral session**

Radon and Thoron **Room A**

A. S. Silva, M. de L. Dinis, A. Pereira, Assessment of indoor Radon levels in Portuguese thermal spas

V. Udovicic et al., First national indoor radon survey in Serbia

J. P. Dembo, Cs. Szabo, Zs. Szabo, P. Volgyesi, Seasonal and spatial variation of Radon and Thoron in Angolan adobe houses

M. Bölükbaş, M. M. Saç, C. Taşköprü, Determination of indoor radon concentration in Manisa-Soma Mine

V. Udovicic et al., In-field intercomparison indoor radon measurements in radon-prone areas of Niska Banja, Serbia

J. Vaupotič, Ana Brodar, Exposure to radon and nano aerosol in dwelling of high radon level

12:30-14:00 **Lunch**

14:00-15:30 **Poster session** **Lobby**

Radiology

M. Marković, M. Petrović, O. Petrović, D. Marković, T. Nikolić, V. Jurišić, How may PET/CT really help in the evaluation of presence metastases: The case of liver metastases which is visualized on the basis of CT but not on the basis of PET/CT techniques

D. Nikolić, V. Jurišić, CT for the monitoring of osteoarthritis: a rare localization of the shoulder of a boy aged 12 years

R. Radović, M. Perišić, V. Jurišić, Ultrasound to monitor the size of the gallbladder during meals

Medical Imaging

M. Sessa et al., Suspected adverse reactions to contrast media in the Campania Region (Italy): results from 14 years of post-marketing surveillance

K. Halavataya, T. Ginko, L. Kalatskaya, Interactive color image processing in photodynamic therapy

Ni. A. Pasare (Tudor), R. Mutihac, Analysis of susceptibility-weighted images using support vector machine in Parkinson's disease

I. Dimitrijevic, D. Mancic, M. Kocic, M. Lazovic, The role of the infrared thermography in diagnosing the unilateral complex regional pain syndrome type I

V. Antic, J. Haglund, Connections between Noise Equivalent Count Rate and Image Noise in PET Medical Imaging

D. Bulja, D. Stojanov, J. Ignjatovic, M. Dakovic Bjelakovic, J. Popovic, The incidence of dehiscence of the tympanic segment of the facial nerve canal estimated Computed Tomography

D. Ospanova, Zh. Abdrakhmanova, M. Kanafina, The analysis of results trephine biopsy under visual control of breast lumps provided in Astana oncology center

Zh. Abdrakhmanova, Endoprosthesis replacement and X-ray diagnostics of knee joints among patients with of hemophilic arthropathy

Radioecology

A. Nikitin, O. Shurankova, O. Popova, R. Korol, The quantitative assessment of the peroral intake of transuranium elements by the wild hoofed animals inhabiting the Polesie state radiation-ecological reserve

M. Varbeva, P. Kovacheva, The impact of sharp temperature shift on the water-soluble forms of technogenic radionuclides in different soil types

J. Ajtić, V. Đurđević, D. Sarvan, E. Brattich, M. A. Hernández Ceballos, Beryllium-7 specific activity in surface air and its correlation with tropopause height, meteorological variables, potential vorticity, solar zenith angle, and number of sunspots

J. Ajtić, V. Đurđević, D. Sarvan, E. Brattich, M. A. Hernández Ceballos, Analysis of extreme Beryllium-7 specific activities in surface air

M. Konstantinova, B. Benedikta, N. Tarasiuk, E. Maceika, Accumulation of Cs isotopes by different above-ground-vegetation after the Fukushima Daiichi NPP accident

G. Lavrentyeva, R. Shoshina, B. Synzynys, Application of zonality conceptual model of chronic effects of ionizing radiation for studying behavior of Sr-90

T. Tugay, A. Tugay, Adaptation of hyphomycetes to chronic ionizing radiation

S. Choi, D. Kim, J. Chae, The bioaccumulation factor of heavy metals in marine organisms from the Korean coast

- M. Kropacheva, M. Melgunov, I. Makarova, Isotope contents and transfer factors of ^{137}Cs and ^{90}Sr in biogeocenosis of Yenisei river floodplain
- S. Aközcan, M. Yılmaz, F. Külahcı, Determinations of gamma emitting radionuclides in soil samples from Thrace Region, Turkey
- S. Aközcan, M. Beste Öztürk, Environmental radionuclide determination and radioactivity evaluation of sediment samples collected along the Büyük Menderes River, Turkey
- A. Puzas, R. Gvozdaitė, R. Druteikienė, J. Šapolaitė, V. Juzikienė, V. Remeikis, Plutonium isotopic ratios analysis in environmental soil samples - a technique to detect artificial nuclear contamination
- Lj. Janković Mandić, R. Dragović, S. Pisanjuk, S. Dragović, Natural radionuclides in the soil of Subotica, Serbia: Their distribution and corresponding gamma dose rates M. Tanić, G. Bačić, Lj. Janković Mandić, Spatial and depth distribution of ^{137}Cs in soil around "Nikola Tesla A" coal fired power plant, Serbia
- A. Oudalova, S. Geras'kin, S. Pyatkova, N. Dikareva, S. Kiselev, Cyto- and geno-toxicity of natural waters in the vicinity of radioactive waste storage facilities
- S. Meseldžija, J. Đorđević, Lj. Janković Mandić, A. Onjia, Population doses from terrestrial exposure in the vicinity of the Kostolac thermal power plant, Serbia
- D. Joković et al., A study on natural radioactivity of various environmental samples from the vicinity of the Obrenovac power plant
- L. Zelena, T. Tugay, A. Tugay, Genetic analysis of *Aspergillus versicolor* growing at Chernobyl zone
- M. Varbeva, P. Kovacheva, The influence of the soil organic matter on the migration ability of technogenic radionuclides in different soil types under a sharp temperature shift
- A. Angeleska, E. Dimitrieska Stojkovic, R. Crceva Nikolovska, B. Dimzovska, R. Uzunov, ^{226}Ra , ^{232}Th and ^{40}K in wheat samples with the estimation of the index of radiation risk in the surrounding of the city of Skopje (R. Macedonia)
- I. Martin, A. Gusev, M. Alves, Radon progeny fallout in tropical rainfalls
- I. Martin, A. Gusev, M. Alves, Observation of radon progeny neutrons
- N. Gradasevic, D. Samek, N. Mujic, The study of the vertical migration of ^{137}Cs in the chain soil-grass
- M. Janković, D. Todorović, M. Rajačić, N. Sarap, J. Nikolić, G. Pantelić, Study of radioactivity in environment around power plants TENT A and KOLUBARA due to coal burning for 2015

R.-C. Begy, E. Reizer, A. Timar Gabor, F. Forray, Different potential systematic uncertainties involved in ^{210}Pb dating method

H. Vasylyeva, S. Vuchkan, V. Yakovlev, Yu. Kylyvnyk, The influence of gamma-irradiation on properties of surface of inorganic sorbents

O. Symkanych, S. Sukharev, S. Delegan-Kokayko, O. Glukh, The distribution of heavy metals and gamma-active nuclides in natural objects

Radon and Thoron

M. Schläger, K. Murtazaev, B. Rakhmatuloev, P. Zoriy, B. Heuel-Fabianek, Radon exhalation of the uranium tailings dump Digmai, Tajikistan

A. Marennyy, P. Miklyaev, A. Tsapalov, T. Petrova, S. Kiselev, Assessment of potential Radon hazard of building sites in Russia

G. Nafezi, L. Kastrati, G. Hodolli, S. Kadiri, M. Kuqali, M. Bahtijari, Radon activity concentrations in underground workplaces other than mines in Kosovo

C. Taşköprü, M. Ichedef, M. M. Sac, Determination of radon concentrations and diffusion coefficients in soils of the Küçük Menderes basin

A. Kasić, A. Kasumović, F. Adrović, M. Hodžić, Radon activity concentration in drinking water in Tuzla City, Bosnia and Herzegovina

I. Stojković, J. Nikolov, N. Todorović, PSA discriminator influence on ^{222}Rn efficiency detection in waters by liquid scintillation counting

M. Bulko, K. Holý, Ž. Pohronská, M. Müllerová, Estimation of the effective dose from natural sources in the vicinity of Mochovce nuclear power plant, Slovakia

B. Vuckovic, Lj. Gulan, B. Milenkovic, J. Stajic, G. Milic, Indoor radon and thoron concentrations in some municipalities in southern part of Serbia

L. Coretchi, I. Plavan, I. Bahnarel, S. Virlan, A. Cojocari, T. Streil, Control of public exposure to radon in Republic of Moldova

S. Mittal, A. Rani, R. Mehra, Estimation of annual effective dose due to radon and thoron level in indoor air of Northern Rajasthan, India

A. K. Farhood, L. M. Rasheed, A study of radon concentrations and the radiation dose levels in salt samples extracted from Samawa Saltern - Iraq

A. Ion, The estimation of annual effective dose from indoor radon and radon concentration measurements in the Geological Institute office building, Bucharest, Romania

M. Długosz-Lisiecka, J. Olszewski, Intercomparison of selected monitors for Rn-222 activity determination in the air

Radiation Physics

- O. Bliznjuk, A. Ogurtsov, Inelastic scattering, energy loss and channeling of photoelectrons in N₂ doped solid Kr
- B. Firoozi, M. Malek Mohammadi, S. M. Hosseini Pooya, Allowed and First-Forbidden Unique Beta Decay Study of ¹⁶N to ¹⁶O in Random Phase Approximation Framework
- G. Ryazantsev, M. Khaskov, Neutrino resonant interaction as a possible reason of nuclear object accidents
- S. Milutinović, F. Jeremić, M. Mišić, M. Vujisić, P. Marinković, Platform dependent efficiency of a Monte Carlo code for tissue neutron dose assessment
- E. Lagzdina et al., ¹⁴C analysis of the graphite disposal from RBMK-1500 reactor
- E. Erdoğan, O. Güneyli, M. Garipagaoglu, H. Kucucuk, The effect of FFF for patients receiving pelvic radiotherapy using Volumetric Modulated Arc Therapy (VMAT) Technique
- M. Popovic et al., A study of gamma-irradiated Poly-L-Lactide by dynamic thermal techniques
- D. Maletic et al., Variation of Muon Cosmic Ray flux recorded by Belgrade Cosmic ray station during December 2015 and comparison with European Neutron flux monitors
- P. Szajerski, A. Gasiorowski, M. Jakubowska, Dosimetric behavior of rare earth doped phosphate glasses and polytetrafluoroethylene composites

Other topics

- P. Atta Amoah, V. Horlu, E. Sarhene, Thermal conductivity of refractory brick materials using transient hot wire method of comparison

VIRTUAL SESSION

Radiobiology:

- O. Jaupaj, I. Stamo, V. Malo, Genetic improvement by means of γ -ray techniques in *Triticum aestivum*: Results on David x Mec variety
- O. Jaupaj, I. Stamo, M. Deda, V. Malo, N. Bardhi, Plant height reduction by means of γ -ray techniques in three genotypes of *Triticum*
- S. Milyukov, Yu. Lysak, G. Panshin, N. Kharchenko, S. Golub, T. Izmailov, Clinical radiobiology of infiltrative low-grade gliomas (grade II)

L. Liozhyna, O. Bulko, S. Pchelovska, A. Berestyanaya, D. Sokolova, Effect of X-ray on plants and hairy roots of *Digitalis Purpurea l.*

E. Grigorkina, G. Olenov, O. Tarasov, Adaptation mechanism of small mammal populations to acute and low level chronic exposure

N. Hovhannisyanyan, A. Karapetyan, V. Grigoryan, Evaluation of endocrine disorders in liquidators of Chernobyl Nuclear Power Plant

Radiochemistry:

N. Chernorukov, O. Nipruk, E. Kostrova, K. Chaplieva, Synthesis and study of potassium uranate

N. Chernorukov, O. Nipruk, E. Kostrova, K. Chaplieva, E. Kostrova, Synthesis and study of plumbum uranate with general formula $Pb(UO_2)_2O_2(OH)_2 \cdot H_2O$

N. Alov, P. Sharanov, D. Filatova, Total reflection X-ray fluorescence analysis of advanced oxide nanomaterials

C. Vancea, M. Demeter, I. Calina, A. Scarisoreanu, E. Stancu, E. Badita, Synthesis of superabsorbent xanthan-reduced oxide graphene hydrogels using electron beam irradiation

A. Scarisoreanu, M. Demeter, C. Vancea, E. Stancu, E. Badita, I. Calina, The radiation synthesis and characterization of the network structure of collagen-PVP superabsorbent hydrogels

Radiation Physics:

L. Elnikova, O. Iliyukhina, E. Prokop'ev, Y. Funtikov, Applications of positron annihilation spectroscopy for investigations of organic liquids

Radiation in Medicine:

N. Ivanova, S. Ivanova, Radiation protection or what if?

Radiation Measurements:

V. Starichenko, N. Lyubashevskiy, Bioindication as verification formulas for calculating Sr-90 dose in the skeleton of small mammals

A. Cannuli, A study of monitoring high frequency electromagnetic field pollution in urban areas

A. Cannuli, E. Calabrò, M. T. Caccamo, S. Magazù, Measurements and effects of microwaves radiation emitted by wireless communication devices

Radiation Protection:

M. Pourkaveh, A comparative survey of the awareness level of working doctors and medical students in the Hamadan province concerning the medical response and preparedness in nuclear accidents

Radioecology:

I. Gretskey, T. Shylo, The use of luminous bacteria *Photobacterium phosphoreum* as a bioindicator of geomagnetic activity

M. Jakubiak, M. Rykaczewska, R. Stęborowski, G. Bystrzejewska-Piotrowska, M. Asztemborska, Accumulation of cesium and strontium by mycelia of *Pleurotus eryngii* in the presence of alumina nanoparticles

N. Shamal et al., Influence of microbiological preparation EM1 on state of ^{137}Cs in soil

R. Spirov, R. Korol, A. Nikitin, The substance of transuranic elements in *Corynephorus canescens* and *Vaccinium myrtillus* growing in the Polesye state radiation ecological reserve

R. Spirov, R. Korol, A. Nikitin, The substance of transuranic elements in *Betula pendula* growing in the Polesye state radiation ecological reserve

R. Spirov, R. Korol, A. Nikitin, The substance of transuranic elements in *Pinus sylvestris* growing in the Polesye state radiation ecological reserve

Lj. Gulan, B. Milenković, B. Vučković, G. Milić, Measurements of radioactivity levels in the soil samples from Pristina, Kosovo and Metohija, Serbia

Yu. Kutlakhmedov, S. Phelovskya, A. Salivon, L. Tonkal, Issues of synergy and antagonism of radiation and chemical factors

Radon and Thoron:

L. Chunikhin, A. Chekhovskii, D. Drozdov, Mapping radon risk on the territory of Republic of Belarus

Radiation Effects:

D. Grodzinsky et al., The effect of acute X-ray irradiation of medicinal plant seeds on the secondary metabolite productivity

E. Calabrò, S. Magazù, Microwave radiation at 1800 MHz induces increase of β -turn and β -sheet features in typical proteins

E. Calabrò, S. Magazù, Reorientation of polymer chains can be produced by extremely low frequency electromagnetic field radiation

E. Pylypchuk, E. Domina, Effect of co-mutagens on radiosensitivity of human somatic cells

I. Kovalchuk, M. Gzhegotskyi, V. Dukach, The impact of radiation on the fatty acid composition of phospholipids of the blood plasma, myocardium and liver tissues of rats

Radiology:

M. Cherkashin, A. Serov, N. Berezina, G. Lyutyh, D. Puchkov, Central venous port catheter system implantation navigated by multispiral chest computer tomography

V. Kuplevatsky, M. Cherkashin, N. Berezina, N. Vorobyov, A. Mikhailov, Indications for MRI-guided prostate biopsy

N. Sirakov, I. Angelova, A. Todorov, L. Chervenkov, V. Sirakov, Cases of abscesses of the sternocleidomastoid muscle

Nuclear Medicine:

M. Firsova, N. Polyakova, O. Kashchenko, Intermittent usage of zolendronic acid and pamidronate between radionuclide therapy courses

Yu. Lysak, V. Klimanov, B. Narkevich, The assessment of absorbed dose in radionuclide therapy

Radiotherapy:

S. Milyukov et al., Influence of different radiotherapy parameters on overall disease - specific survival in patients with low-grade gliomas

N. Vorobyov, G. Andreev, A. Kalesnik, A. Lyubinsky, Early results of hypofractionation combined with whole pelvic irradiation for high-risk prostate cancer

Cancer research:

S. Milyukov et al., The impact of predictors on disease-free survival in patients with supratentorial infiltrative low grade gliomas (grade II)

E. Domina, E. Pylypchuk, Development of approaches for the primary prevention of radiogenic cancer

E. Kuzmina, T. Mushkarina, T. Konstantinova, Minimal residual disease can predict response to treatment of lymphoproliferative disorders

E. Kuzmina, O. Vatin, M. Kaplan, N. Tkachenko, Systemic effect of photodynamic therapy for cancer on cytokines level

Environmental Chemistry:

E. Klementjeva, S. Ovsianikova, Assessment of natural radionuclides in Belarusian drinking water sources

Microwave, Laser, RF and UV radiations:

S. Voychuk, E. Gromozova, V. Pidgorskiy, Yeast cell wall polysaccharide content under action of RF EMF and chemical stresses

N. Statsyuk, K. Thakur, S. Tatiana, M. Kuznetsova, Effect of the pre-planting treatment of tubers with low-frequency pulse electric field on some biometric parameters of potato plants

M. Kuznetsova, N. Statsyuk, A. Rogozhin, A. Filippov, Low-frequency pulse electric field: a new green technology to improve the yield of vegetable crops

S. A. Komarova, A. A. Oleshkevich, The use of UV spectrophotometry for the examination of animal hair

Medical Devices:

D. Mandić, D. Cvetković, MADU innovative medical device

Biomedicine:

E. Kuzmina, T. Mushkarina, T. Konstantinova, L. Krikunova, Activation status of lymphocytes' subpopulations, apoptosis and the level of circulating regulatory T-cells in the development of reproductive system diseases in women living in radioactively contaminated territories following the chernobyl accident

E. Kuzmina, S. Zatsarenko, T. Mushkarina, Combined immunity indicators for differential diagnosis of Hodgkin's lymphoma remission and relapse

E. Kuzmina, E. Kovalenco, O. Vatin, T. Mushkarina, V. Pavlov, Tumor associated of stress-induced molecule MICA in the blood can block the activity of NK cells in cancer

Biochemistry:

A. A. Oleshkevich, Enzyme activity and cellular functions modified by ultrasound

Biophysics:

A. A. Oleshkevich, Growing, biochemical & emissional processes' intensification with modulated ultrasound

L. Baliulytė, J. Tamulienė, Theoretical study of threonine molecule fragmentation by low energy electrons

Biopharmaceuticals:

H. Harbatsevich et al., Redox-active Copper (II) complexes with 1,2-dihydroxybenzene derivatives

Biotechnology:

A. Grunina, L. Tsvetkova, N. Pronina, A. Recoubratsky, Investigations on dispermic androgenesis in sturgeon fishes with the use of cryopreserved sperm: experiment on Sterlet and Beluga sturgeons

Bioinformatics:

M. Simjanoska, A. M. Bogdanova, Colorectal cancer through the prism of signals