

RAD 10 Conference Programme

Sunday, June 12, 2022

20:30 – 24:00 Salsa & Bachata – Hunguest Hotel Sun Resort

Monday, June 13, 2022

09:00 – 10:00 OPENING (Hunguest Hotel Sun Resort)

Monday, June 13, 2022

10:00 – 18:00 Conference Desk Working Hours (Hunguest Hotel Sun Resort)

Monday, June 13, 2022 (Hall A - Hunguest Hotel Sun Resort)

10:00 – 10:30 Plenary lecture: Bernd Kaina (Germany), *Radiation sensitivity, DNA repair and death regulation of immunocompetent cells*

10:30 Coffee break

Monday, June 13, 2022 (Hall A - Hunguest Hotel Sun Resort)

11:00 – 12:45 Oral Session: Biomedicine, Covid 19, Medicine – Case Report, Neuroscience

Chairperson: Bernd Kaina

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- 11:00** Vladimir Jurisic, **What are the most important findings regarding Sars-CoV-2 infection during the pandemic?**
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- 11:15** Jozef Sabol, **The impact of the COVID-19 pandemic on research activities at universities**
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- 11:30** Olga Pechanova, Martina Cebova Cebova, Andrej Barta, **Effects of aliskiren-loaded polymeric nanoparticles on nitric oxide pathway in cardiovascular system of hypertensive rats**
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- 11:45** Oliver Gramosli, **Functional evaluation in patients with multiple sclerosis**
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- 12:00** Fedor Jagla, Ján Lakota, Olga Pechanova, **Exosomes and brain/mind machine**
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- 12:15** Marija Stanojević, Olivera Grujičić, Svetolik Spasić, Srđan Lopičić, Sanjin Kovačević, Jelena Nešović Ostojić, Vladimir Nedeljkov, Zorica Jovanović, Sonja Vučković, **Effects of KCa channel activator NS1619 on parameters of Ni²⁺ - induced epileptiform activity of leech Retzius neurons**
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- 12:30** Rodney Jones, Andrey Ponomarenko, **Biosystem complexity and unexpected outcomes of man-induced interventions on example of influenza infection**

Monday, June 13, 2022 (Hall A - Hunguest Hotel Sun Resort)

15:30 – 17:15 Oral Session: Radiation Measurements, Radiation Protection, Radon and Thoron

Chairperson: Tibor Kovács

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- 15:30** Peter Bossew, Petr Kuča, Jan Helebrant, **Citizen monitoring of ambient dose rate: metrological challenges**

- 15:45 Thorsten B. O. Jentsch, Jovan Thereska, Patrick Brisset, Joon-Ha Jin, **International standardization of basic industrial radiotracer and radiation applications**
- 16:00 Vitalija Rubežienė, Audronė Sankauskaitė, Sandra Varnaitė-Žuravliova, Aušra Abraitienė, Rolf Jonsson, Hans Kariis, **Development and investigation of EMR shielding textile materials for protection of dismounted soldier against battlefield radar**
- 16:15 Mohammadamad Adelikhah, Morteza Imani, Tibor Kovács, **CFD based simulation of RRI thoron calibration chamber and its validation with measurement results**
- 16:30 Mohammadamad Adelikhah, Morteza Imani, Tibor Kovács, **CFD simulation of indoor radon distribution in a naturally ventilated laboratory room in Hungary**
- 16:45 Kristina Bikit, Dusan Mrdja, Jan Hansman, Sofija Forkapic, Jovana Knezevic Radic, Danijel Velimirovic, Ivana Maksimovic, Milos Mladenovic, Dalibor Arbutina, **First experimental test of D-T neutron generator and related Monte-Carlo simulations**
- 17:00 Arkadiusz Mandowski, Robert Smyka, Ewa Mandowska, **Measurement and analysis of radiation induced optically stimulated luminescence (OSL) decay**

Monday, June 13, 2022

20:30 – 24:00 Conference Cocktail – Hunguest Hotel Sun Resort

Tuesday, June 14, 2022

08:00 – 18:00 Conference Desk Working Hours (Hunguest Hotel Sun Resort)

Tuesday, June 14, 2022 (Hunguest Hotel Sun Resort)

08:30 – 10:00 Poster Session: Environmental Chemistry, Environmental Physics, Environmental Pollution, Health and Environment, Microwave, Laser, RF, UV and Solar Radiations, Other - Safety and security interfaces, Radiation Chemistry, Radiochemistry, Radioecology, Radon and Thoron

- A1 Djurica Katnić, Ivica Vujčić, Marija Kojić, Aleksandar Krstić, Milena Marinović-Cincović, Slavica Porobić, **Fig pomace biochar modified using gamma irradiation for Pb²⁺ ions adsorption from aqueous solution**
- A2 Dragana Chernih-Anastasovska, Katerina Drogreshka, Jasmina Najdovska, Ljubco Jovanov, **Could we expect a correlation between geomagnetic field and seismicity**
- A3 Dušan Topalović, Mirjana Radenković, Jelena Stanković Petrović, Viša Tasić, **Assessment and differentiation of light absorbing carbon in atmospheric aerosols**
- A4 Đurica Katnić, Slavica Porobić, Milena Marinović-Cincović, Ivica Vujčić, Marija Kojić, **Removal of Cd²⁺ ions from aqueous solution by gamma irradiation activated biochar of the plum pomace**
- A5 Miroslava Stankovic, Vesna Milovanovic, **Antioxidant potential of extracts isolated from medicinal plants**
- A6 Mihaela Ivanova, Michel Israel, Victoria Zaryabova, Mariana Stoynovska, Tsvetelina Shalamanova, Hristina Petkova, **Problems with general public and workers protection on using optical radiation sources for cosmetic purposes**
- A7 Jovana Knežević, Stevan Andrejić, **In situ broadband measurements of non-ionizing radiation in working environment**
- A8 Petr Chechin, Irina Safronenkova, Olga Guzun, Oleg Zadorozhnyy, **Laser photocoagulation of pigmentary and amelanotic iris tumors**
- A9 Anna Czaja, Magdalena Zdrowowicz, Janusz Rak, **Photodamage of DNA labeled with the halogenated thionucleoside**
- A10 Nikolay Tyutyundzhiev, Christo Angelov, Konstantin Lovchinov, Todor Arsov, Hristo Nitchev, **Effect of altitude on solar UV irradiation in mountain locations of Bulgaria – measurements and comparisons**
- A11 Tsvetelina Shalamanova, Hristina Petkova, Michel Israel, Victoria Zaryabova, Mihaela Ivanova, **Evaluation of the electromagnetic field and safety zones of existing base stations upgraded with 5G Massive MIMO antennas**
- A12 Dragana Zarković, Miloš Mladenović, Stevan Karimanović, Saša Božić, Danijela Soldatović, Nebojša Bilanović, Ivana Maksimović, Dalibor Arbutina, **Strengthening interface between safety and security in Public Company "Nuclear Facilities of Serbia"**
- A13 Magdalena Datta, Magdalena Zdrowowicz, Olga Ciupak, Sebastian Demkowicz, Adrian Szczyrba, Janusz Rak,

Modified 2'-deoxyadenosine as a potential radiosensitizer – attempts at synthesis and stationary radiolysis

- A14** Vladimir Kulemin, Elena Krasavina, Sergey Kulyukhin, Igor Rumer, **Application of stone cast containers for glassed radioactive waste storage**
- A15** Narcisa Smječanin, Jasmina Sulejmanović, Ermin Mašić, Mirza Nuhanović, **Removal of U(VI) by selected type of cyanobacteria from the territory of Bosnia and Herzegovina**
- A16** Marija Lekić, Nevena Zdjelarević, Jelena Đorđević, Nataša Lazarević, Dalibor Arbutina, **Quality control for measurements of tritium in water samples by liquid scintillation counter**
- A17** Mihajlo Vičentijević, Dubravka Vuković, Marija Pavlović, Dragan Živanov, Branislava Slavata, **Gamaspectrometric control of fish and fish food during 2016-2021.**
- A18** Esther Osei Akuo-ko, Mohammadamad Adelikhah, Tuvshinsaikhan Ganbaatar, Eunice Amponsem, Anita Csordás, Gergely Tóth, Tibor Kovács, **Measurement of natural and artificial radioactivity in sediments samples along the coastline of Ghana**
- A19** Vitaly Starinskiy, Dmitriy Isaev, Luliia Gushchina, Tatiana Doroneva, Alexey Titov, Anastasiya Shitova, **Radiation survey of Arctic Zone near the site of flooding the nuclear submarine "K-159"**
- A20** Vanja Radolić, Igor Miklavčić, Maša Surić, Robert Lončarić, Denis Stanić, Marina Poje Sovilj, **Radon levels and dose assessment in Modrič Cave (Croatia)**
- A21** Perko Vukotic, Vanja Radolic, Ranko Svrkota, Denis Stanic, Tomislav Andjelic, Radivoje Mrdak, Budimir Fustic, Mirta Bensic, **Radon in a high karst area of Montenegro**
- A22** Marina Poje-Sovilj, Igor Miklavčić, Goran Šmit, Denis Stanić, Vanja Radolić, **Correlation between radon in water, radon in soil gas and indoor radon based on the extensive measurements in Croatia**
- A23** Gergely Tóth, Esther Osei Akuo-ko, Mohammadamad Adelikhah, Eunice Amponsem, Tuvshinsaikhan Ganbaatar, Anita Csordás, Tibor Kovács, **Indoor radon concentration measurements and its radiological risk assessment within Accra dwellings, Ghana**
- A24** Robert Lakatoš, Selena Samardžić, Sofija Forkapić, Kristina Bikit, Dušan Mrdja, Uranija Kozmidis Luburić, Aleksandra Mihailović, **Statistical coherence of ambient conditions affecting indoor radon concentration**
- A25** Jovana Knežević-Radić, Sofija Forkapić, Dušan Mrđa, Kristina Bikit, Jan Hansman, Danijel Velimirović, Predrag Kuzmanovic, **Comparison of alpha spectrometry methods for radon determination in water**

Tuesday, June 14, 2022 (Hall A - Hunguest Hotel Sun Resort)

10:00 – 12:45 Oral Session: Cancer Research, Medical Physics, Nuclear Medicine, Radiation Effects, Radiation Oncology, Radiotherapy
Chairperson: Igor Belyaev

- 10:00** Valerio Licursi, Elena Di Nisio, Wei Wang, Rodolfo Negri, **Small molecule inhibitors of KDM5 histone demethylases increase radio-sensitivity of breast cancer cells**
- 10:15** Sergey Taskaev, **Neutron source VITA**
- 10:30** Gokce Ucar Alveroglu, Nazmiye Donmez Kesen, Canan Koksak Akbas, Inci Kingir Celtik, Hatice Bilge, **Dose Comparison of Total Body Irradiation in Different Treatment Planning System Algorithms**
- 10:45** Gaia Dellepiane, Pierluigi Casolaro, Alexander L. Gottstein, Isidre Mateu, Paola Scampoli, Naomi Voeten, Saverio Braccini, **Study of ⁶⁸Ga and ⁴⁷Sc production for theranostics at the Bern medical cyclotron**
- 11:00** Brahim Selmaoui, Jasmina Wallace, Wendi Shang, Lydia Yahia-Cherif, Christophe Gitton, Laurent Hugueville, **GSM 900 MHz radiofrequency electromagnetic field effects on the resting human EEG: study of the beta, theta, and delta bands**
- 11:15** **Coffee break**
- 11:45** Janusz Winięcki, Agnieszka Orzechowska, Sebastian Maleszka, Paweł Trafara, Yu. Zorenko, **Predicting a sudden failure of the conversion disk in a medical accelerator based on data from dosimetric measurements**
- 12:00** Igor Belyaev, Sachin Gulati, Pavol Kosik, Matus Durdik, Lukas Jakl, Milan Skorvaga, Eva Markova, Dominika Kochanova, Katarina VıgasovaKatarina Vıgasova, **Possible health risks from exposure to microwaves from base stations**
- 12:15** Dražan Jaroš, Goran Kolarević, Milovan Savanović, **Dosimetric comparison of deep inspiration breath-hold of left-sided breast irradiation with wedges and forward-planned IMRT**
- 12:30** Nazmiye Donmez Kesen, Canan Koksak Akbas, Şule Karaman, **Lung cancer irradiation with hybrid technique**

Tuesday, June 14, 2022 (Hall A - Hunguest Hotel Sun Resort)

15:30 – 17:30 Oral Session: Environmental Chemistry, Environmental Physics, Environmental Pollution, Radiation Chemistry, Radioecology

Chairperson: Grzegorz Boczkaj

- 15:30 Grzegorz Boczkaj, Kirill Fedorov, Łukasz Cichocki, **Advanced chemical treatment by means of cavitation for degradation of environmental pollutants – towards importance of ultrasonic and ultraviolet radiation**
- 15:45 Ewa Kowalik-Pilarska, **Modeling of bioaerosols spreading in air indoor and outdoor**
- 16:00 Natalia Kobylinska, Liubov Puzyrnaya, Oleg Zui, Galina Pshinko, **Magnetic Zn,Al-layered double hydroxide intercalated with chelating agents for fast and efficient uptake U(VI) from polluted solutions**
- 16:15 Sibel Gezer, **Challenges of radioactive waste management in a safe manner**
- 16:30 Wael Badawy, Ahmed Elsenbawy, Andrey Dmitriev, Hussein ElSamman, Ayman ElGamal, **Trace elements in unconsolidated shallow marine sediments along Egyptian Mediterranean Sea: characterization and pollution**
- 16:45 Artem Maltsev S., Alexei Ivanov V., Galina Pashkova V., **Total-reflection X-ray fluorescence spectrometry (TXRF) as a promising method for the analysis of apatite**
- 17:00 Miklós Hegedűs, Van-Hao Duong, Trung-Tien Chu, Thanh-Xuan Pham, Hong-Duong Vu, Dong Nguyen Thanh, Luan Thanh Pham, Mohamed Saiyad Musthafa, Tibor Kovács, **Effect of climate on the ²²²Rn activity concentration in spring water in rare earth element and uranium mining areas in North Vietnam**
- 17:15 Zhanat Baigazinov, Sergey Lukashenko, Edit Tóth-Bodrogi, Ganbaatar Tuvshinsaikhan, Tibor Kovács, **Assessment of farm animal breeding possibility on the Semipalatinsk test site**

Tuesday, June 14, 2022

20:00 – 01:00 Conference Dinner – Gradska Kafana (www.gradskakafana.me/en)

Wednesday, June 15, 2022

08:00 – 13:00 Conference Desk Working Hours (Hunguest Hotel Sun Resort)

Wednesday, June 15, 2022 (The Hunguest Hotel Sun Resort)

08:30 – 10:00 Poster Session: : Cancer Research, Covid 19, Medical Devices, Medical Imaging, Medical Physics, Medicine – Case, Neuroscience, Nuclear Medicine, Radiation Effects, Radiation Oncology, Radiotherapy, Radiology, Radiotherapy

- B1 Robert Czarnomysy, Dominika Radomska, Anna Muszynska, Olga Szewczyk, Krzysztof Bielawski, **Anticancer effect of novel imidazole berenil platinum(II) complex conjugated with G2 PAMAM-OH dendrimer in human breast cancer cells**
- B2 Justyna Hermanowicz, Iwona Kwiatkowska, Dariusz Pawlak, **MM-129 as a new potential candidate against colon cancer - assessment of toxicity**
- B3 Arkadiusz Surażyński, Adam Kazberuk, Magda Chalecka, Jerzy Pałka, **Analysis of the proline dehydrogenase/proline oxidase importance in NSAIDs-induced apoptosis by using CRISPR/Cas9 PRODH/POX-knockout MCF7 breast cancer model**
- B4 Marijana Stanojevic Pirkovic, Olgica Mihaljević, Danijela Jovanovic, Sanja Stankovic, Ivana Nikolic, Marija Andjelkovic, Vladimir Jurisic, Snezana Zivancevic Simonovic, Jana Arsenijevic, Dragan Milovanovic, **Predictive value of altered status of lipids and the markers of inflammation for cardiovascular events in COVID-19 patients**
- B5 Monika Simjanoska, Tashko Pavlov, Maja Mitreska, Kostadin Mishev, **Graphene-based sensing for vitals monitoring**
- B6 Diana Toneva, Silviya Nikolova, Dora Zlatareva, **Sex and bilateral differences in the position of mental foramen: A CT-study**
- B7 Silviya Nikolova, Diana Toneva, **Visualization and investigation of paranasal sinuses via CT imaging**
- B8 Dora Zlatareva, Diana Toneva, Silviya Nikolova, **Sex estimation by mastoid process size based on CT imaging**
- B9 Gennady Agre, Diana Toneva, Silviya Nikolova, Dora Zlatareva, **Machine learning classification models for sex estimation based on cranial measurements derived from computed tomography images**
- B10 Predrag Božović, Nikola Kržanović, Miloš Živanović, Andrea Kojić, Teemu Siiskonen, Valentin Blideanu, Nylund Reetta,

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| | Giuseppe Schettino, Paula Toroi, Investigation on the potential of improvement in the field of medical applications of ionizing radiation via the future European Metrology Network |
| B11 | Vasile Petru Virag, Diana Maria Ghemis, An intercomparison of multiple beam matched linear accelerators commissioned according to accelerated go live program |
| B12 | Tadeusz Kowalski, Gas multiplication process in straw proportional tube filled with propane based TEG mixture – pressure scaling |
| B13 | Marijana Maneska, Vladimir Ristovski, Mutations in ABCC9 and LMNA may be associated with malignant arrhythmias in a young male patient with family history of cardiomyopathy |
| B14 | Zorica Jovanović, Effects of cadmium on electrophysiological properties of membranes of Retzius neurons in leech Haemopsis sanguisuga |
| B15 | Dejana Hornjak, Jovana Nikolov, Nataša Todorović, Andrej Vraničar, Marija Jeremić, Stefan Rafajlović, Exposure to ionizing radiation in Nuclear Medicine Centers in Kragujevac and Niš |
| B16 | Zsófia Szilágyi, Bertalan Pintér, Erika Szabó, Györgyi Kubinyi, György Thuróczy, Pilot study of radiofrequency radiation impacted bystander effect on dermal fibroblast cells in vitro |
| B17 | Bertalan Pintér, Zsófia Szilágyi, Erika Szabó, Györgyi Kubinyi, György Thuróczy, Examination of UV-induced pan-nuclear H2AX phosphorylation on human skin in vitro |
| B18 | Oleh Shpotyuk, Valentina Balitska, Mykhaylo Shpotyuk, Yaroslav Shpotyuk, Vitaliy Boyko, On the role of intrinsic free volume in radiation-induced effects in chalcogenide vitreous semiconductors |
| B19 | A.V. Titova, Zh.B. Lyutova, V.P. Sedov, A.A. Borisenkova, Investigation of radiation-induced effects in fullerenols |
| B20 | Dragan Dragisic, Gordana Vujasinovic, Lung cancer screening program using low dose computed tomography in Serbia |
| B21 | Smiljana Bundovska-Kocev, Gordana Antuleska Belcheska, Ana Mihajlovska Rendevska, Rare case of sequestered thoracic disc |
| B22 | Živorad Savić, Katarina Savić, Sofija Savić, Srbislav Pajić, Mirjana Petrović, Vojislav Antić, Absces periapicalis |
| B23 | Milomir Milaković, Nikola Jovančević, Miodrag Krmar, Determination of photon radiation spectrum by application standard unfolding technique |
| B24 | Isidoro Ruiz-García, Juan A. Moreno-Pérez, Pedro Martín-Holgado, Amor Romero Maestre, Alberto José Palma, Miguel Ángel Carvajal, PIN photodiodes as high dose dosimeters for proton beams |
| B25 | Anna Pedracka, Bartosz Kieltyka, Lukasz Brandt, Lidia Mazur, Tomasz Skora, Renata Kopec, Tomasz Kajdrowicz, Kamil Kisielewicz, Comparison of dose distributions for cerebrospinal axis irradiation based on highly specialized techniques of radiotherapy |
| B16 | Ewa Mandowska, Robert Smyka, Arkadiusz Mandowski, Long lasting luminescence decay and spectral properties of irradiated feldspar samples |

Wednesday, June 15, 2022 (Hall A - Hunguest Hotel Sun Resort)

10:00 – 10:30 Plenary lecture: Ana Pejović-Milić (Canada), **Role of total reflection X-ray spectrometry in nanomedicine**

Chairperson: Alberto Palma

10:30 Coffee break

Wednesday, June 15, 2022 (Hall A - Hunguest Hotel Sun Resort)

11:00 – 12:45 Oral Session: ELICSIR Project

Chairperson: Ana Pejović-Milić

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| 11:00 | Goran S. Ristić (project coordinator), Briefly about ELICSIR project |
| 11:00 | Isidoro Ruiz-García, Juan Román-Raya, Marko S. Andjelković, Damián Guirado, Alberto J. Palma, Miguel A. Carvajal, Compensation of the temperature effect of the dark current in photodiodes dosimeters |
| 11:15 | Stefan D. Ilic, Marko S. Andjelkovic, Miguel Ángel Carvajal, Russell Duane, Milija Sarajlic, Srboljub Stankovic, Goran S. Ristic, Stacked floating gate MOSFET as a passive dosimeter |
| 11:30 | Russell Duane, Nikola Vasovic, Mary White, Alan Blake, Anne Marie McGarrigle, Srboljub, A Metal Oxide |

Semiconductor ionizing radiation detector architecture with increased voltage sensitivity

11:45 Sandra Veljković, Stefan D. Ilić, Russell Duane, Marko S. Andjelković, Alberto J. Palma, Goran S. Ristić, **Behaviour of pMOS dosimeters during and after X-rays**

12:00 Antonio Pousibet Garrido, Pablo Escobedo Araque, Damián Guirado LLorente, Alberto José Palma López, Miguel Ángel Carvajal Rodríguez, **Battery-less NFC tag for radiation dose measurement with MOSFET dosimeters**

12:15 Nikola Mitrović, Sandra Veljković, Vojkan Davidović, Snežana Đorić-Veljković, Snežana Golubović, Emilija Živanović, Zoran Prijić, Danijel Danković, **Characterization of irradiated and NBT stressed p-channel power VDMOSFETs**

12:30 Milos Marjanovic, Marko Andjelkovic, Milos Krstic, Goran Ristic, **Simulation of single event transient effects in CMOS circuits using open access tools and device models**

Wednesday, June 15, 2022

17:30 – 01:00 Boat Excursion and Dance Evening (Departure from Škver Harbor, Herceg Novi)

Thursday, June 16, 2022

08:00 – 18:00 Conference Desk Open (Hunguest Hotel Sun Resort)

Thursday, June 16, 2022 (Hunguest Hotel Sun Resort)

08:30 – 10:00 **Poster Session: Biochemistry, Bioinformatics, Biomaterials, Biomedicine, Biopharmaceuticals, Biophysics, Biotechnology, Food Safety and Health, Materials Science, Pharmaceutical Sciences, Radiation Detectors, Radiation Measurements**

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- C1 Jelena Tamuliene, Lina Misevičienė, Narimantas Čėnas, **Evaluation of standard single-electron reduction potential of nitroaromatics by modified approach**
- C2 Safija Herenda, Edhem Hasković, Denis Hasković, Ena Hasković, **Determination of the inhibitor effect of boroxin on acetylcholinesterase activity**
- C3 Šaćira Mandal, **Association of marker of inflammation, hepatic enzymes and lipid profile in non-treated T2D patients**
- C4 Aušra Nemeikaitė-Čėnienė, Dalius Kučiauskas, Narimantas Čėnas, **Redox proteomic profile of tirapazamine-resistant hepatoma cell line**
- C5 Sara Janowska, Dmytro Khylyuk, Sylwia Andrzejczuk, Monika Wujec, **Synthesis and antibacterial activity of thiosemicarbazide and 1,3,4-thiadiazole with 3-methoxyphenyl substituent**
- C6 Slađana Tanasković, Branka Dražić, Mirjana Antonijević Nikolić, **Biological activity of new mixed ligand copper(II) complexes**
- C7 Mihalj Poša, Ana Pilipović, Zita Farkaš Agatić, Kosta Popović, Vesna Tepavčević, Ivana Vapa, Dušan Škorić, **Interaction between Triton X-100 and propranolol hydrochloride in aqueous solution mixed micellar pseudo phase**
- C8 Marta Semen, Olena Lychkovska, Olha Yelisyeyeva, **Heart rate variability in adolescents with irritable bowel syndrome**
- C9 Gordana Šošić, Mirjana Varjačić, Nikola Jović, Tanja Novaković, **Effect of low-molecular-weight heparin therapy on cytogenetic biomarkers values in peripheral blood lymphocytes of pregnant women with thrombophilia**
- C10 Mikhail Tsvirko, **Porphyrins photosensitized radical reactions in solutions and cell membranes containing halomethans**
- C11 Yaroslav Bobytskyy, Tetiana Bulavinets, Iryna Yaremchuk, Adriana Barylyak, **Controllable fabrication of triangular AG nanoparticles for biomedical applications**
- C12 Ana-Maria Udrea, Angela Staicu, Speranta Avram, **The interactions between photosensitizer and cancer therapeutical targets—a computational approach**
- C13 Branka Ružičić, Dragana Grujić, Mladen Stančić, Matejka Bizjak, Blanka Škipina, Aleksandar Savić, Ljiljana Topalić-Trivunović, **Influence of UV irradiation on color strength, antimicrobial and dielectric properties printed linen fabrics modified with ZnO and Pinus sylvestris L. extract**
- C14 Nataliia Poyedinok, Oksana Mykhaylova, Nataliia Sergiichuk, Nadiia Matvieieva, **Photoregulation of biosynthetic activity of Inonotus obliquus (Ach.:Pers.) Pilát using colloidal solutions of biogenic metal nanoparticles**
- C15 Blagica Cekova, Margarita Matlievska, Filip Jovanovski, **Characteristics of the essential oil of marigold (calendula officinalis) obtained by extraction and arrangement of its chemical composition with HPLC chromatography and its application in medical purposes.**

- C16 Nely Metlyaeva, Andrey Bushmanov, Irina Galstyan, Andrey Kretov, Olga Shcherbatykh, **Features of individual psychophysiological adaptation of a patient affected from extremely uneven gamma-neutron exposure**
- C17 Aruppillai Suthaparan, **Short wavelength UV in combination with cold storage can minimize postharvest gray mold losses in strawberry**
- C18 Daniela Belichovska, Katerina Belichovska, Vesna Levkov, Natasha Gjorgovska, **Microbiological quality of commercial fish feeds**
- C19 Andriy Kovalskiy, Roman Golovchak, Oleh Shpotyuk, Valentina Balitska, Mykhaylo Shpotyuk, **On the unified configuration-enthalpic model of radiation-induced functionality in chalcogenide glass-forming systems**
- C20 Yaroslav Zhydachevskyy, Vasyl Stasiv, Andriy Luchechko, Denis Afanassyev, Jan Fink-Finowicki, Sergiy Ubizskii, Marek Berkowski, Andrzej Suchocki, **High-Z TL/OSL detectors based on Mn-doped rare-earth aluminates**
- C21 Robert-Csaba Begy, Codrin-Fabian Savin, Claudiu Tănăselia, Marin Şenilă, **Radon-222 adsorption characteristics of different enhanced natural zeolites**
- C22 Ivana Mladenović, Nebojša Nikolić, Dana Vasiljević-Radović, Stevo Jaćimovski, Milija Sarajlić, Vesna Radojević, Jelena Lamovec, **Application of copper electrodeposition processes in visualization of latent fingerprints obtained on various substrates**
- C23 Sergei Baranovskii, Florian Gebhard, Klaus Meerholz, **Effects of disorder in alloy semiconductors for device applications**
- C24 Leoš Assmann, Marcin Kopec, **Debris fretting testing facility at CVR**
- C25 Ladislav Viererbl, Hana Assmann Vratislavská, Antonín Kolros, **Afterglow study of solid scintillators excited by gamma radiation**
- C26 Miguel Ángel Carvajal Rodríguez, Juan Antonio Moreno Pérez, Isidoro Ruiz García, Jaime Estela, María Sofía Martínez García, Damián Guirado Llorente, Alberto José Martínez García, **Multi-sensor MOSFET dosimeter for radiation measurements in Precursor CubeSat**
- C27 Juan A. Moreno-Pérez, Isidoro Ruiz-García, Pedro Martín-Holgado, Yolanda Morilla, Alberto José Palma, Miguel Ángel Carvajal, **Commercial MOSFET chracterization for proton dosimetry**
- C28 Jelena Stankovic Petrovic, Nikola Krzanovic, Milos Zivanovic, Dusan Topalovic, Andrea Kojic, Predrag Bozovic, **Results of an IMS participations in the international intercomparisons for the whole body dosimetry – 10 years study**
- C29 Andrea Kojic, Nikola Krzanovic, Predrag Bozovic, Milos Zivanovic, **Establishing W/AI mammography radiation qualities in Secondary Standard Dosimetry Laboratory**

Thursday, June 16, 2022 (Hall A - Hunguest Hotel Sun Resort)

10:00 – 11:45 Oral Session: Radiation Detectors, Radiation Effects, Radiation Physics

Chairperson: Tamulaitis Gintautas

- 10:00 Maria Mitkova, Shah Mohammad Ullah, Al Amin Ahmed Simon, David Estrada, **Radiation sensor, based on irradiation induced Ag diffusion in chalcogenide films deposited by additive technology**
- 10:15 Pierluigi Casolaro, Isidre Mateu, Paola Scampoli, Saverio Braccini, **Innovative dosimeters with ultra-fast scintillators and optical fibers for FLASH radiotherapy**
- 10:30 V. Gorbenko, S. Witkiewicz-Lukaszek, Y. Syrotych, T. Zorenko, J.A. Mares, M. Nikl, P. Bilski, O. Sidletskiy, K. Kamada, A. Yoshikawa, J. Winiecki, Yu. Zorenko, **Development of composite scintillators and thermoluminescent detectors based on the epitaxial structures of garnet compounds for radiation monitoring and medical applications**
- 10:45 Mindaugas Dagys, Zilvinas Kancleris, Paulius Ragulis, Rimantas Simniskis, **Diagnostic system for high power microwave pulse measurement**
- 11:00 Tamulaitis Gintautas, Nargelas Saulius, Korzhik Mikhail, **Novel tools to optimize timing properties of scintillation materials**
- 11:15 Pedro Martín-Holgado, Mario Sacristán Barbero, Yolanda Morilla, Rubén García Alía, **Study of total ionizing dose and single event upset effects on a commercial 65nm-SRAM using gamma and neutron radiation**
- 11:30 Shakir Zeynalov, Olga Sidorova, **PFN multiplicity variations measurement at IREN**

Thursday, June 16, 2022 (Hall B - Hunguest Hotel Sun Resort)

10:00 – 11:45 Oral Session: Young Researchers (Bioinformatics, Cancer Research, Medical Imaging, Medical Physics, Radiation Effects, Radiobiology)

Chairperson: Vladimir Jurišić

- 10:00 Nicolas Callebaut, Emilie Cauët, Jacky Liévin, Marianne Rooman, Fabrizio Pucci, **Quantum mechanics-based calculations of the size- and sequence-effects on the ionization energy of stacked DNA bases**
- 10:15 Iwona Kwiatkowska, Justyna Hermanowicz, Robert Czarnomysy, Arkadiusz Surazynski, Dariusz Pawlak, **MM-129: a derivative with a dual mechanism of action as an innovative molecule with antitumor activity against colon cancer cells.**
- 10:30 Yauhen Levandouski, **Laboratory evaluation of sensitivity and specificity of a novel and rapid method of pneumonia diagnosis based on lung ultrasound**
- 10:45 Mariacristina Guarrera, Giada Petringa, Alma Kurmanova, Salvo Tudisco, Giuseppe Antonio Pablo Cirrone, **Dosimetric characterization of a new waterproof silicon carbide detector**
- 11:00 Una Molnar, Dejana Hornjak, Jovana Nikolov, Predrag Bozovic, Natasa Todorovic, Sanja Stojanovic, Viktor Till, **Implementation of a new iaea remote and automated quality control program for radiography equipment**
- 11:15 Tamara Fuciarelli, C David Rollo, **Impacts of ionization radiation on the cuticular hydrocarbon profile and mating success of male house crickets (*Acheta domesticus*)**
- 11:30 Iurii Severiukhin, **Comparative Analysis of Behavioral Reactions and Morphological Changes in the Rat Brain After Exposure to Ionizing Radiation with Different Physical Characteristics**

Thursday, June 16, 2022 (Hall A - Hunguest Hotel Sun Resort)

15:30 – 18:15 Oral Session: Biomaterials, Biomedical Engineering, Biotechnology, Material Science, Radiation Effects, Radiation Physics, Medical Imaging, Other - Research Topic Initiative

Chairperson: Harmen Bijwaard

- 15:30 Harmen Bijwaard, Karin Bol, Colinda Vroonland, **Artificial Intelligence for radiographers: a review of current applications and a survey among Dutch hospitals**
- 15:45 Tatiana Tozar, Mihai Boni, Simona Nistorescu, Angela Staicu, **Photopolymerization of gelatin methacryloyl hydrogels using UV pulsed radiation and its biomedical applications**
- 16:00 Nadiia Matvieieva, Volodymyr Bessarabov, Svitlana Rybalko, Daria Starosyla, Volodymyr Duplij, Taisa Bohdanovych Bohdanovych, Yakiv Ratushnyak, Nataliia Poiedynok, Natalia Kobylinska Kobylinska, **Wormwood “hairy” roots as a potential source of chemicals for coronavirus-induced disease treatment with anti-inflammatory activity**
- 16:15 Maksim Bulavin, **Irradiation facility of the IBR-2: current status and experiments**
- 16:30 Piotr Szajerski, **Lignite slag and bismuth oxide filled elastomeric hosts for radioactive waste encapsulation – radiation shielding, leaching behavior and aging**
- 16:45 Coffee break**
- 17:15 Alessandro Bartoloni, Nan Ding, Gianluca Cavoto, Cristina Consolandi, Lidia Strigari, **Astroparticle experiments to improve the biological risk assessment of exposure to ionizing radiation in the exploratory space missions: a research topic initiative**
- 17:30 Bohdan Padyak, **Nature and structure of the radiation-induced paramagnetic centres in borate glasses**
- 17:45 Maksym Buryi Buryi, Vladimir Babin, Anna Artemenko, Kateřina Děcká, Júlia Mičová, **The effect of x-ray irradiation on charge trapping processes in zinc and molybdenum containing oxides**
- 18:00 Mirjana Cvijović, Milorad Murić, Marina Kremić, **Air pollution in Kosjerić and lung cancer risk**

Thursday, June 16, 2022 (Hall B - Hunguest Hotel Sun Resort)

15:30 – 17:15 Oral Session: Young Reasercher (Environmental Pollution, Neutron and Heavy Ion Radiations, Radiation Chemistry, Radiation Detectors, Radiation Measurements, Radon and Thoron)

Chairperson: Robert-Csaba Begy

- 15:30 Robert-Csaba Begy, Ioana Bocsan, Codrin-Fabian Savin, David Karoly Sule, **Fast determination of radium isotopes (^{224}Ra , ^{226}Ra , ^{228}Ra) from water samples by combined nuclear spectrometric techniques**
- 15:45 Lidia Chomicz-Mańka, Karina Falkiewicz, Agnieszka Gajewicz-Skrętna, Mieczysław Torchała, Magdalena Zdrowowicz, Konrad Skotnicki, Krzysztof Bobrowski, Janusz Rak, **How do nitroimidazole type oxygen mimetics work? Computational and radiation chemistry studies**
- 16:00 Davaakhuu Tserendorj Tserendorj, Katalin Zsuzsanna Szabó, Peter Völgyesi, Tam Cong Nguyen, István Gábor Hatvani, Noémi Buczkó, Gorkhmas Abbaszade, Nelson Salazar, Csaba Szabó, **Distribution of natural and artificial radionuclides in attic dust and urban soil samples from a former industrial city (Salgótarján, Hungary)**
- 16:15 Almas Yskakov, Maxim Bulavin, Ivan Vasil'evskii, **Impact of neutron irradiation on the structural and electronic properties of semiconductor heterostructures**
- 16:30 Hugo Lefevre, Michael Descostes, Jérôme Donnard, Sophie Billon, Samuel Duval, Tugdual Oger, Hervé Toubon, Paul Sardini, **Quantitative mapping of ^{226}Ra ultra-trace content by spectroscopic autoradiography using a gaseous detector**
- 16:45 Codrin-Fabian Savin, Ioana Bocsan, David Karoly Sule, Robert-Csaba Begy, **Simultaneous determination of ^{226}Ra and ^{210}Pb in sediment and peat bog samples by Liquid Scintillation Counting technique for geochronological uses**
- 17:00 Ababii Aurelia, **Surveillance of population's exposure to indoor radon of dwellings in the Republic of Moldova, Chisinau municipality**

Thursday, June 16, 2022

20:30 – 24:00 Conference Cocktail – Hunguest Hotel Sun Resort

Friday, June 17, 2022

08:00 – 10:30 Conference Desk Open

Friday, June 17, 2022 (Hunguest Hotel Sun Resort)

08:30 – 10:00 Poster Session: Other - Physics Education, Other - Radioactive Waste, Other - Radioactive Waste Management, Other – Statistics, Radiation Measurements, Radiation Physics, Radiation Protection, Radon and Thoron

- D1 Tomas Nemeš, Selena Samardžić, Miodrag Milutinov, Strahinja Ilić, Milka Zečević, **Developing and manufacturing physics laboratory equipment (apparatures) using standard materials and 3D technologies**
- D2 Oksana Morozova, Anna Vostrikova, **Improvement of the International Disaster Database EM-DAT for correct statistical recording of technological and natural disasters of the example of the Russian Federation**
- D3 Renata Majgier, **Comparison of the dose recovery test results for selected materials with potential application in emergency dosimetry**
- D4 Codrin-Fabian Savin, Evangelos Giagias, David Karoly Sule, Robert-Csaba Begy, **A new approach for the determination of gross α/β activity in water samples, by integrating Liquid Scintillation Counting with beta spectrometry**
- D5 Péter Necz, Balázs Gyulai, József Krausz, György Thuróczy, **Measurement of radiofrequency (RF) exposure around a 5G base station**
- D6 Olga Sidorova, Shakir Zeynalov, **Computer Simulation of PFN Detector**
- D7 Nevena Zdjelarević, Jovana Knežević, Nataša Lazarević, Marija Lekić, Jelena Đorđević, Dalibor Arbutina, **Determination of gamma active radionuclides for the purpose of ConvEx-3 emergency response exercise**
- D8 Predrag Kuzmanović, Slobodanka Bogdanović Vasić, Dušan Mrđa, Sofija Forkapić, Kristina Bikit, Svetlana Karić, Jovana Knežević Radić, **Occupational radiation exposure in diagnostic radiology in general hospitals in Serbia**
- D9 Olena Aksimentyeva, Serhiy Malynych, Ruslan Filipsonov, Roman Gamernykh, Yuliia Horbenko, **Broadband absorbers of electromagnetic radiation**
- D10 Aleksandar Slepčević, Milan Stojanović, Ivan Grujanac, Zdravko Vranješ, Danijela Soldatović, **Decontamination of the working area after radiological incident in ex-industrial complex radiography unit**
- D11 Borja Frutos, Isabel Sicilia, Jesus García Rubiano, Héctor Alonso, Lluís Font, Victoria Moreno, Carlos Sainz, Luis Santiago Quindós, Marta García-Talavera, **Definition and sensitivity analysis of a CFD model for the study of radon immission in buildings**