







# INTERNATIONAL CONFERENCE ON RADIATION APPLICATIONS

In Physics, Chemistry, Biology, Medical Sciences,  
Engineering and Environmental Sciences  
June 6-10, 2022 | Aristotle University Research Dissemination Center (KEDEA) | Thessaloniki | Greece  
www.rap-conference.org | info@rap-conference.org

## CONFERENCE PROGRAMME

Eastern European Time	<b>Sunday, June 5</b>	
16:00–20:00	<b>Registration</b>	<b>KEDEA Hall, Level 0</b>
Eastern European Time	<b>Monday, June 6</b>	
08:00–18:00	<b>Registration</b>	<b>KEDEA Hall, Level 0</b>
09:00	<b>Official Opening</b>	<b>Amphitheater 2, Level -1</b>
Eastern European Time	<b>Plenary Session</b> Chairperson: <b>Taner Kavas</b>	<b>Amphitheater 2, Level -1</b>
09:30	<b>Invited talk</b> Jovana Nikolov, <b>Current trends in Nuclear Forensics</b>	
10:00	<b>Refreshments</b>	<b>KEDEA Hall, Level 0</b>
Eastern European Time	<b>Oral session</b> <b>Medical Imaging, Medical Devices, Biomedical Engineering, Food Irradiation</b> Chairperson: <b>Krasimir Mitev</b>	<b>Amphitheater 1, Level 0</b>
10:30	 O. Slesarev, S. Abul'khanov, A. Chaurasia, <b>Qualitative analysis of X-ray images of the temporomandibular joint</b>	
10:50	A. Galanopoulou et al., <b>Effect of reader software to image quality metrics of X-ray Computed Radiography systems</b>	
11:10	O. Yilmaz, U. Gurer, E. Selcuk Unlu, E. Budak, E. Yilmaz, <b>A preliminary study: <i>in vitro</i> test for lung cancer detection with GFET based biosensor</b>	
11:30	 K. Kyrikos, S. David, I. Kalatzis, T. Chrysikos, A. Skouroliaou, <b>Infrared Thermography as a measure of emotion response</b>	
11:50	 S. Kury, V. Meda, H. Nair, C. Olivier, C. Rangacharyulu, <b>Influence of X-ray irradiation on germination of fusarium infested wheat seeds</b>	
12:10	 O. Khmelevskiy et al., <b>The effect of accelerated electrons on the chemical parameters of chilled poultry meat</b>	

Eastern  
European  
Time

## Oral session

### Radiation Protection

Chairperson: **Beata Kozłowska**

**Amphitheater 2, Level -1**

10:30

R. Kurtulus, C. Kurtulus, T. Kavas, **A sustainable approach for radiation protection applications: synthesis and characterization of waste bricks bottom ash involving  $\text{Bi}_2\text{O}_3$**

10:50

D.-K. Süle, C.-F. Savin, E. Giagias, R.-C. Begy, **Radiological survey of geothermal water resources in Romania and dose estimation from their use in balneotherapy**

11:10

I. Kaissas, C. J. Hourdakos, **Radiological risk assessment method for the interim storage of radioactive materials**

11:30

G. Rahimi, D. Chirlesan, Z. Soltani, **Optimization of filler content and minimizing thickness of polymeric composite for shielding against neutron source by Response Surface Methodology (RSM) and Monte Carlo simulation**

11:50



D. Prifti, K. Tushe, E. Bylyku, B. Daci, **Radioactive materials transport van safety and security upgrade in Albania**

12:10



D. Prifti, K. Tushe, C. Massey, E. Bylyku, B. Daci, **NORM alarms assessment safety issues in Albania**

12:30



I. Bërdufi, E. Spahiu, M. Shyti, E. Bylyku, **Determination of the radioactivity level of concrete used as shielding for medical  $^{60}\text{Co}$  source**

13:00

## Lunch

**KEDEA Hall, Level 0**

Eastern  
European  
Time

## Plenary Session

Chairperson: **Aleksandar Jaksic**

**Amphitheater 1, Level 0**

14:00

### Invited talk

Vladimir Jurisic, **Knowledge of SARS-CoV-2 infection and the immune system**

Eastern  
European  
Time

## Oral session

### Biomedicine, Medical Physics

Chairperson: **Vladimir Jurisic**

**Amphitheater 1, Level 0**

14:30

D. Pap, **Laboratory testing and preanalytical errors: Where are we in 2022?**

14:50



Yu. Kreynina et al., **Modulated electrohyperthermia (mEHT) during conventional pelvic radiotherapy and chemoradiation enhances tumor cells apoptosis and improves the survival in advanced IIb-IVa cervical cancer patients**

15:10

B. Vrbanić, Š. Čerba, J. Lüley, V. Filová, V. Nečas, **Printed circuit heat exchangers and fast neutron radiography**

15:30

B. Kozłowska, K. Antończyk-Szewczyk, S. de Souza, L. Lazzeri, F. d'Errico, **GTA-PVA Fricke gels as 3D dosimeters for radiotherapy**

15:50



V. Ipatova, U. Bliznyuk, P. Borshchegovskaya, A. Chernyaev, A. Nikitchenko, F. Studenikin, **Analytical dependence of the electron beam spectrum after passing through aluminum plates**

16:10



S. Zolotov, U. Bliznyuk, F. Studenikin, G. Krusanov, A. Chernyaev, **Method for increasing the dose distribution uniformity during electron radiation treatment**

16:30



F. Studenikin, U. Bliznyuk, P. Borshchegovskaya, V. Ipatova, A. Chernyaev, V. Khankin, **Method to increase the uniformity of the irradiation treatment on electron accelerations**

Eastern European Time	<b>Oral session</b> <b>Nuclear Forensics, Radiation Measurements</b> Chairperson: <b>Jovana Nikolov</b>		<b>Amphitheater 2, Level -1</b>
	14:30	A. Mladenov, K. Krezhov, <b>Instruments and approaches for prevention of illegal trafficking in radioactive materials: Case study INRNE-BAS</b>	
	14:50	Š. Čerba, B. Vrban, J. Lúley, V. Filová, V. Nečas, <b>Thermal neutron measurement in the STU Mini Labyrinth experiment</b>	
	15:10	P. Kuča, J. Helebrant, P. Bossew, <b>Characterization of the “bGeigie Nano” instrument used in citizen science dose rate monitoring</b>	
	15:30	 O. Sans Planell, M. Costa, F. Grazzi, <b>First tomography reconstruction application of the ANET Compact Neutron Collimator</b>	
Eastern European Time	16:50	<b>Refreshments</b>	<b>KEDEA Hall, Level 0</b>
	<b>Oral session</b> <b>Radiochemistry, Environmental Chemistry</b> Chairperson: <b>Antoaneta Ene</b>		<b>Amphitheater 1, Level 0</b>
	17:20	G. Simeonova, B. Todorov, <b>Method for indirect radiofluorination with [<sup>18</sup>F]-FDG by bioorthogonal reaction</b>	
	17:40	I. Dianellou, P. Tsamos, F. Noli, <b>The effect of irradiation on the sorption properties of Greek Bentonite: Cs and Co-sorption studies</b>	
	18:00	F. Noli, E. Kapashi, P. Tsamos, <b>Removal of actinides from waste and waters using different sorbents</b>	
Eastern European Time	18:20	 I. Zinicovscaia et al., <b>Bioinspired electrospun hybrid nanofibers based on biomass templated within polymeric matrix for metal removal from wastewater</b>	
	18:40	 I. Zinicovscaia et al., <b>Bioremediation Capacity of Edaphic Cyanobacteria Nostoc linckia for Chromium in Association with Other Heavy-Metals-Contaminated Soils</b>	
	<b>Oral session</b> <b>Radiation Measurements</b> Chairperson: <b>Robert-Csaba Begy</b>		<b>Amphitheater 2, Level -1</b>
	17:20	A. Walencik-Łata, B. Kozłowska, T. Przylibski, <b>Concentrations of natural radionuclides dissolved in different hydrochemical types of spa waters of the western Izera Block (Sudety Mts., Polish-Czech borderland)</b>	
	17:40	M. Polo, J. C. Delgado Alvarez, F. E. Pino Andrades, D. Fabris, S. Moretto, <b>Assessment of a NaI detector performance for radiation monitoring applications</b>	
	18:00	F. E. Pino Andrades et al., <b>Radiological survey using a CLLB detector: single unit for triple particle discrimination</b>	
	18:20	R. Lok, U. Gurer, O. Yilmaz, E. Yilmaz, <b>The effects of different thickness boron layers on the electrical characterization of NÜRFETs</b>	
	19:00	<b>Welcome cocktail</b> KEDEA Hall, Level 0	

Eastern  
European Time

## Tuesday, June 7

08:00–18:00

Registration

KEDEA Hall, Level 0

Eastern  
European  
Time

Oral session

Material Science

Amphitheater 1, Level 0

Chairperson: Marko Zavrtanik

08:30

A. Mutale, E. Yilmaz, **Gamma irradiation response on SiNWs based MOS capacitor with high-k  $\text{Yb}_2\text{O}_3$  gate dielectric**

08:50

M. C. Zulu, E. Budak, E. Yilmaz, **Frequency response on electrical characteristics of SiNWs based MOS capacitor with  $\text{VO}_2$  as high-k material**

09:10

U. Güner, O. Yilmaz, E. Budak, E. Yilmaz, **The coating of reduced graphene oxide (rGO): A novel ultrasonic-assisted method**

09:30

R. Chirwa, A. Mutale, E. Yilmaz, **Investigation of annealing temperature on structural and surface morphologies, electrical properties of  $\text{Y}_2\text{O}_3$  thin film with SiNWs**

09:50

K. Krezhov, A. Malakova, G. Raikova, E. Mladenova, I. Genov, **On the performance of carbon-free zinc-air rechargeable batteries: characterization of some spinel and perovskite oxides as catalysts in gas diffusion electrodes**

10:10

R. Mehra, S. Chand, L. Pursharthi, A. Jain, **Thermoluminescence Studies of  $\text{NaCaPO}_4\text{:Dy}$  nanophosphor for TL dosimetric applications**

10:30

Refreshments

KEDEA Hall, Level 0

Eastern  
European  
Time

Plenary Session

Chairperson: Nektarios Kalyvas

Amphitheater 1, Level 0

Invited talk

11:00

Yiota Foka, **SEEIIST: a facility for research and therapy of cancer tumours with ions for the South East Europe (and capacity building)**

Eastern  
European  
Time

Oral session

Radiation Detectors

Amphitheater 1, Level 0

Chairperson: Kiril Krezhov

11:30

A. Saydgov et al., **The study of low energy gamma-ray detection performance of SiPM with LaBr scintillator**

11:50

E. Doganci, A. Kahraman, E. Yilmaz, **Silicon based P-I-N photodiode design by using TCAD simulation**

12:10

G. Kramberger, **Low Gain Avalanche Detectors for various applications**

12:30



G. Ambrosi, E. Fiandrini, G. Rossi, L. Servoli, L. Tosti, V. Vagelli, **Use of SiPM as direct radiation detector to measure dose-rates**

12:50



G. Lastovicka-Medin, M. Rebarz, G. Kramberger, J. Andreasson, T. Lastovicka, **Femtosecond laser based TCT-TPA and IBIC microscopy: Two very powerful characterisation tools for testing micron-sized sensitive volumes in micro-strips or pixelated detectors and microdosimeters in microbeam and hadron therapy**

13:00

Lunch

KEDEA Hall, Level 0

14:00–15:30	<b>Poster Sessions</b> <b>Food Irradiation, Radiation Protection, Radiation Measurements, Radiation Detectors</b> <b>KEDEA Hall, Level -1</b> Chairpersons: <b>Gregor Kramberger, Jelena Ajtić</b>	
	<b>FI1</b> R. Mladenova, N. Solakov, K. Loginovska, <b>Effects of gamma irradiation on phenolic content and antioxidant activity of bee bread and bee pollen</b> <b>FI2</b> K. Aleksieva, R. Mladenova, <b>EPR study of gamma radiation effects on free radicals and antiradical activity of royal jelly</b> <b>RP1</b> F. Ciupagea, N. Nuta, G. Rosca Fartat, C. Ghioca, <b>Radiological accidents involving industrial radiography source</b> <b>RP2</b> U. Eismonts et al., <b>Synthesis of antibacterial radionuclide-binding hybrid nanocomposites</b> <b>RM1</b> A. Vraničar, M. Travar, N. Todorović, J. Nikolov, <b>Experimental verification of ANGLE 5 software for quantitative gamma spectrometry</b> <b>RM2</b> J. Nikolov, N. Todorović, I. Stojkovic, M. Vraneš, S. Gadžurić, <b>Possible application of ionic liquid 3-methylpyridinium salicylate in LSC measurements</b> <b>RM3</b> N. Kazakis, C. Betsou, <b>Detection of baby food sterilized with Ionizing radiation using thermoluminescence</b> <b>RM4</b> Y. Karakirova, <b>Comparative study between the ascorbic acid and some ascorbates for the application in electron paramagnetic resonance dosimetry</b> <b>RD1</b> A. Jancar, J. Culen, B. Mikel, M. Jelinek, F. Mravec, V. Prenosil, Z. Matej, <b>Development of a high range gamma detector with optical fiber for long transmission</b> <b>RD2</b> D. Zoul, M. Koplová, <b>A study of using MAKROCLEAR dosimeters for the dosimetry of deuteron beams</b> <b>RD3</b> D. Zoul, M. Koplová, <b>Proton beam dosimetry using integrating radiochromic dosimeters MAKROCLEAR</b> <b>RD4</b> A. Ioannidou, L. Christos, E. Ioannidou, Ch. Betsou, <b>Repairing and calibration of malfunctioned radiation detectors</b>	
14:00–15:30	<b>Poster Sessions</b> <b>Radiochemistry, Environmental Chemistry</b> <b>KEDEA Hall, Level -1</b> Chairperson: <b>Nikolaos Kazakis</b>	
	<b>RC1</b> G. Simeonova, B. Todorov, <b>Monitoring and evaluation of factors affecting radio labeling with [<sup>18</sup>F]-FDG by oxime formation</b> <b>RC2</b> P. Tsamos, S. Stoulos, A.-G. Karydas, F. Noli, <b>Assessment of the radiological risk in marine area close to an oil factory at Kavala Gulf-Greece</b> <b>RC3</b> E. Kapasii, I. Paschalidis, F. Karantoumanis, F. Noli, <b>Application of new biosorbents for removal of uranium, thorium and europium from aqueous solutions</b> <b>EC1</b> A. Ene, M. Frontasyeva, F. Sloata, <b>Combined XRF and NAA study of depth migration, ecological and health risk of trace elements in soils adjacent to metallurgical industry</b> <b>EC2</b> A. Ene, A. Pantelica, F. Sloata, <b>Nuclear and atomic analytical techniques applied for the composition characterization of industrial wastes and soils</b>	
Eastern European Time	<b>Plenary Session</b> Chairperson: <b>Alexandra Ioannidou</b> <b>Amphitheater 1, Level 0</b>	
	<b>Invited talk</b> Theodoros Samaras, <b>The evolution of telecommunications networks and human exposure to radiofrequency radiation</b>	
15:30		

Eastern  
European  
Time

### Oral session

**Radiotracers and Sealed Sources Technologies for Industrial Applications, Radiation Detectors**

**Amphitheater 1, Level 0**

Chairperson: **Ercan Yilmaz**

16:00



D. Gurau, **Study of radiotracers diffusion through cement matrices**

16:20

E. Aksoy, O. Guven, S. F. Ozmen, **Spatial analysis of natural and artificial radioactivity levels of marine sediments with geographical indication**

16:40

H. Dapo, A. Aksoy, O. Karsli, H. Yildiz, **New gamma-spectroscopy laboratory for nuclear reactions at Turkish accelerator and radiation laboratory**

17:00

M. Zavrtanik, G. Kramberger, B. Hiti, **Transient Current Technique (TCT) versus Two Photon Absorption (TPA) measurements in Si detector characterisation**

17:20



A. Scordo, **A new life for kaonic atoms at DAΦNE: future measurements and perspectives with advanced X-ray spectroscopy techniques**

17:40



M. Dinh, P.-G. Reinhard, E. Suraud, **On the microscopic description of irradiation dynamics**

18:00

### Refreshments

**KEDEA Hall, Level 0**

Eastern  
European  
Time

### Oral session

**Radioecology**

**Amphitheater 1, Level 0**

Chairperson: **Suleyman Ozmen**

18:30

S. Bianchi et al., **Beryllium-7 activity concentration trends in Serbia and Slovenia**

18:50

C.-F. Savin, D.-K. Süle, F. L. Forray, R.-C. Begy, **Radiological properties and elemental composition of spring water related to the volcanic geological environment of the Eastern Carpathians, Romania**

19:10

R.-C. Begy, C.-F. Savin, D. L. Vereş, S. Kelemen, E. K. Magyari, **Last 150 years of human impact on high altitude lakes in Eastern and Southern Carpathians, Romania**

19:30



D. Gudkov et al., **Dose-dependent effects of ionizing radiation on aquatic biota in gradient of long-term radionuclide contamination of water bodies**

19:50



E. Spahiu, I. Bêrdufi, M. Shyti, **Preliminary investigation of naturally occurring radionuclides in some spices used in Albania**

20:10



E. Spahiu, I. Bêrdufi, M. Shyti, F. Cfarku, **Monitoring of cosmogenic and terrestrial radionuclides in ground level air samples by gamma spectrometry in Albania**

20:30



V. Niadzvetskaya, R. Stęborowski, M. Asztemborska, **Effect of silver and iron nanoparticles on the bioavailability of cesium radioisotopes for *Triticum aestivum* plants**

20:50



C. Ganzha, D. Gudkov, I. Abramiuk, O. Kaglyan, **Skeletal anomalies in juvenile fish from the cooling pond of the Chornobyl NPP**

Eastern  
European  
Time

## Wednesday, June 8

10:00–18:00

### Excursion

Visit to the Archeological Museum, boat ride to Peraia, lunch at *Το Στέκι του Βασίλη* Restaurant ([www.tostekitoyvasili.gr](http://www.tostekitoyvasili.gr)), boat ride back to Thessaloniki

Eastern  
European  
Time

## Thursday, June 9

08:30–16:00

**Registration**

**KEDEA Hall, Level 0**

## RADON SYMPOSIUM

Eastern  
European  
Time

### Plenary Session

Chairperson: **Jugoslav Karamarkovic**

**Amphitheater 1, Level 0**

09:00

### Invited talk

Peter Bossew, **Current topic discussions in radon research**

Eastern  
European  
Time

### Oral session

Chairperson: **Peter Bossew**

**Amphitheater 1, Level 0**

09:30

G. Toncheva et al., **Structure and Extraction-Spectrophotometric Determination of an Iron(II) Ternary Complex**

09:50

K. Ivanova, Z. Stojanovska, B. Kunovska, D. Djunakova, J. Djounova, N. Chobanova, **Direct measurements of radon and radon progeny in different public places**

10:10

J. Lüley, **CR-39 detector-based Radon dosimetry system calibration in the self-decay mode**

10:30

### Refreshments

**KEDEA Hall, Level 0**

Eastern  
European  
Time

### Oral session

#### Radon Symposium

Chairperson: **Dobromir Pressyanov**

**Amphitheater 1, Level 0**

11:00



A. A. Koçer, M. E. Kürkçüoğlu, **A study on IOT-based continuous radon monitoring**

11:20



K. Tushe, D. Prifti, J. Shano, M. Kaçeli (Xhixha), P. Dhoqina, **Results of Albania public opinion survey on radon risk perception**

11:40



L. Visca et al., **Radon detector development using a pin photodiode**

12:00



M. Kolovou, C. Potiriadis, N. Kallithrakas - Kontos, **A study on the correlation between indoor radon concentrations and the construction year of the dwellings**

12:20



C. Briones et al., **Multiparametric analysis for determining radon potential areas in the Metropolitan Area of Tenerife Island**

13:00

### Lunch

**KEDEA Hall, Level 0**

14:00–15:30

### Poster Sessions

**Radioecology, Radon Symposium, Environmental Physics, Space Research, Radiation Technology in Cultural Heritage Applications**

**KEDEA Hall, Level -1**

Chairpersons:

**Agata Walencik-Łata, Ioannis Kaissas**

**RE1** J. Ajtić, B. Mitrović, **Natural and artificial radionuclides in herbal teas from Serbia**

**RE2** C. Betsou, E. Ioannidou, N. Kazakis, A. Ioannidou, N. Tsirliganis, **Study of radionuclides concentrations in Greek vineyards: from cultivation to consumers' table**



**RE3** C. Betsou, E. Tsakiri, E. Ioannidou, M. Frontasyeva, A. Ioannidou, **Assessment of temporal variations of radionuclides close to a coal power plant in Northern Greece using moss bags**

**RE4** A. Csordás, T. Kovács, **Analysis of biosphere models describing the behaviour of natural and artificial radionuclides in the environment**

**RE5** A. Csordás, T. Kovács, **Environmental impact modelling and radiological risk assessment of NORM repositories in Hungary**

**RN1** B. Kunovska, K. Ivanova, D. Djunakova, N. Chobanova, J. Djounova, Z. Stojanovska, **Continuous diurnal radon measurements in Bulgarian caves**



	RN2	M. Kuqali, D. Kuqi, <b>Indoor radon monitoring in two seasons in the public kindergartens of Tirana city</b>
	EP1	E. Ioannidou, J. Paatero, S. Papagiannis, K. Eleftheriadis, C. Betsou, A. Ioannidou, <b><sup>210</sup>Pb as a tracer of air pollution in central Helsinki Space Research</b>
	SR1	M. Długosz-Lisiecka, T. Jakubowski, M. Krystek, A. El-Mallul, <b>HAH 346 chondrites from joint fall in Al-Džabal al-Gharbi, Libya</b>
	CH1	M. Długosz-Lisiecka, J. Sikora, M. Krystek, D. Płaza, P. Kittel, <b>Novel method of ancient pottery analysis based on radioactive isotope ratios – a pilot study</b>
14:00–15:30	<b>Poster Sessions</b> <b>Radiobiology, Biomedicine, Medical Physics, Radiotherapy, Biophysics</b> Chairperson: <b>Yordanka Karakirova</b> <b>KEDEA Hall, Level -1</b>	
	RB1	L. Andrejsová, Z. Šinkorová, J. Čížková, <b>Ex vivo apoptosis detection as a new tool in biodosimetry</b>
	RB2	Z. Šinkorová et al., <b>New model of pulmonary fibrosis treatment based on hyaluronic acid nanoparticles</b>
	BM1	C. Alexopoulos, D. Radojičić, T. Jončić, D. Radosavljević, M. Mikić Mladenović, I. Milojević, <b>The need to plan human resources for the work of the health institution</b>
	BM2	C. Alexopoulos, M. Despotović, M. Zlatanović, M. Mikić Mladenović, I. Milojević, M. Jovanović, <b>Measures to prevent reduced birth rates in the Republic of Serbia</b>
	BM3	B. Veljković, S. Dukić, M. Mihajlović, Z. Kaludjerović, M. Todorović, C. Alexopoulos, <b>Cyberbullying research on the youth population in Serbia</b>
	BM4	B. Veljković, J. Aleksandrić, M. Despotović, I. Milojević, M. Mikić Mladenović, C. Alexopoulos, <b>Computer skills of health professionals</b>
	MP1	M. Zivkovic, D. Krstic, T. B. Miladinovic, A. Miladinovic, D. Cocic, <b>Absorbed dose in humerus for breast cancer and regional lymph nodes involvement simulated by FOTELP – VOX code comparison with calculations by treatment planning system</b>
	MP2	A. Mamaras, P. Foka, M. Vretenar, A. Liolios, G. Bisoffi, A. Alic, <b>Numerical calculation method for medical radioisotope production with compact linear accelerators</b>
	RT1	D. Penev, P. Stavrev, N. Stavreva, D. Pressyanov, <b>Influence of dose uncertainty on TCP estimates – a model study</b>
Eastern European Time	<b>Oral session</b> <b>Radon Symposium</b> Chairperson: <b>Kremena Ivanova</b> <b>Amphitheater 1, Level 0</b>	
15:30		D. Pressyanov, D. Dimitrov, <b>A novel sensitive radon and thoron DVD-based detector for environmental monitoring</b>
15:50		K. Mitev, S. Georgiev, I. Dimitrova, V. Todorov, B. Sabot, <b>Recent work with electronic radon detectors for continuous Radon-222 monitoring</b>
16:10		A. Mustapha, O. Alatise, I. Okeyode, M. Olaoye, D. Al-Azmi, <b>Diurnal and seasonal influences on temporal variation of indoor radon concentration in the tropical climate of Abeokuta, South West Nigeria</b>
16:30		M. A. Olaoye, <b>Radon in groundwater from selected private wells and boreholes in Osogbo, Southwest Nigeria</b>
16:50		R. Mehra, <b>Use of appropriate sensitivity factors for long-term simultaneous measurement of the indoor concentration of radon and thoron progenies in the dwellings for health risk assessment</b>
21:00–01:00	<b>Conference Dinner</b> <b>Dia Tauta (Δια Ταύτα) Restaurant</b> <a href="http://www.diatautathessaloniki.com/en/">www.diatautathessaloniki.com/en/</a>	



**VIRTUAL SESSION**

[www.rap-conference.org](http://www.rap-conference.org)

**Radiobiology**

E. Syssoyeva, E. Polivkina, A. Yankauskas, **Study of the influence of the radiation factor on the morpho-anatomical parameters of plants in the conditions of a model experiment**

G. Wałpuski, Z. Szepliński, M. Paluch-Ferszt, M. Zienkiewicz, A. Rafalski, M. Asztemborska, **Effects of high-dose ionizing gamma radiation on the growth and survivability of *Cyanidioschyzon merolae***

G. Wałpuski, Z. Szepliński, M. Paluch-Ferszt, M. Zienkiewicz, Ł. Modzelewski, M. Asztemborska, **Effects of low doses of short-term gamma radiation on growth and photosynthetic activity of *Cyanidioschyzon merolae***

S. Akulinichev et al., **Analysis of cell response to single-pulse proton irradiation**

S. Vargas Castrillon, **A novel analytical approach to biological to radiotherapy treatment plan optimization**

**Radiation Protection**

J. Shano, **Establishment of CT diagnostic reference levels in Albania**

W. Ślusarczyk-Kacprzyk, I. Grabska, W. Bulski, P. Kukołowicz, **TLD postal dose audit in Poland – 2021 results**

I. Grabska, W. Ślusarczyk-Kacprzyk, W. Bulski, P. Kukołowicz, **Results of the interlaboratory comparisons for the Polish Secondary Standard Dosimetry Laboratory in the field of testing of thermoluminescent detectors in terms of absorbed dose to water**

**Radioecology**

A. Aldibekova, A. Peretykin, D. Osipov, E. Pryakhin, **The effect of chronic radiation exposure on zooplankton communities of radioactively contaminated reservoirs of “Mayak” PA**

A. Raimkanova, A. Aidarkhanova, **Assessment of radiocarbon concentration in soils of the ‘experimental field’ site**

R. Lavrikova, A. Aidarkhanova, A. Mamyrbayeva, Zh. Tleukanova, **The character of the vertical distribution of radionuclide pollution in bottom sediments of natural lakes in the territory of the Semipalatinsk test site**

A. Aidarkhanova, N. Larionova, Z. Tleukanova, **The current radiation state of water bodies at the sites of ‘peaceful’ nuclear explosions at the territory of the Semipalatinsk test site**

Y. Polivkina, L. Subbotina, F. Zhamaldinov, Y. Romanenko, A. Panitskiy, **Tritium incorporation by eggplant and pepper after short-term exposure to atmospheric HTO vapor under different growth periods**

Zh. Tleukanova, A. Aidarkhanova, Y. Tleukanov, **Study of speciation of technogenic radionuclides in surface waters of the Degelen site**

D. Ganzha, R. Ganzha, B. Sploshnoy, **The ratio of gross and water-soluble potassium in the upper soil layer in the area of influence of the thermal power plant**

D. Ganzha, D. Ganzha, D. Gudkov, B. Sploshnoi, **Retrospective estimation of radiation dose rate and morphometric parameters of leaf venation of the common reed in the Chornobyl Exclusion Zone**

## **Radon and Thoron**

I. Čeliković et al., **The radon flux measurement intercomparison and the use of radon flux in determination of indoor radon concentration**

## **Medical Physics**

S. Heta, I. Robo, G. Demika, N. Alliu, **Tensile force analysis for sutures most commonly used in dentistry during surgical procedures**

A. Cichoński, J. Ćwikła, A. Wysocka-Rabin, **Dosimetry evaluation in Lu-177-labeled somatostatin analogue internal radiotherapy**

## **Radiotherapy**

S. Akulinichev, V. Denisenko, T. Kulinich, V. Martynova, I. Yakovlev, **Increased apoptosis of tumor cells with a combination of photodynamics and radiation therapy**

## **Cancer Research**

E. Kuzmina, T. Mushkarina, S. Zatsarenko, **Relative resistance of CD4+CD25 high CD127low regulatory T cell subpopulation in the peripheral blood to the treatment of different types of cancers**

E. Kuzmina, S. Zatsarenko, T. Mushkarina, **Disorders of immune status are determined with the level of tumor cells in peripheral blood circulation in small lymphocytic lymphoma / B-cell chronic lymphocytic leukemia**

## **Neutron and Heavy Ion Radiations**

E. Mafucci, R. Bedogni, S. Altieri, M. Costa, V. Monti, **Development of a compact multi-elements activation neutron spectrometer for BNCT**

## **Medical Imaging**

I. Robo, S. Heta, S. Kapaj, B. Qirjaqi, **Classification of endo-perio lesions, based on radiographic examinations**

I. Robo, S. Heta, E. Kapaj, E. Sadiku, **Tissue reaction of the periodontal ligament presented with radiographic width, numerical correlations**

S. Heta, I. Robo, N. Alliu, **Stomach cancer, data on diagnostic methodology**

M. Dobrzyńska, A. Wysocka-Rabin, K. Pasicz, W. Skrzyński, E. Fabiszewska, **Comparison of two digital mammography systems using quantitative methods**

A. Kaloudi, S. David, N. Kalyvas, D. Rimpas, A. Skouroliaou, **Infrared imaging of venipuncture sites, an evaluation of effectiveness on vein visualisation**

## **Biomedicine**

V. Ju. Laga, E. I. Yarygina, A. A. Oleshkevich, **Heterogeneity of the distribution of genetic variants of the rabies virus in the territory of the Russian Federation**

D. Mandic, D. Cvetkovich, M. Jovanovich, I. Buha, D. Djordjevic, **Regeneration processes in hip cartilage promoted by new magnetic (MADU) method**

D. Djordjevic, D. Cvetkovich, D. Mandic, I. Buha, M. Jovanovich, **Knee articular cartilage regeneration by new magnetic (MADU) method**

D. Cvetkovich, D. Djordjevic, M. Jovanovich, I. Buha, D. Mandic, **Vascular Diseases Treated by New Magnetic (MADU) Technology in Medicine**

D. Djordjevic, M. Jovanovich, I. Buha, D. Cvetkovich, D. Mandic, **Osteochondral Regenerative Processes in Vertebral Bodies by New Magnetic (MADU) Method**

E. Filippova, A. Zhuravleva, **Morphological changes of Harderian glands after implantation of PET track-etched membranes into the anterior chamber of the eye**

E. Filippova, A. Zhuravleva, **Morphology of Harderian glands after the polycaprolactone implantation**

Y. G. Samoilova, M. V. Matveeva, O. A. Oleinik, O. S. Tonkikh, L. M. Shuliko, **Neurovascularization and tractography in obese children**

## **Biochemistry**

A. A. Oleshkevich, F. I. Vasilevich, S. A. Komarova, **Seasonal biochemical parameters of domestic dogs' blood from various breeds**

## **Biophysics**

S. A. Komarova, A. A. Oleshkevich, T. E. Denisenko, **Biophysical indicators of deer skin derivatives from different habitats**

L. Batyuk, N. Kizilova, **Investigation of frequency of dielectric relaxation of water molecules in blood cells of cancer patients**

## **Biotechnology**

A. A. Oleshkevich, E. I. Yarygina, V. Laga, **Pilot phase in the development of vaccines against Marek's disease**