



# BPU11 CONGRESS

## Monday, August 29, 2022

**Poster session: S10, S11, S14, S15 - Lobby (6:00 PM - 7:30 PM)**

time	[id] title	presenter
6:00 PM	[M1] Autumn - diurnal variation of lightning over Black Sea and Bulgaria	Dr PETROVA, Savka
6:00 PM	[M20] Verification of EBU-POM regional climate model using E-OBS and ERA5-Land dataset over Pannonian Basin	Mrs LAZIC, Irida
6:00 PM	[M12] Introduction of the virtual lab in Physics class	OVANNISIAN, Errikos DIMITSAKIS, Panagiotis
6:00 PM	[M04] Evolution in the Semantics of the Term 'Climate'	TAKUCHEV, Nikolay
6:00 PM	[M9] Formation of Silver Selenide and Copper Selenide synthesized by Pack Cementation and Mechanical alloying processes	STATHOKOSTOPOULOS, Dimitrios
6:00 PM	[M81] Extending the MVD model and produce a video to foster students' understanding of climate change	PELEKAS, Lazaros
6:00 PM	[M12] Introducing Wetting Models in Science Club	Mrs ARVANITOU, Efthymia
6:00 PM	[M5] Work with motivated and gifted students in physics in RCT "Mihajlo Pupin" from Pancevo – a review of the last 15 years	Dr CUCIĆ, Dragoljub
6:00 PM	[M91] Lidar Investigation and Mapping of Aerosol Loadings above Sofia, Bulgaria	Dr DREISCHUH, Tanja
6:00 PM	[M05] The High-Energy Positive Solar Particles Invading Earth with Contribution to the Mortality from Ischemic Heart Diseases?	TAKUCHEV, Nikolay
6:00 PM	[M6] Developing an integrated Urban Heat Island Forecasting and Heat Health Warning System for selected Mediterranean urban areas	PARLIARI, Daphne
6:00 PM	[M11] The evaluation of vulnerability to extreme climate events over Balkan Peninsula using modified Climate Extremes Index	TOSIC, Milica
6:00 PM	[M12] Three decades of heat waves and extreme precipitation in Albania	Dr PORJA, Tanja
6:00 PM	[M09] Realization problems in the Individualized Educational Plan of physics teaching in elementary schools in Serbia	Ms POPOVIĆ, Jelena
6:00 PM	[M18] Wetting and Roughness of Surfaces As Biomimetic Concepts in Teaching – A Proposal for Science Clubs	Mr STEFANIS, Michail Mrs TSIRIGOTI, Emmanouela
6:00 PM	[M7] Representation of history of science in teaching physics: Students' knowledge about physics scientists	ČAVIĆ, Milan
6:00 PM	[M10] A Proposition for the Introduction of the Lotus Effect in Secondary Education	Mr PELEKAS, Lazaros
6:00 PM	[M91] The way we teach: The cases of backward pedagogy, through prototyping and aiming for the societal benefits	LASTOVICKA-MEDIN, Gordana
6:00 PM	[M06] Experimental study of a circular motion by smartphone technology	Mrs OPINGARI, Ingrid
6:00 PM	[M7] Inquiry Based Learning Approach in Teaching "Phase Transitions" for Experimental Skills Formation in 16 Years Old Students	Mrs DANIELA, Ivanova
6:00 PM	[M4] Some challenges for teachers in natural sciences in the context of distance learning during the Covid 19 pandemic	Prof. RAYKOVA, Zhelyazka

6:00 P	M148] Tailoring the photocatalytic properties of anatase $\text{TiO}_2$ by B - TM (TM = Pt, Ta, V) co-doping	IVANOVSKI, Valentin N.
6:00 P	M11] Investigation of the Dst variations in X component at mid latitudes during geomagnetic storm in 3 February 2022	Dr BOJILOVA, Rumiana
6:00 P	M17] Development of a Monitoring and Forecasting Air Quality Modelling System	Ms PAPADOGIANNAKI, Sofia
6:00 P	M18] Spatial distribution of the magnetic disturbances at European midlatitudes during substorms: case study	Prof. GUINEVA, Veneta
6:00 P	M177] International Physics Olympiads as effective resources of knowledge source for high school students	MANOLEV, Stojan
6:00 P	M156] Seasonal distribution of lightning over Bulgaria and Black Sea and its relationship with sea surface temperature	Prof. MITZEVA, Rumjana
6:00 P	M193] Evaluation of low-cost air quality measuring devices - Klimerko	ALEKSANDROV, Neda
6:00 P	M126] Determination of maximal expected magnitude of the main neotectonic zones in North Macedonia	DROGRESHKA, Katerina
6:00 P	M141] Preliminary results on the multifractal nature of the main geomagnetic field	Dr PEQINI, Klaudio
6:00 P	M151] Synthesis and Characterization of $\text{Mg}_2\text{Si}$ and Al doped $\text{Mg}_2\text{Si}$ formed by Pack Cementation process	Dr STATHOKOSTOPOULOS , Dimitrios
6:00 P	M107] Hierarchical Structure and the Rose Petal Phenomenon. A Proposition for Educational Reconstruction in Secondary Education.	Mr KALANTZIS, Ioannis
7:29 P	M109] System for monitoring and acquisition of physical processes dynamics: the decomposition of $\text{CaCO}_3$ tablets in deionized water	PETRONIJEVIĆ, Ivan

**Poster session: S02, S07, S08, S09, S12 - Restaurant (6:00 PM - 7:30 PM)**

time	[id] title	presenter
6:00 P	M1] A Parallelized Soft for Lattice QCD Simulations	Prof. XHAKO, Dafina
6:00 P	M171] Universal patterns of social group growth: a statistical physics approach	Dr MITROVIĆ DANKULOV, Marija
6:00 P	M155] Evaluation of Thermophysical Properties of Semiconductors by Photoacoustic Phase Neural Network	DJORDJEVIC, Katarina
6:00 P	M142] Direct Conversion Of Ionizing Radiation Into Electrical Energy Using PIN Diodes	Mr ILIĆ, Stefan
6:00 P	M183] Steering witnesses for Gaussian quantum states	MIHAESCU, Tatiana
6:00 P	M169] Topology of evolving networks: the role of growth signals	Ms VRANIĆ, Ana
6:00 P	M16] Optical spectroscopy of $\text{BaF}_2:\text{Pb}^{2+}$ crystals	Dr BUSE, Gabriel
6:00 P	M105] Influence of air and water vapor on EEDF and some active species in atmospheric pressure low temperature helium plasmas: investigation by global model	Dr MLADENOVIĆ, Željko
6:00 P	M130] Synthesis and characterization of titanium boride coatings fabricated by selective electron-beam surface alloying	Dr VALKOV, Stefan
6:00 P	M199] Competitive Influence Diffusion Through Social Networks	IFTI, Margarita
6:00 P	M17] The Magnetic Properties of Bilayer Ising Model in External Magnetic Field	Prof. EKIZ, Cesur
6:00 P	M14] Existence and dynamics of eigenmodes in linear flux dressed two-dimensional plus lattice	STEPIĆ, Milutin

6:00 P	M17] Experimental demonstration of coherent beam recombination after controllable beam break-up and filamentation by using optical vortex lattices	Dr STOYANOV, Lyubomir
6:00 P	M18] Milankovitch cycles, eighty years later	JOVANOVIĆ, Gordana
6:00 P	M164] Characteristic Emission of Star-Forming High Redshift Galaxies: Testing the IR Template	Dr BOGDANOSKA, Jana
6:00 P	M114] Lightcurve Analysis of Asteroids at the Astronomical Station Vidojevica for the first half of 2022	Prof. APOSTOLOVSKA, Gordana
6:00 P	M185] Mechanical Analysis of Dollar Index Trend	MALIVUK GAK, Dragana
6:00 P	M150] Cathodes with increased thermoelectronic emission properties	TOPALA, Pavel
6:00 P	M158] High robustness discrete time quantum random walk search algorithm without marking coin	TONCHEV, Hristo
6:00 P	M148] Obtaining secondary light radiation under the action of that caused by plasma in the air environment	Prof. TOPALA, Pavel
6:00 P	M173] Flux densities and spectral indices of Relaxed Double radio galaxy 3C 84	Dr BORKA JOVANOVIĆ, Vesna
6:00 P	M108] Scattering and absorption of light by aerosol particles	Dr MICO, Silvana
6:00 P	M139] Control of group index in two level system by Kerr nonlinearity	PERIĆ, Milica
6:00 P	M148] Compact localized modes in Dice lattice dressed by artificial flux	MANČIĆ, Ana
7:29 P	M166] Determination Of The Temperature Distribution In The Cathode Sheath Region Of Hydrogen Glow Discharge Using R-Branch Of Fulcher- $\alpha$ Band	Prof. MAJSTOROVIĆ, Gordana
7:29 P	M191] Experimental study of Ne II spectral lines shapes in the cathode sheath of an abnormal glow discharge	Dr IVANOVIĆ, Nikola NEDIĆ, Nikodin
7:29 P	M146] Stark shifts dependence on the upper level ionization potential and the rest core charge of the emitter within 3s-np transition arrays	SCEPANOVIĆ, Mara

# Tuesday, August 30, 2022

## Poster session: S03, S05, S13 - Lobby (6:00 PM - 7:30 PM)

time	[id] title	presenter
6:00 PM	[M180] Support vector machine for evaluation of autofluorescence cancer diagnostic parameters	ZAHARIEVA, Lidia
6:00 PM	[M11] Analysis of the strange particle transverse flow in relativistic heavy-ion collisions	RISTEA, Oana
6:00 PM	[M89] The way we succeed in our research within LGAD R&D enabling real time and 4D tracking for LHC-HL, by designing the scientific tools and performing the experiments at the European Research Infrastructures: The case of Montenegro RD50 group	LASTOVICKA-MEDIN, Gordana
6:00 PM	[M144] Measurement of the $\sigma \times BR(H \rightarrow ZZ^*)$ at 350 GeV and 3 TeV center-of-mass energies CLIC	MILUTINOVIC DUMBELOVIC, Gordana
6:00 PM	[M5] On the quarks transverse momenta in SIDIS experiments	STOILOV, Michail
6:00 PM	[M101] On Various Aspects of DBI Lagrangian Dynamics and its Mechanical and Cosmological Realization	POPOVIĆ, Milan
6:00 PM	[M170] On a gauge invariant variable for scalar perturbations during inflation	VESIĆ, Nenad
6:00 PM	[M134] The dependence of the radiation dose on the angle and the field size for radiation beam with energy 18 MV.	Dr SELMANI, Idajet
6:00 PM	[M168] Lipid content changes in cancerous and non-cancerous cells induced by ZnO nanoparticles: Raman spectroscopy approach	MILETIĆ, Mirjana
6:00 PM	[M115] Hardware and Physics Studies at KAHVELab	GÖKTÜRK, Berare
6:00 PM	[M195] The ATLAS New Small Wheels for LHC Run3	Ms PERGANTI, Maria
6:00 PM	[M158] Progress on characterizatin of LGAD sensors for the ETL	MARKOVIC, Lazar
6:00 PM	[M178] Collective modes of gluon in an anisotropic thermo-magnetic medium	KARMAKAR, Bithika
6:00 PM	[M108] The production of particles with well determined angular momentum in external Coulomb field on de Sitter expanding universe	BALOI, Mihaela
6:00 PM	[M100] Determination of CPV Higgs mixing angle in ZZ-fusion at 1.4 TeV CLIC	VUKASINOVIC, Natasa
6:00 PM	[M13] Study of mass hierarchy in heavy flavor suppression	ILIC (BLAGOJEVIC), Bojana
6:00 PM	[M163] Determination of spatial resolution of nonlinear laser scanning microscopy	BUKUMIRA, Marta
6:00 PM	[M124] Polarimetric characterization of collagenosis tissue samples	ILYOV, Stoyan
6:00 PM	[M166] Upgrade and extensive hardware and software tests of the CMS ECAL detector for the upcoming LS3	Dr MILENOVIC, Predrag
6:00 PM	[M154] Application of Multivariate Analysis in Separation of Higgs Boson Signal at future e+e- colliders	RADULOVIC, Mirko
6:00 PM	[M116] Measurement of the Higgs to $\gamma\gamma$ branching fraction at 3 TeV CLIC	KACAREVIC, Goran
6:00 PM	[M186] Pigmented skin lesions assessment with optical coherence tomography	Ms MIRCHEVA, Victoria
6:00 PM	[M167] Neural network distributed training and optimization library (NNLO)	VELJANOVIC, Irena
6:00 PM	[M162] Analysis of deposit accumulated on electrode samples in the course of CSC longevity tests using 40% Ar, 50% CO2 and 10%CF4 gas mixture	Dr MILOVANOVIC, Dubravka
7:15 PM	[M17] Evaluation of the influence of some polymers on the physical stability of lipid self- double emulsifying systems with Alendronate Sodium	PEHLIVANOV, Ivaylo

**Poster session: S01, S04, S06 - Restaurant (6:00 PM - 7:30 PM)**

time	[id] title	presenter
6:00 P	M26] Effective field theory approach to low temperature thermodynamics of two-dimensional O(3) ferromagnets	RADOŠEVIĆ, Slobodan
6:00 P	M38] Investigating the degradation effects of a compartment fire protocol on wall-paintings	MALLETZIDOU, Lamprini
6:00 P	M38] Superconducting Quantum Interference Proximity Transistor (SQUIPT)	Ms PRTENJAK, Teodora
6:00 P	M0] Simulations of phonon-limited electron mobility in II-VI semiconductors	VUKMIROVIĆ, Nenad
6:00 P	M] Magnetic Hyperthermia Potential of Colloidal Zinc-substituted Iron Oxide Nanoparticles and TiO <sub>2</sub> @Zinc Ferrite Hybrids	Dr JOVIĆ ORSINI, Nataša
6:00 P	M3] Semi-flexible interacting self-avoiding polygons on 3-simplex lattice	MARČETIĆ, Dušanka
6:00 P	M3] Tubular structures of magnetic particles: platform for curvilinear nanomagnetism	Dr STANKOVIĆ, Igor
6:00 P	M8] Long-ranged Cu-based order at cuprate/manganite interface	Dr GAINA CAPU, Roxana
6:00 P	M5] Non-equilibrium molecular dynamics investigation of a model ionic liquid lubricant for heavy-duty applications	STANKOVIĆ, Igor
6:00 P	M9] Crystallization of sodium chlorate crystals by evaporation in a magnetic field	MILOJEVIC, Milica
6:00 P	M20] Cosmic-ray induced background of shielded HPGe detector	VELIMIROVIC, Danijel
6:00 P	M59] Effect of Yttrium Substitution on Structural Properties of nanopowder nickel ferrites: X-Ray and Raman studies	JANKOV, Stevan
6:00 P	M72] Computational study of lead selenide doped with group IIIA elements	TOTH, Elvira
6:00 P	M4] Slow and fast relaxation times of quantum lattice model with local multi-well potentials: Phenomenological dynamics for $\text{Sn}_2\text{P}_2\text{S}_6$ ferroelectric crystals	Mr ERDEM, Riza
6:00 P	M72] Generalized Haldane Model and Molecular Excitons' Spectra	LALOV, Ivan
6:00 P	M6] Determination of <sup>226</sup> Ra and <sup>222</sup> Rn content in thermomineral water and assessment of radiation risk	KNEZEVIC RADIC, Jovana
6:00 P	M16] Bose-Einstein condensate - Tunneling	PEJIĆ, Emilija
6:00 P	M52] Planar surfaces of point dipoles as a platform for 2d magnetic structure research	RODRIGUEZ SOTELO, Sindy Julieth
6:00 P	M33] Superconductor in a weak time-dependent magnetic field	Dr IVANOVIĆ, Krsto
6:00 P	M10] The dwell time of electron tunneling through a multi-barrier quantum structure based on graphene	BĂLȚĂȚEANU, Doru Marcel
6:00 P	M6] Influence of magnetic field on the growth mechanisms of sodium chlorate crystals	Ms MILOJEVIĆ, Milica Dr VUČETIĆ, Branislava
6:00 P	M45] Radiation dosimetry applications based on silicate minerals extracted from dried oregano	KARAMPIPERI, Maria
6:00 P	M57] Terahertz Radiation from the BSCCO Single Crystal in resonance region	IVANOVIĆ, Krsto
6:00 P	M04] Polymer nanocomposites filled with core-shell nanoparticles for nanodielectric application	PETRONIJEVIĆ, Ivan
6:00 P	M31] Josephson current in d-wave superconductor junctions with inhomogeneous ferromagnet	POPOVIĆ, Zorica

6:00 P	M167] Synthesis, Structural and Electrical Properties of SWCNT Thin Film Electrodes - First Results	SILJEGOVIC, Mirjana
6:00 P	M155] Nonrelativistic energy spectra of three-particle systems calculated in the adiabatic approach by using finite difference method	DANEV, Petar
6:00 P	M165] Muonium formation in collisions of positively charged muons with hydrogen and helium atoms	Prof. MILOJEVIĆ, Nenad
6:00 P	M140] Towards the Discrimination between Natural and Synthetic Pigments: The Case of Ultramarine	POURLIAKA, Anastasia
6:00 P	M1] Shannon Entropy for Ground State of Harmonium in Spherically Confined Plasma	SIMIĆ, Milena
6:00 P	M17] Radioactivity Measurements of Ceramic Tiles Produced in Serbia	Prof. KUZMANOVIĆ, Predrag
6:00 P	M22] Detection of ionizing particles with monolith scintillator and segmented photodetector	IVANOV, Simeon
6:00 P	M16] Alternating-Basis Quantum Monte Carlo Method for Strongly Correlated Electrons	Dr JANKOVIC, Veljko
6:00 P	M117] Experimental determination of the energy dependence of the rate of negative muon transfer reaction $\mu^- + O \rightarrow p + \mu^- + O$	Prof. BAKALOV, Dimitar
6:00 P	M181] Mobility of Holstein polaron from real and imaginary time quantum Monte Carlo calculations	MILADIC, Suzana
6:00 P	M160] Drift velocity of the electron transport in RF electromagnetic field in $N_2$ gas	Mrs STANKOVIĆ, Violeta
6:00 P	M141] Monastery of the Ascension, Ellassona, Mount Olympus, Greece: Characterization of Late Post-Byzantine Wall Paintings	PATSIATZI, Eftalia
6:00 P	M118] Midgap state in silicon carbide monolayer induced by atom adsorption	OROZOVIĆ, Marko