



**12<sup>th</sup> Conference of the Society of Physicists of Macedonia – CSPM 2018**  
**27-30 September 2018, Ohrid, Macedonia**  
**Conference Schedule (Update)**

**27 September 2018 – Thursday**

10:00-12:00	<b>REGISTRATION</b>	
12:15-12:30	<b>Conference Opening</b>	
12:30-13:15	CHAIRMAN Ljupčo Hadžievski	
	<b>PT-01: Francesco Saverio Cataliotti, QUANTUM ZENO EFFECT AND COHERENT CONTROL IN ULTRA-COLD ATOMS</b>	
13:15-15:00	<b>LUNCH</b>	
	CHAIRMAN Francesco Saverio Cataliotti	
15:00-15:45	<b>PT-02: L. Stoyanov, G. Maleshkov, M. Zhekova, I. Stefanov, Alexander Dreischuh, S. Topuzoski, Lj. Janicijevic, P. Hansinger and G. G. Paulus, FAR-FIELD BEAM RESHAPING BY OPTICAL VORTICES AND VORTEX LATTICES</b>	
15:50-16:20	<b>IT-01: Ljupčo Hadžievski</b> CHIRAL METAMATERIALS BASED ON TWISTED CLOSED RING RESONATORS	<b>Parallel-session - CHAIRMAN</b> (to be announced)
		<b>EDU-01: Ljubiša Nesić and L. Radenković</b> CONTACT FORCES IN RIGID BODY DYNAMICS
16:20-16:40	<b>CT-01: Suzana Topuzoski, L. Stoyanov, Lj. Janicijevic, I. Stefanov and A. Dreischuh, TRANSFORMATION OF HERMITE-GAUSSIAN MODE (1,1) INTO A BEAM WITH MULTIPLE VORTICES</b>	<b>EDU-02: Stojan Manolev, THE MOTIVATIONAL EFFECT OF THE EXPERIMENT IN PHYSICS TEACHING</b>
16:40-17:10	<b>COFFEE BREAK</b>	
	CHAIRMAN Alexander Dreischuh	<b>Parallel-session - WORKSHOPS</b>
17:10-17:40	<b>IT-02: Sefer Avdiaj, Jay Hendricks and Jacob Ricker</b> THE QUANTUM PASCAL: MEASURING PRESSURE AND VACUUM WITH LIGHT	<b>EDU-W1: Sladjana Nikolić and Hrvoje Mesić</b> <u>MOTIVATIONAL SIMPLE EXPERIMENTS WORKSHOP</u>  <b>EDU-W2: Vladimir Dojčilović and Dragica Krvavac</b> <u>NEW TECHNOLOGIES IN PHYSICS EDUCATION</u> <u>Experiments with optical sets</u>
17:40-18:00	<b>CT-02: Olgica Kuzmanovska, O. Atanackovic, M. Faurobert</b> APPLICATION OF FBILI METHOD FOR MULTI-LEVEL LINE TRANSFER	
18:00-18:20	<b>CT-03: Violeta Petrović, K. Isaković, H. Delibasić, THE THEORETICAL STUDY OF THE ELECTRON CORRELATION AND EXCITATION EFFECTS ON THE ENERGY DISTRIBUTION IN PHOTON IMPACT IONIZATION</b>	
18:20-18:40	<b>Jelena Radovanović</b> MODELING AND APPLICATIONS OF QUANTUM CASCADE STRUCTURES	
19:00-20:00	<b>WELCOME RECEPTION</b>	



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<b>28 September 2018 – Friday</b>		
9:15-10:00	CHAIRMAN Ervin Kaminski Lenzi <b>PT-03: Ljupco Kocarev</b> , COLLABORATION/COOPERATION IN GROUPS OF AGENTS	
10:00-10:45	<b>PT-04: Aleksei Chechkin</b> , WONDERFUL WORLD OF RANDOM WALKS: FROM LUCRETIUS' "DE RERUM NATURA" TO OPTIMAL SEARCH STRATEGIES	
10:50-11:10	<b>CT-04: Dušan Zorica</b> , S. Cvetičanin FRACTIONAL TELEGRAPHER'S EQUATION IN MODELING TRANSMISSION LINES AND HEAT CONDUCTION	<b>Parallel-session - CHAIRMAN</b> (to be announced) <b>EDU-03: Sonja Gegovska-Zajkova</b> , O. Zajkov HOW GOOD KNOWLEDGE TESTS USED IN EDUCATION ARE: EXAMPLE OF NATIONAL SCIENCE COMPETITION TESTS
11:10-11:45	<b>COFFEE BREAK</b>	
11:45-12:30	CHAIRMAN Aleksei Chechkin <b>PT-05: Ervin Kaminski Lenzi</b> , FRACTIONAL TIME DERIVATIVES, ANOMALOUS DIFFUSION AND POISSON-NERNST-PLANCK MODEL	
12:35-13:05	<b>IT-03: Trifce Sandev</b> , ANOMALOUS-TO-NORMAL DIFFUSIVE CROSSOVER IN COMPLEX SYSTEMS: TEMPERED DYNAMICS APPROACH	<b>Parallel-session - CHAIRMAN</b> (to be announced) <b>EDU-04: Filip Milinković</b> , BLOCKCHAIN TECHNOLOGY IN PHYSICS
13:05-13:25	<b>CT-05: Yildrita Seferi</b> , G. Markoski, A. Gjurchinovski, COMPARATIVE ANALYSIS OF DIFFERENT NUMERICAL METHODS FOR NONLINEAR FRACTIONAL DIFFERENTIAL EQUATIONS	<b>EDU-05: Oliver Zajkov</b> , S. Gegovska-Zajkova IMPROVEMENT OF THE PHYSICS TEXTBOOKS FOR 8 <sup>TH</sup> AND 9 <sup>TH</sup> GRADE IN MACEDONIAN SCHOOLS
13:30-15:00	<b>LUNCH</b>	
	CHAIRMAN Mimoza Ristova	<b>Parallel-session – WORKSHOPS</b>
15:00-15:30	<b>IT-04: Jan Mlynar</b> , O. Ficker, E. Macusova and EUROfusion MST1 Team RUNAWAY ELECTRONS IN THE COMPASS TOKAMAK	<b>EDU-W2: Vladimir Dojčilovic and Dragica Krvavac</b> <u>NEW TECHNOLOGIES IN PHYSICS EDUCATION Experiments with optical sets</u>  <b>EDU-W3: Stefan Jokić, Ljiljana Jokić</b> <u>WORKSHOP FOR TEACHERS: PHYSICS, INFORMATICS, INNOVATION VIA INQUIRY APPROACH</u>
15:30-15:50	<b>CT-06: Ambra Lattanzi</b> , A. Torre and D. Levi, SOLUTIONS TO THE FREE-SPINLESS-PARTICLE (1+1)D SALPETER EQUATION: A NON-LOCAL DESCRIPTION FOR RELATIVISTIC BODIES	
15:50-16:10	<b>CT-07: Mihai V. Nichita</b> and V. P. Paun, PULMONARY ARTERIAL NETWORK. A FRACTAL ANALYSIS OF X-RAYS IMAGES	
16:10-16:30	<b>CT-15: Ibrahim Hameli</b> , Sefer Avdiaj, OUTGASSING MEASUREMENTS OF THE KOSOVO VACUUM STANDARD	
16:30-16:45	<b>CT-16: Svetlana Nestoroska Madjunarova</b> , OPERATIONAL INTERVENTION LEVELS FOR ENABLING TRANSITION TO AN EXISTING EXPOSURE SITUATION AFTER A RADIOLOGICAL EMERGENCY INVOLVING DISPERSAL OF RADIOACTIVE MATERIAL IN THE ENVIRONMENT	
16:45-18:45	Poster session and EPS Young Minds	<b>20:00-00:00 GALA DINNER</b>



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<b>29 September 2018 – Saturday</b>			
9:15-10:00	CHAIRMAN Aleksandar Skeparovski <b>PT-06: Marija Gajdardziska-Josifovska</b> , M.A. Schofield, C.J. Hirschmugl ADVANCED ACTIVE ANODE MATERIALS AND ADDITIVES FOR LITHIUM ION BATTERIES		
10:05-10:35	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><b>IT-05: Dencho Spassov</b>, A. Paskaleva, T. A. Krajewski, A. Skeparovski, E. Guziewicz, N. Novkovski Al<sub>2</sub>O<sub>3</sub>/HfO<sub>2</sub> MULTILAYER STACKS FOR NONVOLATILE FLASH MEMORY APPLICATIONS</td> <td style="width: 50%;"><b>Parallel-session - CHAIRMAN</b> (to be announced) <b>EDU-06: Sasha Stamenkovski</b>, N. Markovic RELATING MECHANICS AND ELECTROMAGNETISM IN ARDUINO BASED ACTIVITY AIMED AT UNDERSTANDING MOTION OF NEODYMIUM MAGNET FALLING THROUGH A COPPER PIPE</td> </tr> </table>	<b>IT-05: Dencho Spassov</b> , A. Paskaleva, T. A. Krajewski, A. Skeparovski, E. Guziewicz, N. Novkovski Al <sub>2</sub> O <sub>3</sub> /HfO <sub>2</sub> MULTILAYER STACKS FOR NONVOLATILE FLASH MEMORY APPLICATIONS	<b>Parallel-session - CHAIRMAN</b> (to be announced) <b>EDU-06: Sasha Stamenkovski</b> , N. Markovic RELATING MECHANICS AND ELECTROMAGNETISM IN ARDUINO BASED ACTIVITY AIMED AT UNDERSTANDING MOTION OF NEODYMIUM MAGNET FALLING THROUGH A COPPER PIPE
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10:35-11:00	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><b>IT-06: Vlado K. Lazarov</b>, Y. Liu, D. Gilks, L. Lari, A. Ghasemi, Q. Ramasse, D. Kepaptsoglou, M. GuerreroLebrero, P. L. Galindo, M. Weinert and L. Li, TUNING DIRAC STATES IN TOPOLOGICAL INSULATOR THIN FILMS</td> <td style="width: 50%;"><b>EDU-07: Štefica Ujčić</b>, TESLA AND GOETHE</td> </tr> </table>	<b>IT-06: Vlado K. Lazarov</b> , Y. Liu, D. Gilks, L. Lari, A. Ghasemi, Q. Ramasse, D. Kepaptsoglou, M. GuerreroLebrero, P. L. Galindo, M. Weinert and L. Li, TUNING DIRAC STATES IN TOPOLOGICAL INSULATOR THIN FILMS	<b>EDU-07: Štefica Ujčić</b> , TESLA AND GOETHE
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11:00-11:30	<b>COFFEE BREAK</b>		
11:30-12:15	CHAIRMAN Oliver Zajkov/Vlado Lazarov <b>PT-07: Gorazd Planinšič</b> , HOW WE CAN USE PHYSICS EXPERIMENTS TO HELP STUDENTS BUILD THEIR OWN KNOWLEDGE?		
12:20-12:40	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><b>CT-10: Valentin G. Peschansky and Kyriacos Yiasemides</b> SHUBNIKOV–DE–HAAS OSCILLATIONS OF THE THERMOELECTRIC FIELD IN LAYERED CONDUCTORS NEAR THE LIFSCHITZ TOPOLOGICAL TRANSITION</td> <td style="width: 50%;"><b>Parallel-session - WORKSHOPS</b> <b>EDU-W1: Sladjana Nikolić and Hrvoje Mesić</b> MOTIVATIONAL SIMPLE EXPERIMENTS WORKSHOP</td> </tr> </table>	<b>CT-10: Valentin G. Peschansky and Kyriacos Yiasemides</b> SHUBNIKOV–DE–HAAS OSCILLATIONS OF THE THERMOELECTRIC FIELD IN LAYERED CONDUCTORS NEAR THE LIFSCHITZ TOPOLOGICAL TRANSITION	<b>Parallel-session - WORKSHOPS</b> <b>EDU-W1: Sladjana Nikolić and Hrvoje Mesić</b> MOTIVATIONAL SIMPLE EXPERIMENTS WORKSHOP
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13:00-13:20	<b>CT-12: Irina Petreska</b> , G. Zwicknagl, ELECTRON-PHONON COUPLING IN A CLASS OF ORGANIC MOLECULES		
13:30-14:45	<b>LUNCH</b>		
15:00-18:00	<b>GUIDED TOUR</b>		



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**30 September 2018 – Sunday**

	CHAIRMAN Riste Popeski-Dimovski	
10:00-10:20	<b>CT-18: Mimoza Ristova</b> , Dijana Angeleska, Zuzana Brozek-Mucha, SEM/EDX ANALYSIS OF THE DENTAL CEMENTUM TO ESTABLISH ONE HUMAN'S LIFESTYLE FOR FORENSIC APPLICATIONS (Pilot Study)	
10:20-10:40	<b>CT-13: Stojan Rendeovski</b> , Ahmed Sulaiman Ali Alghanbeer Alkhanbouli, Khaled Saif Mohamed Ali Alshaabi, Saif Abdullah Ali Ahmed, Naim Mahmudi, NOISE ABSORBING PROPERTIES OF A SANDWICH-LIKE WALL STRUCTURE FILLED WITH DESERT SAND	<b>Parallel-session - CHAIRMAN</b> (to be announced)
10:40-11:00	<b>CT-14:</b> R. Popeski-Dimovski, <b>Arta Velju</b> , A. Jashari, N. Mahmudi ALGINATE GEL MATRIX AS CARRIER OF AN ULTRASOUND INDUCED WATER SOLUBLE FORM OF (E)-3- [2-(thiazol-2-yl)hydrazinylidene]chroman-2,4-dione AS PROMISING ANTICANCER SUBSTANCE	<b>EDU-08:</b> Ana Trpkovska and O. Zajkov POSSIBLE PROBLEMS IN PERFORMING DEMONSTRATIONS AND ELECTROMAGNETISM EXPERIMENTS
11:00-11:20	<b>CT-09: Neset Izairi</b> , F. Ajredini, R. Bexheti, Sh. Rexha, M. Ristova IMPROVEMENT OF THE MECHANICAL PROPERTIES OF THE Al-ALLOY AA6082	<b>EDU-09:</b> Marina Janeska, T. Cileva, O. Zajkov SMARTPHONES FOR EXPERIMENTATION AND KNOWLEDGE TESTING IN PHYSICS CLASSROOM
11:20-11:40	<b>CT-17:</b> Riste Popeski-Dimovski, <b>Labinot Useini</b> , Ahmet Jashari, Naim Mahmudi PHYSICAL PROPERTIES OF HONEYS FROM NORTH-WEST MACEDONIA AND THEIR INTER-CORRELATION	
11:40-12:00	<b>CT-08: Dragana Chernih-Anastasovska</b> , Jasmina Najdovska, Katerina Drogreshka SEISMIC ACTIVITY IN THE OHRID EPICENTRAL AREA IN THE PERIOD BETWEEN JUNE-SEPTEMBER 2017	
12:00 -	<b>Closing/Farewell Coffee</b>	



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**LIST OF POSTERS (Poster Session – Friday, 29 September 2018, 16:45-18:45)**

**PP-01: Tinkara Troha, V. Novotna, M. Kaspar, V. Hamplova, M. Cigl, D. Pociеча, LIQUID-CRYSTALLINE SILVER NANOPARTICLES**

**PP-02: Marushka Sendova-Vassileva, R. Gergova, Hr. Dikov, G. Popkirov, P. Vitanov, G. Grancharov and V. Gancheva, MAGNETRON SPUTTERED MoO<sub>x</sub> HOLE TRANSPORT LAYER FOR ORGANIC SOLAR CELLS**

**PP-03: Ivana Sandeva, H. Spasevska, M. Ginovska, and L. Stojanovska-Georgievska, INVESTIGATING LUMINESCENCE CHARACTERISTICS OF SILICATE MINERALS FOR DOSIMETRIC PURPOSES**

**PP-04: Trifce Sandev, Irina Petreska, Ervin Kaminski Lenzi, QUANTUM MOTIONS UNDER GEOMETRIC CONSTRAINTS**

**PP-05: Madalina Cruceru and S. Afanasiev, A dE-E TELESCOPE DETECTOR FOR CHARGED PARTICLE IDENTIFICATION**

**PP-06: Vesna Gershan, AVAILABILITY OF MEDICAL TECHNOLOGY IN EUROPE AND SOUTHEAST EUROPE**

**PP-07 EDU: Karolina Dvojković, Kristina Kristek, Sanja Pavlović Šijanović, EXAMPLE OF INTERACTIVE LEARNING IN NATURAL SCIENCES - THE EFFECTS OF VARIOUS SOURCES OF VISIBLE LIGHT ON THE LIFE OF A PLANT**

**PP-08 EDU: Angela Busheska, AN INTERESTING AND EFFICIENT METHOD OF LEARNING HIGH SCHOOL PHYSICS CONTENT: THE SUCCESSFUL METHOD OF JUNKYARD PHYSICS (PHYSICS BASED ON GAMES)**

**PP-09 EDU: Jasmina Djokic-Jovanovic, T. Misic and Lj. Nešić, INQUIRY BASED APPROACH IN TEACHING GEOMETRICAL OPTICS**

**PP-10: Maja Skenderovska, Zlatko Skulic, Mimoza Ristova, EXAMINATION OF METALLIC PARTICLES (GSR-GUN SHOT RESIDUE) OBTAINED BY DISCHARGED AMMUNITION OF WEAPON IN ORDER TO DETERMINE THE FIRING DISTANCE WITH SEM / EDX ANALYSIS**