# The XXVII International Scientific Conference of Young Scientists and Specialists (AYSS-2023)

## Monday, 30 October 2023

#### Mathematical Modeling and Computational Physics - Bogolyubov Hall (2nd floor), BLTP (14:20 - 15:50)

time	[id] title	presenter
	[1237] Numerical simulation of the magnetization reversal within the RF-SQUID model with $\phi 0$ junction depending on the external magnetic field pulse	BASHASHIN, Maxim
14:35	[1245] Monte Carlo background simulation in a boron loaded scintillator for the OLVE-HERO detector	SATYSHEV, Ilyas
	[1323] Calculation of a multidimensional integral with a singularity by dividing the integration domain into subsegments	GODERIDZE, Daviti
	[1435] Cluster formation near midrapidity can the mechanism be identified experimentally?	KIREYEU, Viktar
15:20	[1302] NEW ALGORITHMS FOR PROCESSING NEUTRON TOMOGRAPHY DATA BASED ON CONVOLUTIONAL NEURAL NETWORKS	BAKIROV, Bulat
	[1404] Research of neutron transportation through neutron guides and magnetic fields of the UCN source at the pulsed reactor	POPOV, Aleksander

#### Mathematical Modeling and Computational Physics - Bogolyubov Hall (2nd floor), BLTP (16:10 - 17:40)

time [id] title	presenter
16:10 [1335] Optimization of cascade simulation process using spatial parametrization	Ms BELYAKOVA, Anna
16:25 [1347] Using a shell turbulence model to describe the evolution of the solar wind spectrum	DUKANOV, Ilya
16:40 [1363] A model for the magnetic field in the inner heliosphere	GALIKYAN, Norayr
16:55 [1364] Neural Network Analysis of S-Star Dynamics: Implications for Modified Gravity	GALIKYAN, Norayr
17:10 [1243] Study of higher tungsten boride for catalytical application	RADINA, Aleksandra
17:25 [1261] Efficiency assessment of IRT-T research reactor cooling system by machine learning methods	KUBLINSKIY, Maxim

### Tuesday, 31 October 2023

#### Mathematical Modeling and Computational Physics - Bogolyubov Hall (2nd floor), BLTP (15:30 - 16:30)

time	[id] title	presenter
15:30	[1407] DYNAMICAL PROPERTIES OF DUST PARTICLE CHAIN STRUCTURES STUDY USING NUMERICAL SIMULATION	Mr KOLOTINSKII, Daniil
	[1425] Tools for high-accuracy ab initio relativistic modeling of excited states and spectra of actinide molecules and impurity ions in solids	OLEYNICHENKO, Alexander
16:00	[1240] A fast and accurate tool for calculation of characteristics of Capacitive Micromachined Ultrasound Transducers (CMUT)	BIRIUKOV, Anton
16:15	[1344] Confinement effects in heterogeneous nucleation of droplets on solid particles	GOSTEVA, Liubov

#### Mathematical Modeling and Computational Physics - Bogolyubov Hall (2nd floor), BLTP (16:50 - 17:50)

time [id] title		presenter
	[1434] Development of clusterization algorithm for pixel detectors for FPGA Abstract	ЛАПКИН, Александр
17:05	[1277] Simulation of performance of the beam position detector	ZIMIN, Ilia
17:20	[1447] Theoretical study of isotope shifts	PROSNYAK, Sergey