



# International Conference “Mathematical Modeling and Computational Physics, 2017” (MMCP2017)

## Monday, 3 July 2017

### Plenary (09:00 - 10:30)

time	[id] title	presenter
09:00	[213] Opening welcome from JINR. Scientific Program of JINR	Prof. MATVEEV, Victor
09:30	[208] Multiscale simulations of neuronal receptors	Prof. CARLONI, Paolo
10:00	[214] Supercomputing Co-Design Technology	Prof. VOEVODIN, Vladimir

### Plenary (11:00 - 12:00)

time	[id] title	presenter
11:00	[191] SOLUTION OF MAGNETOGASDYNAMICS PROBLEMS WITH THE HELP OF HIGH PERFORMANCE COMPUTER SYSTEMS	Prof. CHETVERUSHKIN, Boris
11:30	[35] Petrov-Galerkin Finite Element Method for Fractional Advection-Dispersion Equations	Prof. LAZAROV, Raytcho

# Tuesday, 4 July 2017

## **Plenary - LIT Conference Hall (08:00 - 10:00)**

time	[id] title	presenter
08:00	[46] Precise Frequency-Pattern Analysis Reveals the Functional Structure of Complex Systems	Prof. USTININ, Mikhail
08:30	[29] Dynamical and Thermodynamic Electronic Properties of DNA	Prof. LAKHNO, Victor
09:00	[42] Quantum dynamics of a hole migration through DNA.	Dr SHIRMOVSKY, Sergey
09:30	[221] Advanced computing in radiation biophysics	BELOV, Oleg

## **Plenary (10:30 - 12:00)**

time	[id] title	presenter
10:30	[196] MODELING THE BEHAVIOR OF VIRTUAL SYSTEMS WITH ENDOGENOUSLY SHAPING PURPOSES	Dr VINOGRADOV, G.
11:00	[9] Machine learning and complex networks for precision and systems biomedicine	Dr CANNISTRACI, Carlo
11:30	[82] Monte Carlo simulation of early biological damage induced by ionizing radiation at the DNA scale: overview of the Geant4-DNA project	Dr INCERTI, SEBASTIEN

# Wednesday, 5 July 2017

## Plenary - LIT Conference Hall (08:00 - 10:30)

time	[id] title	presenter
08:00	[24] MATHEMATICAL MODELING OF RESONANT PROCESSES IN CONFINED GEOMETRY OF ATOMIC AND ATOM-ION TRAPS	Prof. MELEZHIK, Vladimir
08:30	[178] Generalized Techniques in Numerical Integration	Prof. SAFOUHI, Hassan
09:00	[15] Disentangling complexity in Bayesian automatic adaptive quadrature	Prof. ADAM, Gheorghe
09:30	[28] Fractional stochastic field theory	Dr HONKONEN, Juha
10:00	[224] BigData challenges and processing at present and future High Energy Physics and Nuclear Physics experiments and Computing Model Evolution	Dr KLIMENTOV, Alexei

# Thursday, 6 July 2017

## **Plenary - LIT Conference Hall (08:00 - 10:00)**

time	[id] title	presenter
08:00	[14] Dynamics of quantum correlations in bipartite Gaussian open quantum systems	Prof. ISAR, Aurelian
08:30	[47] Quantum correlations in bipartite systems	Prof. FEL'DMAN, Edward
09:00	[21] New Possibilities and Applications of the Method of Collocations and the Least Residuals	Prof. SHAPEEV, Vasily
09:30	[22] Modeling Quantum Behavior in the Framework of Permutation Groups	Dr KORNYAK, Vladimir

## **Plenary - LIT Conference Hall (10:30 - 12:00)**

time	[id] title	presenter
10:30	[16] Partial analytic integration of Cosserat PDE system describing dynamics of slender structures	Prof. GERDT, Vladimir
11:00	[58] Usage Power Geometry and Normal Form Methods in simulation of degenerated nonlinear ODEs study	Dr EDNERAL, Victor
11:30	[20] Shape Approximation Based on Higher-Degree Polynomials	DIKUSAR, Nikolay

# Friday, 7 July 2017

## Plenary (08:00 - 11:15)

time	[id] title	presenter
08:00	[32] Kinetic, Monte-Carlo and Multiparticle Models of the Processes in Photosynthetic Membrane	Prof. RIZNICHENKO, Galina
08:30	[107] Higher-order partial differential equations for description of the Fermi-Pasta-Ulam and the Kontorova-Frenkel models	Prof. KUDRYASHOV, Nikolay
09:00	[27] On the Load Balancing Problem	Prof. SEMANIŠIN, Gabriel
09:30	[26] An attempt to build a smart real-time system for heavy element research: approaches, mathematical objects, algorithms, equations.	Mr TSYGANOV, Yury
10:00	[189] ONLINE EVENT RECONSTRUCTION IN THE CBM EXPERIMENT AT FAIR	Prof. KISEL, Ivan (for the CBM collaboration) Ms AKISHINA, Valentina
10:30	[132] Multiscale Multilevel Approach to Solution of Nanotechnology Problems	Prof. POLYAKOV, Sergey
11:00	[127] Modification of Adaptive Artificial Viscosity for Solution of Gasdynamic Problems on Parallel Computer Systems	Dr POPOV, Igor