

## August 26, Wednesday

### Session "Mathematics and nonlinear mechanics"

DIAS Hall, ground floor

Chair: G. Alekseev

- |               |                                                                              |
|---------------|------------------------------------------------------------------------------|
| 15:00 - 15:20 | V. Korepin<br><i>Entanglement in quantum spin chains</i>                     |
| 15:20 - 15:40 | A. Veselov<br><i>Quantum Calogero-Moser problems and Lie superalgebras</i>   |
| 15:40 - 16:00 | P. Pyatov<br><i>Spectral extension of the quantum group cotangent bundle</i> |
| 16:00 - 16:20 | T. Kamalov<br><i>Ostrogradsky dynamics and quantum transition amplitudes</i> |
| 16:20 - 16:40 | L. Tomio<br><i>Stability in a 2D BEC system with nonlinear lattice</i>       |
| 16:40 - 17:00 | S. Mayburov<br><i>Fuzzy space-time geometry and gauge fields</i>             |
| 17:00 - 17:20 | COFFEE BREAK                                                                 |
| 19:30         | BANQUET                                                                      |

## August 26, Wednesday

### Session "Quantum field theory and theory of elementary particles" (QFT)

Conference Hall, 2nd floor

Chair: O. Teryaev

- 15:00 - 15:20 B. Arbuzov  
*Bogoliubov compensation approach in QCD and in the electroweak theory*
- 15:20 - 15:40 A. Bakulev  
*Resummation approach in fractional analytic perturbation theory*
- 15:40 - 16:00 A. Kataev  
*Quarks and leptons masses in QCD and QED: existing definitions, relations and values*
- 16:00 - 16:20 Yu. Sitenko  
*Dirac fermions in the background of topological defects*
- 16:20 - 16:40 D. Polyakov  
*Ground ring of  $\alpha$ -symmetries and sequence of RNS string theories*
- 16:40 - 17:00 S. Krivonos  
 *$SU(2)$  reduction in the supersymmetric mechanics*
- 17:00 - 17:20 COFFEE BREAK
- 17:20 - 17:40 L. Laperashvili  
*Superstring-inspired  $E_6$  unification and shadow theta-particles in Cosmology*
- 17:40 - 18:00 Yu. Vernov  
*The NEC violation and classical stability in the FRW and Bianchi I metrics*
- 18:00 - 18:20 A. Zakharov  
*Duality and Non-perturbative Physics in QCD*
- 18:20 - 18:40 D. Gal'tsov  
*Radiation in presence of large extra dimensions*
- 18:40 - 19:00 A. Bagrov  
*Critical formation of trapped surfaces in the collision of non-expanding gravitational shock waves in de Sitter spacetime*
- 19:30 BANQUET

Chair: I. Aref'eva

## August 26, Wednesday

### Session "Quantum field theory and theory of elementary particles" (TEP)

Blokhitsev Hall, 4nd floor  
Chair: V. Andrianov

- 15:00 - 15:20 V. Saleev  
*Reggeization of amplitudes in QCD and description of particle production at colliders*
- 15:20 - 15:40 A. Godizov  
*Quark Mass and High Energy Behaviour*
- 15:40 - 16:00 O. Selyugin  
*Asymptotic of S-matrix and unitarization*
- 16:00 - 16:20 O. Shevchenko  
*QCD analysis of DIS and SIDIS data*
- 16:20 - 16:40 G. Efimov  
*Bound states in quantum field theory*
- 16:40 - 17:00 E. Kapuścik  
*The Bogoliubov S-Matrix*
- 17:00 - 17:20 COFFEE BREAK
- 17:20 - 17:40 L. Jenkovzsky  
*Analytic model of generalized parton distributions*
- 17:40 - 18:00 A. Dorokhov  
*Rare decay  $\pi^0 \rightarrow e^+e^-$  as a window to dark matter*
- 18:00 - 18:20 R. Mir-Kasimov  
*Generating function for the Jacobi Functions, noncommutative differential calculus and the relativistic energy and m operator*
- 18:20 - 18:40 Yu. Bystritskiy  
*Radiative decays of scalar mesons  $\sigma(600)$ ,  $f_0(980)$  and  $a_0(980)$  in the local Nambu-Jona-Lasinio model*
- 18:40 - 19:00 Yu. Surovtsev  
*The model-independent analysis indications for spectroscopy of scalar mesons. Proof for the  $K_0^*(900)$*
- 19:30 BANQUET

Chair: E. Kapuścik

## August 26, Wednesday

### Session "Statistical mechanics, kinetics and quantum theory of condensed matter" (StatMech)

Lecture Hall, 2nd floor

Chair: N.N. Bogolyubov (jr.)

- 15:00 - 15:30 A. Sukhanov  
 *$(\hbar - k)$  - dynamics as some generalization of equilibrium quantum statistical mechanics*
- 15:30 - 16:00 A. Kuzemsky  
*Symmetry breaking, quantum protectorate and quasiaverages in condensed matter physics*
- 16:00 - 16:30 A. Prykarpatsky  
*On kinetic Boltzmann-Bogolubov type equations and related hydrodynamic flows with dry viscosity*
- 16:30 - 17:00 M. Jurčišin  
*Anomalous Scaling in Helical Turbulent Environment: Field Theoretic Renormalization Group Approach*
- 17:00 - 17:20 COFFEE BREAK
- 17:20 - 17:40 N. Antonov  
*Effects of turbulent mixing on critical behaviour*
- 17:40 - 18:00 V. Plechko  
*Fermions and disorder in Ising and related models in two dimensions*
- 18:00 - 18:20 S. Lyagushin  
*Kinetics of system of emitters and nonequilibrium electromagnetic field*
- 18:20 - 18:40 U. Taneri  
*The relativistic electrodynamics least action principles revisited: new charged point particle and hadronic string models analysis*
- 19:30 BANQUET

Chair: B. Sadovnikov

## August 26, Wednesday

### Session "Nuclear physics"

LNP Conference Hall, 2nd floor

Chair: L. Majling

- 15:00 - 15:20 A. Georgieva  
*Dynamical symmetries in the contemporary applications in nuclear structure*
- 15:20 - 15:40 A. Vdovin  
*Thermal Bogoliubov transformation in nuclear structure theory*
- 15:40 - 16:00 N. Antonenko  
*Isomeric states in heavy nuclei*
- 16:00 - 16:20 S. Mishev  
*Quasiparticle-phonon nuclear model for odd-mass nuclei - recent developments*
- 16:20 - 16:40 A. Meremyanin  
*On the divergence of the mean rotational energy in quantum  $N$  body systems*
- 17:00 - 17:00 COFFEE BREAK

Chair: A. Antonenko

- 17:50 - 18:10 S. Wycech  
*On nuclear states of  $\bar{K}$  mesons*
- 18:10 - 18:30 L. Majling  
*Delayed clusters accompanying nonmesonic weak decay of the  $\Lambda$ -hypernuclei: a clue to nonleptonic processes*
- 18:30 - 18:50 Kh. Abraamyan  
*Resonance structure in the  $\gamma\gamma$  invariant mass spectrum in  $pC$ - and  $dC$ -interactions*
- 19:30 BANQUET