

Programme of BGL-2019

Monday, May 20th

8:30 - 10:00 *Registration*

10:00 - 10:10 Opening: A. Zagorodny

Chairman Yu.A. Sitenko

10:10 - 10:55 **A.A. Starobinsky.** *Inflation and pre-inflation in scalar-tensor and $f(R)$ gravity (40+5)*

10:55 - 11:25 Yu.V. Shtanov. *Inflationary Magnetogenesis with Helical Coupling (25+5)*

11:25 - 11:55 **Coffee break**

Chairman A.A. Starobinsky

11:55 - 12:25 V.O. Pelykh, Y.V. Taistra. *Wave optics in Kerr space-time (25+5)*

12:25 - 12:55 O. Sergijenko. *Early versus late inflation: similarities and differences (25+5)*

12:55 - 13:25 V.E. Kuzmichev, V.V. Kuzmichev. *Quantum corrections to the dynamics of the gravitational system in quantum cosmology (25+5)*

13:25 - 14:45 **Lunch**

Chairman A.M. Gavrilik

14:45 - 15:25 **I. Bandos.** *Supersymmetric action for multiple D0-brane system (35+5)*

15:25 - 15:55 S. Catto. *Effective Hadronic Supersymmetry (25+5)*

15:55 - 16:25 V. Haurysh, V. Andreev. *Dalitz decays of unflavored mesons in Poincare covariant quark model (25+5)*

16:25 - 16:50 **Coffee break**

Chairman V.M. Simulik

16:50 - 17:20 O. Stashko, V. Zhdanov. *Geodesic structure of spherically symmetric space-times around astrophysical relativistic configurations with scalar fields (25+5)*

17:20 - 17:50 R.M. Plyatsko, M.T. Fenyk. *On reaction of a spinning particle on the spacetime curvature (25+5)*

18:00 - 20:00 **Welcome party**

Tuesday, May 21st

Chairman **A. Mostafazadeh**

10:00 - 10:40 **S.-D. Liang.** *Probing non-commutative quantum mechanics by nanoscale physics* (35+5)

10:40 - 11:10 S. Gangopadhyay, S. Bhattacharyya, A. Saha. *Footprint of spatial noncommutativity in resonant detectors of gravitational wave* (25+5)

11:10 - 11:40 M.J. Lake. *Generalized uncertainty from geometric superpositions* (25+5)

11:40 - 12:10 **Coffee break**

Chairman **S.-D. Liang**

12:10 - 12:40 A. Rovenchak, B. Sobko. *Fermi-gas with nonadditive statistics* (25+5)

12:40 - 13:10 A.R. Kuzmak. *Geometry of quantum state of spin-s system with long-range Ising-type interaction* (25+5)

13:25 - 14:45 **Lunch**

Chairman **A.V. Nazarenko**

14:30 - 15:10 **A.G. Nikitin.** *Supersymmetry and superintegrability of PDM Schrödinger equations* (35+5)

15:10 - 15:40 P. Gavrylenko, N. Iorgov, O. Lisovyy. *On solutions of the Fuji-Suzuki-Tsuda system* (25+5)

15:40 - 16:10 Yu. N. Bespalov. *Categories: between cubes and globes* (25+5)

16:10 - 16:40 **Coffee break**

Chairman **N.Z. Iorgov**

16:40 - 17:10 L. Jenkovszky. *BGL history* (25+5)

17:10 - 17:40 V.M. Fedorchuk, V.I. Fedorchuk. *On classification of symmetry reductions and invariant solutions for the Euler-Lagrange-Born-Infeld equation* (25+5)

17:40 - 18:10 O.O. Vakhnenko. *Four-component integrable nonlinear Schrödinger system with background-controlled intersite interactions* (25+5)

Wednesday, May 22nd

Chairman **Yu.V. Shtanov**

- 10:00 - 10:40 **B. Novosyadlyj.** *Dark sector in cosmology: Dark Matter, Dark Energy, Dark Ages* (35+5)
- 10:40 - 11:10 A.V. Nazarenko, A.M. Gavrilik. *Statistics effects in extremal black holes ensemble* (25+5)

11:10 - 11:40 **Coffee break**

Chairman **A.G. Nikitin**

- 11:40 - 12:10 A.A. Duviryak, Yu.H. Yaremko. *Radiation reaction and action-at-a-distance of point-like particles in de Sitter space* (25+5)
- 12:10 - 12:40 M.V. Khelashvili, A.M. Gavrilik, I.I. Kachurik. *Galaxy rotation curves in the μ -deformation based approach* (25+5)

12:40 - 14:00 **Conference photo; Lunch**

14:00 - 19:00 **Excursion & boat trip**

19:00 - 22:00 **Conference Dinner**

Thursday, May 23rd

Chairman **D. Sorokin**

- 10:00 - 10:40 **S. Mignemi.** *Advances on Snyder spacetime* (35+5)
- 10:40 - 11:10 V.M. Tkachuk. *Soccer-ball problem in quantum space* (25+5)
- 11:10 - 11:40 Kh.P. Gnatenko. *Time reversal symmetry in noncommutative space and parameters of noncommutativity* (25+5)

11:40 - 12:10 **Coffee break**

Chairman **S. Mignemi**

- 12:10 - 12:40 M.I. Samar. *Quasiposition representation in deformed space with minimal length* (25+5)
- 12:40 - 13:10 V.E. Kuzmichev, V.V. Kuzmichev. *Generalized uncertainty principle in quantum cosmology* (25+5)

13:10 - 14:40 **Lunch**

Chairman **V.M. Tkachuk**

- 14:40 - 15:20 **A. Mostafazadeh.** *Energy observable for a quantum system with a dynamical state space and a geometric extension of quantum mechanics* (35+5)
- 15:20 - 15:50 D.V. Anchishkin. *Phase transition in interacting boson system at finite temperatures* (25+5)

15:50 - 16:20 Yu. Kurochkin. *Free motion in Lobachevsky space in terms of scattering theory* (25+5)

16:20 - 16:50 *Coffee break*

Chairman Yu. Kurochkin

16:50 - 17:20 A.M. Gavrilik, I.I. Kachurik. *Hamiltonians built from pseudo-hermitian position/momentum operators, and nonlinear Bogolyubov transformations* (25+5)

17:20 - 17:50 V.M. Simulik. *Symmetries of relativistic hydrogen atom* (25+5)

Friday, May 24th

Chairman I. Bandos

10:00 - 10:40 **D. Sorokin.** *On Goldstone Fields of Spin Higher than $\frac{1}{2}$* (35+5)

10:40 - 11:10 V.V. Kisel, E.V. Ovsyuk, A.V. Ivashkevich, V.M. Red'kov. *Fradkin equation for a spin 3/2 particle in presence of external electromagnetic and gravitational fields* (25+5)

11:10 - 11:40 V.M. Gorkavenko, Yu.A. Sitenko. *Polarization of the vacuum of quantized spinor field by a topological defect in two-dimensional space* (25+5)

11:40 - 12:00 *Coffee break*

Chairman V.M. Red'kov

12:00 - 12:40 **A. Zolotaryuk.** *Contact interactions in quantum mechanics* (35+5)

12:40 - 13:10 Yu.A. Mishchenko, A.M. Gavrilik. *Composite quantum particles as deformed oscillators: wavefunctions, entanglement and implications* (25+5)

13:10 - 13:40 V.M. Simulik. *Relativistic equations for arbitrary spin, especially for the spin $s=2$* (25+5)

13:40 - 14:30 *Excursion "Masterpieces of Art in BITP"*

14:30 - 15:30 *Lunch*

15:40 - 18:30 *Closing ceremony at the National park "Theophania"*