

## Programme of International Meeting Physical Interpretations of Relativity Theory

Monday 4 July – Thursday 7 July 2011

Department of Physics, BMSTU, Moscow  
International Research Institute of Hypercomplex Systems in Geometry and Physics  
Department of Physics, University of Liverpool, Great Britain  
S.C.&T., University of Sunderland, Great Britain  
Russian Gravitational Society  
Moscow Physical Society

### Monday 4<sup>th</sup> July 2011. Conference Hall. Study Laboratory Building BMSTU

**9.00-9.30h** Registration of delegates

**9.30-10.00h** Opening the PIRT Meeting

**Chair:** *Rowlands P., (University of Liverpool, G.B.)*

10.30-11.00 Bolotovskiy B.M. Visible form of fast-moving objects.

11.00-11.30 Abramson N.H. A sphere of light.

11.30-12.00 Kassandrov V.V. Geometry of Urusovskii as the geometry of complexified light cone and universal kinematics of particles in complex space-time.

12.00-12.30 Siparov S.V. On the gravitation of the moving bodies.

12.30-13.00 Gorelik V.S. Microstructure of crystalline physical vacuum and photon-boson conversion effects in media.

**13.00-14.00h** Lunch Break

**Chair:** *Gorelik V.S. (Lebedev Physical Institute, Moscow, Russia).*

14.00-14.30 Miskovic O., Olea R. Black hole thermodynamics in Einstein-Gauss-Bonnet gravity with negative cosmological constant coupled to non-linear electrodynamics.

14.30-15.00 Antonyuk P.N. The extreme dimension of spheres and balls.

15.00-15.30 Frolov B.N., Portnov Ju.A., Pozdnjakov S.V. Early Universe filled with quark-gluon plasma.

**15.30-16.00h** Coffee Break

**Chair:** *Pavlov D.G. (Research Institute Hyper Complex Systems in Geometry and Physics, Fryazino, Russia).*

16.00-16.20 Meierovich B.E. Vector fields in multidimensional cosmology.

16.20-16.40 Izmailov G.N. Black holes. Minimal mass and rotation problem.

- 16.40-17.00 Koryukin V.M. On the quantum theory of the gravitational interaction and the Lobachevskij – Chernikov potential.
- 17.00-17.20 Il'ichov L.V. A topos-theoretic approach to branching space-time.
- 17.20-17.40 Mordvinov B. Dark matter in the framework of new cosmological model.
- 17.40h Close of the Monday Session of Lectures**

**Tuesday 5<sup>th</sup> July 2011. Conference Hall. Study Laboratory Building**

**Chair:** *Pustovoit V.I. Science Technological Center of Unique Instruments of RAS, Moscow, Russia.*

- 9.00-9.30 Pavlov D.G. Correction of space-time metric with using CMB data.
- 9.30-10.00 Petrov A.N. Conservation laws in the Einstein-Gauss-Bonnet gravity as an instrument for analyzing solutions.
- 10.00-10.30 Darvas G. GTR and the Isotopic Field Charge Spin Assumption.
- 10.30-11.00 Coffee Break**
- 11.00-11.30 Krysanov V.A. The sensitivities of laser determination of small distances.
- 11.30-12.00 Gladyshev V., Tiunov P., Leontiev A., Gladysheva T., Sharandin Ye., Fomin I., Tereshin A., Yavorskii A. Estimation of space-time variations in the position of the interference picture in SADE.
- 12.00-12.30 Vasiliev N.S.; Gorelik V.S. Properties of the quasiparticles with negative and imaginary effective rest mass in condensed matter and in the physical vacuum.
- 12.30-13.00 Kauts V.L. Gravitational experiments in RadioAstron project.

**13.00-14.00h Lunch Break**

**Chair:** *Izmailov G.N. (Moscow Aviation Institute (State Technical University), Department of Physics, Moscow, Russia).*

- 14.00-14.30 Korotaev S.M., Kiktenko E.O. Causality in the entangled states.
- 14.30-15.00 Kozyrev S.M. Classes of exact static spheroidal Einstein-Maxwell and Jordan-Brands-Dicke solutions.
- 15.00-15.30 Zhogin I.L. Absolute parallelism, modified gravity, and suppression of gravitational “short” waves.

**15.30-16.00 Coffee Break**

**Chair:** *Ivashshuk V.D. (Centre for Gravitation and Fundamental Metrology, VNIIMS and Institute of Gravitation and Cosmology, Peoples Friendship University of Russia, Moscow, Russia)*

- 16.00-16.20 Lebedev Y.A., Kir'janov D.A. Everett's aspects of the space-time properties, probability and decoherent of complex quantum systems.
- 16.20-16.40 Dumin Yu.V. Perturbation of a planetary orbit by the Lambda-term (“dark energy”) in Einstein equations.
- 16.40-17.00 Levich A.P. Generation of space and time flow in a model of open and non-local particles.
- 17.00-17.20 Yurasov N.I. About the lifetime of boson Higgs.
- 17.20-17.40 Gorelik V.S., Izmailov G.N. The conversion of photons of sunlight and laser radiation in low mass bosons.
- 17.40-18.00 Shulman M.H. Connection between Gravity and Entropy.

**18.00h Close of the Tuesday Session of Lectures**

### Wednesday 6<sup>th</sup> July 2007. Conference Hall. Study Laboratory Building

**Chair:** *Darvas G. (IRO of the Hungarian Academy of Sciences; Symmetrion; R. Eotvos University, Budapest, Hungary).*

- 9.00-9.30 Lassiaille F. Gravitational model of the three elements theory.  
9.30-10.00 Chelnokov M. Evaluation of the Universe Parameters Based on the Expanded System of Planck's Values.  
10.00-10.30 Bulyzhenkov I.E. Interpretation of Einstein's gravitation in Riemannian space-time through Euclidean material 3-section and anisotropically dilated Finslerian time.  
**10.30-11.00 Coffee Break**  
11.00-11.30 Vargashkin V.Ya. Visualisation of distribution of magnetic properties of the early Universe on celestial sphere according to WMAP-measurements of Q- and U- Stokes parameters of CMB.  
11.30-12.00 Zhotikov V.G. N. Bohr's postulates and Bohr-Sommerfeld's quantization rules as consequences from Finsler geometry.  
12.00-12.30 Shcherbak O.A. The three methods of defining the astronomical aberration.  
12.30-13.00 Rylov Yu.A. Discriminating properties of compactification in discrete uniform isotropic space-time.

### **13.00-14.00h Lunch Break**

**Chair:** *Siparov S.V. (State University of Civil Aviation, Department of Physics, St-Petersburg, Russia)*

- 14.00-14.20 Rowlands P. Duality and nonlocality.  
14.20-14.40 Babourova O.V., Frolov B.N., Lipkin K.N. Theory of gravitation with scalar Dirac field in exterior form formalism and the cosmological constant problem.

### **14.40-15.00 Press-conferences.**

**15.00h Close of the Wednesday Session of Lectures**

### Thursday 7<sup>th</sup> July 2007. Conference Hall. Study Laboratory Building

**Chair:** *Lassiaille F. (Polytech" Sophia, University of Nice Sophia-Antipolis, France).*

- 9.00-9.30 Babourova O.V., Kostkin R.S., Frolov B.N. Research of the equations of the conformal theory of gravitation with Dirac scalar field in Weyl–Cartan space-time with the help of computer methods.  
9.30-10.00 Kokarev S.S. Extravariational principle in the theory of field.  
10.00-10.30 Fil'chenkov M.L., Laptev Yu.P. Loop quantum cosmology effects for homogeneous isotropic models.  
**10.30-11.00 Coffee Break**  
11.00-11.30 Rylov Yu.A. Incompleteness of the relativity theory and the skeleton conception of elementary particles as overcoming of this incompleteness.  
11.30-12.00 Fomin I.V. Cosmological perturbations in the models of inflation with the nontrivial kinetic term.  
12.00-12.30 Kudriavtcev Yu.S. On inner contradiction in the metric tensor of the standard cosmological model.  
12.30-13.00 Dymnikova I. Electrovacuum solitons in nonlinear electrodynamics coupled to gravity.

**13.00-14.00h Lunch Break**

**Chair:** *Vargashkin V.Ya.* (Oryol State Technical University, Department of Physics, Oryol, Russia)

14.00-14.20 Pavlov D.G. Hyperbolic fields hypothesis and its experimental testing.

14.20-14.40 Bukusheva A.V. A Berwald-Moor metric with an integrable poly-affinor structure on a manifold.

14.40-15.00 Petrova L.I. Conservation laws. Mechanism of generation of physical structures.

15.00-15.20 Petoukhov S.V. Connection of the genetic code with the 8-dimensional hypercomplex numbers.

15.20-15.40 Galaev S.V. Contact structures with admissible Finsler metrics.

**15.40-16.00 Coffee Break**

16.00-16.20 Antonyuk P.N. The rational parametrization of transformations in the field theory.

16.20-16.40 Golubtsova A.A. On cosmological and spherically symmetric solutions in multidimensional gravity with sigma-model action for scalar fields.

16.40-17.00 Mayburov S.N. Fuzzy geometry of space-time and gauge fields.

17.00-17.20 Margulis M.A. Physical vacuum and charged particles model.

17.20-17.40 Kuznetsov S. Photon moving in two-directional time: dark energy effect.

**17.40h Close of Moscow PIRT Meeting.**