



Program
of the VI International Meeting
“Finsler Extensions of Relativity Theory”

1–7 November 2010, Moscow – Fryazino, Russia

BAUMAN MOSCOW STATE TECHNICAL UNIVERSITY
RESEARCH INSTITUTE OF HYPERCOMPLEX SYSTEMS IN GEOMETRY AND PHYSICS

Monday 1st November 2010. Conference Hall. Study Laboratory Building. Bauman University

09-00 – 10-00 Registration of delegates

Chair: *Gladyshev Vladimir O., Research Institute Hypercomplex Systems in Geometry and Physics, Fryazino; Bauman Moscow State Technical University, Moscow, Russia*

10-00 – 11-00 **Opening the FERT Meeting**

11-00 – 11-45 *Kokarev Sergei S.(speaker), logos-center@mail.ru, Pavlov Dmitriy G., geom2004@mail.ru, (Research Institute of Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region, Russia)*

Algebraic unified theory of space-time and matter in terms of double variable

11-45 – 12-30 *Pavlov Dmitriy G., geom2004@mail.ru, (Research Institute of Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region, Russia)*

Hyperbolic analog of electromagnetic field

12-30 – 13-15 *Kisil Vladimir V., kisilv@maths.leeds.ac.uk (School of Mathematics, University of Leeds, Leeds, England, UK)*

Symmetries, hypercomplex numbers and non-differential geometry

13-15 – 14-15 **Lunch**, all participants picture in the Conference Hall of Bauman University

Chair: *Panchelyuga Victor A., Research Institute Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region, Institute of theoretical and experimental biophysics, Puschino, Moscow region, Russia*

14-15 – 15-00 *Gromov Nikolai A., gromov@dm.komisc.ru (Department of Mathematics, Komi Science Center UrD RAS, Russia)*

Noncommutative quantum kinematics)

15-00 – 15-45 *Plaksa Sergiy, plaksa@imath.kiev.ua (Institute of Mathematics of the National Academy of Sciences of Ukraine, Kiev, Ukraine)*

Commutative algebras associated with equations of mathematical physics

15-45 – 16-15 **Coffee break**

16-15 – 17-00 *Balan Vladimir, vbalan@mathem.pub.ro, vladimir.balan@upb.ro, (University Politehnica of Bucharest, Faculty of Applied Sciences, Department of Mathematics I, Bucharest, Romania.)*

New results in the spectral theory of special m-root structures

17-00 – 17-45 *Wood John C., j.c.wood@leeds.ac.uk, (Department of Pure Mathematics, University of Leeds, Leeds, G.B.)*

Harmonic morphisms and bicomplex manifolds

17-45 – 18-15 *Shpakivskiy Vitalii, shpakivskiy@mail.ru, (Institute of Mathematics of the National Academy of Sciences of Ukraine, Kiev, Ukraine)*

Monogenic functions in a three-dimensional harmonic algebra

Tuesday 2nd November 2010. Conference Hall. Study Laboratory Building. Bauman University

Chair: *Balan Vladimir, University Politehnica of Bucharest, Faculty of Applied Sciences, Department of Mathematics I, Bucharest, Romania.*

10-00 – 10-45 *Bogoslovski Georgi Yu. bogoslov@theory.sinp.msu.ru (Research Institute of Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region, Russia; Skobeltsyn Nuclear Physics Institute of Lomonosov Moscow State University, Moscow, Russia)*

On some aspects of the theory of locally anisotropic space-time

- 10-45 – 11-30 **Lebedev Sergei V.(speaker)**, serleb@rambler.ru (Research Institute Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region; Bauman Moscow State Technical University, Moscow, Russia) **Garas'ko Grigory I.** gri9z@mail.ru (Research Institute Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region, Russian Institute for Electrotechnics, Moscow, Russia), **Pavlov Dmitri G.** geom2004@mail.ru (Research Institute of Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region, Russia), **Panchelyuga Victor A.** panvic333@list.ru (Research Institute Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region; Institute of theoretical and experimental biophysics, Puschino, Moscow region, Russia)
Staircase (generalized exponential) form of polynumbers considered taking H_3 and H_4 as an example
- 11-30 – 12-00 **Coffee break**
- 12-00 – 12-45 **Malykhin Aleksandr V.**, avm020@yandex.ru (Research Institute Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region, Russia)
To be announced
- 12-45 – 13-30 **Siparov Sergey** (Research Institute Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region; State University of Civil Aviation, Department of Physics, St-Petersburg, Russia)
To be announced
- 13-30 – 14-30 **Lunch**
- Chair:** **Siparov Sergey**, Research Institute Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region; State University of Civil Aviation, Department of Physics, St-Petersburg, Russia
- 14-30 – 15-15 **Chernov Vladimir**, schraube@samtel.ru (Samara Aerospace University, Image Processing Systems Institute of RAS, Samara, Russia)
To be announced
- 15-15 – 16-00 **Vargas Jose G.**, josegvargas@earthlink.net (Phase Space Time Associates, Colombia, USA)
Finsler-Kaluza-Klein geometry, preferred frames and the Lorentzian metric
- 16-00 – 16-30 **Coffee break**
- 16-30 – 17-15 **Levin Sergey F.**, info@rostest.ru, antoninaEL@rostest.ru, (Moscow Institute for expertise and tests, Moscow, Russia)
Identification of red shift anisotropy on the basis of the exact decision of Mattig equation
- 17-15 – 18-00 **Solovyov Anton V.**, a.v.solovyov@gmail.com, (Faculty of Physics, M.V. Lomonosov Moscow State University, Moscow, Russia)
Quantum mechanics of a scalar particle in the 9-dimensional flat Finslerian space with the cubic metric.

Wednesday 3rd November 2010. Conference Hall. Study Laboratory Building. Bauman University

- Chair:** **Chernov Vladimir**, Samara Aerospace University, Image Processing Systems Institute of RAS, Samara, Russia
- 10-00 – 10-45 **Bronnikov Kirill A. Melnikov Vitali**, kb20@yandex.ru, melnikov@phys.msu.ru (Centre for Gravitation and Fundamental Metrology, VNIIMS and Institute of Gravitation and Cosmology, Peoples Friendship University of Russia, Moscow, Russia)
Variations of FPC as a Test of Space-Time Anisotropy and New SI
- 10-45 – 11-30 **Zhotikov Vadim G.**, zhotikov@yandex.ru, (Moscow Institute for Physics and Technology (National Research University), Dolgoprudny, Moscow region, Russia)
On the singular Finsler metrics with the arbitrary class of singularity
- 11-30 – 12-00 **Coffee break**
- 12-00 – 12-45 **Zaripov Rinat G.** zaripov@mail.knc.ru, (Institute of Mechanics and Engineering, Kazan Science Center, Russian Academy of Sciences (IME KazSC RAS))
About the theory of a physical vector field for geometry of events Berwald-Moor
- 12-45 – 13-30 **Voicu Nicoleta**, nico.brinzei@rdslink.ro, grasza_01@yahoo.com, ("Transilvania" University, Brasov, Romania)
On the equations of electromagnetism in spaces with Finsler geometry
- 13-30 – 14-30 **Lunch**

- Chair:** *Kisil Vladimir V., School of Mathematics, University of Leeds, Leeds, England, UK*
- 14-30 – 15-15** *Pavlov Dmitri G.* geom2004@mail.ru (Research Institute of Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region, Russia), *Panchelyuga Mariya S., Panchelyuga Victor A. (speaker),* panvic333@list.ru, (Research Institute Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region, Russia; Institute of theoretical and experimental biophysics, Puschino, Moscow region, Russia)
- About Julia pre-fractals structure on the double-numbers plane**
- 15-15 – 16-00** *Gal'mak Alexander M., Vorob'ev G.N., Balan Vladimir D.,* Shche70@mail.ru, (Mogilev State University of Food Technology, Mogilev, Belarus; University Politehnica of Bucharest, Faculty of Applied Sciences, Department of Mathematics I, Bucharest, Romania)
- On n-ary subgroups of n-ary group $\langle A^{n-1}, []_{n, n-1}$**
- 16-00 – 16-30** Coffee break
- 16-30 – 17-15** *Fjelstad Paul,* fjelstap@stolaf.edu (St. Olaf College, Emeritas, Northfield, USA)
- Tracking Concepts in the Wake of Generalizing**
- 17-15 – 18-00** *Smirnov Roman,* rgsmirnov@gmail.com, (Department of Mathematics and Statistics, Dalhousie University, Halifax, Nova Scotia, Canada)
- Invariant theory of Killing tensors and its applications**
- 18-00 – 20-00** BANQUET (in banquet hall near Conference Hall)

Thursday 4th November 2010. Nearby the entrance to Study Laboratory Building. Bauman University

- 11-00 – 17-00** The excursion in the center of Moscow (Cathedral of Christ the Saviour, Tretyakovskaya Gallery).

Friday, 5th November 2010, Educational Center “Forest Lake” in Fryazino, Moscow region

- 08-15** Departure from the underground station Shcholkovskaya (the first subway car from the center of Moscow) to the Educational Center “Forest Lake”

Chair: *Vargas Jose G., Phase Space Time Associates, Colombia, USA*

- 10-00 – 10-45** *Pandey Triyugi N.,* vkcoct@gmail.com, (Department of Mathematics & Statistics, D. D. U. Gorakhpur University, Gorakhpur, INDIA)
- Euclidean to Finslerian geometry**
- 10-45 - 11-30** *Chaubey Vinit Kumar,* vkcoct@rediffmail.com, vkcoct@gmail.com (Department of Mathematics & Statistics, D. D. U. Gorakhpur University, Gorakhpur, INDIA)
- Equation of geodesic for a (α, β) metric in a two-dimensional Finsler space**
- 11-30 – 12-00** Coffee break
- 12-00 – 12-45** *Silagadze Zurab,* silagadze@inp.nsk.su, (Budker Institute of Nuclear Physics, Novosibirsk, Russia)
- On the Finslerian extension of the Schwarzschild metric**
- 12-45 – 13-30** *Glazunov Nikolai M.,* glanm@yahoo.com (National aviation university, Kiev, Ukraine)
- On Finsler geometries with symmetric distance functions**
- 13-30 – 14-30** Lunch

Chair: *Voicu Nicoleta, “Transilvania” University, Brasov, Romania*

- 14-30 – 15-15** *Neagu Mircea, Atanasiu Gh.* mircea.neagu@unitbv.ro (University Transilvania of Brasov, Faculty of Mathematics and Informatics)
- Jet local Riemann-Finsler geometry for the three-dimensional time**
- 15-15 – 16-00** *Kassandrov Vladimir V.* vkassan@sci.pfu.edu.ru (Institute of gravitation and cosmology of Peoples' Friendship University of Russia, Moscow, Russia)
- Links of linear and Finsler geometries of space-time induced by the structure of complex quaternions**
- 16-00 – 16-30** Coffee break
- 16-30 – 17-15** *Turbin Anatoli,* turbin@imath.kiev.ua (Institute of mathematics of National Academy of sciences of Ukraine, Kiev, Ukraine) *Zhdanova Yuliya,* yuzhdanova@yandex.ru (State university of informatively-communication technologies, Kiev)
- Noneuler polyhedrons of N. Kuzenny and androhedrons**
- 17-15 – 18-00** *Mel'nikov Gennadii S.,* GMelnikov@list.ru (Federal State Unitary Enterprise NPC "GOI im. SI

Vavilov”, *St.-Petersburg, Russia*)

Why the three dimensional sphere in the quaternionic parametric description geometrization space-time?

18-15 Departure from the Educational Center “Forest Lake” to the underground station Shcholkovskaya, Moscow

Saturday, 6th November 2010, Educational Center “Forest Lake” in Fryazino, Moscow region

08-15 Departure from the underground station Shcholkovskaya (the first subway car from the center of Moscow) to the Educational Center “Forest Lake”

Chair: *Silagadze Zurab, Budker Institute of Nuclear Physics, Novosibirsk, Russia*

10-00 – 10-45 *Gladyshev Vladimir O., vgladyshev@mail.ru (Research Institute Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region, Russia; Bauman Moscow State Technical University, Moscow, Russia)*

Problem of detection of space-time anisotropy

10-45 – 11-30 *Eliovich Aleksandr A., eliovich@mail.ru (Research Institute Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region, Russia; Peoples' Friendship University of Russia, Moscow, Russia)*

On Polynorms, Automorphisms and Field Theory

11-30 – 12-00 Coffee break

12-00 – 12-45 *Perminov Nikolay S., nikolai-kazan@rambler.ru (Department of General Relativity and Gravitation, Faculty of Physics, Kazan (Volga) State University, Russia)*

Finslerian lenses

12-45 – 13-30 *Vargashkin Vladimir Ya., varg@ostu.ru (Department of physics, Oryol State Technical University, Oryol, Russia)*

The analysis of anisotropy of distribution of parametres of polarisation of radiation of quasars along celestial sphere.

13-30 – 14-30 Lunch

Chair: *Pavlov Dmitriy, Research Institute of Hypercomplex Systems in Geometry and Physics, Fryazino, Moscow region, Russia*

14-30 - 15-15 *Fil'chenkov Mikhail, fmichael@mail.ru (Institute of Gravitation and Cosmology. Peoples' Friendship University of Russia, Moscow, Russia), *Laptev Yuri, yplaptev@rambler.ru (Bauman Moscow State Technical University, Moscow, Russia)**

Anisotropic Riemannian and Finsler metrics revisited

15-15 – 16-00 *Gorelik Vladimir S. gorelik@sci.lebedev.ru (Lebedev Physical Institute of Russian Academy of Sciences, Moscow, Russia)*

Microstructure of physical vacuum and opportunity of the scalar bosons generation

16-00 – 16-30 Coffee break

16-30 – 17-15 *Krylova Galina V., Krylova Nina G. grushevskaja@bsu.by, nina-kr@tut.by (Belarussian State University, Minsk, Belarus)*

Finsler geometry effects in surface phenomena physics: the case of monolayer systems

17-15 – 18-00 *Lapshin Alexander V. lavexander@mail.ru (Ural State University named A. M. Gorkiy, Russia)*

To question about duality between algebras of double numbers and complex numbers

18-00 – 18-45 *Shakirov Shamil R., shakirov@itep.ru (Institute For Theoretical and Experimental Physics, Moscow, Russia)*

On the bounded volume of algebraic hypersurfaces

18-45 – 21-00 Round Table devoted the results of the Competition of experimental projects which acknowledge the detection of space anisotropy. Closing the meeting

21-00 Departure from the Educational Center “Forest Lake” to the underground station Shcholkovskaya, Moscow