

List of participants and titles of reports

1. Spin density waves and puzzling low energy modes in chromium.

E. Clementyev

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2. Level anti-crossing and change in the sign of ^{13}C spin polarization in diamond

Alexander T. Halikov, Alexei I. Ivanov

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3. Theoretical estimation of nucleation field in bistable amorphous ferromagnetic microwires

Grzegorz Kwiatkowski

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and University of Iceland*

4. The Benney System and its integrable dispersive deformation.

Maxim Pavlov

Lebedev Physical Institute of Russian Academy of Sciences, Moscow

5. Nonlinear effects during high intensity focused ultrasound treatment of liver cancer.

Solovchuk M.

National Health Research Institutes Taiwan

6. Wave tomography problem with incomplete data

L.N. Pestov

Immanuel Kant Baltic Federal University

7. FDTD simulations for determining optical properties of gold nanoparticles

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8. Asymptotic exact estimates of the distortion for quasiconformal automorphisms of the disk

V.D. Kolesnikov, **V.I. Semenov**

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9. Mathematical models of X-ray focusing and their applications

Wojda P., Kshevetskii S.

Immanuel Kant Baltic Federal University

10. Magnetoacoustic heating in a quasi-isentropic magnetic gas

Perelomova Anna

Gdansk University of Technology, Gdansk, Poland

11. Heitler-Heisenberg multispin states via irreducible representations of the united permutations and space symmetry group.

S. Leble

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12. Numerical simulation of wave propagation from atmospheric pressure variations registered with the microbarographs.

Kurdyayeva Y., Kshevetskii S.

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13. Direct variational method for the point-to-point radio wave ray tracing.

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14. Analytic description of pulse frequency self-shift in nonlinear photonic crystal fibers

V.A. Khalyapin

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15. Wave- and entropy modes diagnostics in 1D exponential atmosphere via measurements in a vicinity of a point

S. Leble, S. Vereshchagin

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16. On the entropy of a spherical plasma shell

M. Bordag

(Universität Leipzig)

17. Cosmological models on the brane: acceleration with negative cosmological constant

A.V. Yurov, V.A. Yurov, A.V. Astashenok

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18. On a nonlinear Schrodinger model for photopolymers

Dmitry Ponomarev

Institute: ENSTA ParisTech, France

19. Internal stress distribution in glass-coated amorphous ferromagnetic microwires

Mikhail Vereshchagin

Immanuel Kant Baltic Federal University, Kaliningrad, Russia

20. Tides and planetary waves in thermosphere in January 2009 in the whole atmosphere model

Vasilev P.A., Bessarab F.S., Karpov I.V., Sukhodolov T.V., Rozanov E.V.

West Department of Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation, Kaliningrad, Russia

21. Asymptotics of solutions of inhomogeneous stationary problems with localized right-hand sides and pairs of Lagrangian manifolds.

S.Yu.Dobrokhotov

(Ishlinsky Institute for Problems in Mechanics of Russian Academy of Sciences and Moscow Institute of Physics and Technology).

22. WKB method for the Helmholtz equation in a three-dimensional layer of variable thickness with a localized right-hand side.

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Moscow Region, 141701, Russian Federation

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23. Neutron stars in the R-square gravity and equivalent Brance-Dicke theory in Einstein frame

A.V. Astashenok, **A.S. Baigashov**
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24. Sclesinger transformation for the AKNS hierarchy
A.A. Yurova, **A.V. Yurov**, Chirikov R.
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25. Storm-time and after-storm ionospheric disturbances.

M.V. Klimenko 1,2, V.V. Klimenko 1, K.G. Ratovsky 3, N.V. Chirik 1,2, I.E. Zakharenkova 1, A.M. Vesnin 3, R.V. Vasilyev 3, D.S. Kotova 1
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26. To the problem of estimating accuracy of atmosphere perturbations diagnostics to measuring at a limited number of points

Leble S., **Vereshchagina I.**
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27. Propagation of the boundary regime of acoustic wave launched by tsunami wave at heights of ionosphere

Leble S., **Smirnova E.**
Immanuel Kant Baltic Federal University

28. Ionospheric disturbances initiated by meteorological storms. Observations and modeling.

Karpov I.V.^{1,2}, Borchevskina O.P.^{1,2}, Vasilyev P.A.², Karpov M.I.²
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29. Ionospheric response to the Baltic sea meteorological storm in December, 2010

Mikhail Karpov¹, Olga Borchevskina^{1,2}
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30. Lie group analysis of nonlinear Black-Scholes Models.

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University of Applied Sciences Zittau/Go rlitz,
Theodor-Ko rner-Allee 16, D-02763 Zittau, Germany

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Shpilevoi A.A., Burmistrov V. I.

32. Kinetic approach for modeling conductivity of low-dimensional structures

Botman S., Leble S.
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ul.A. Nevskogo, 14, 236041, Kaliningrad, Russia

33. Evolution equation for two-time derivative Lorentz metamaterial: Projecting operators method.

D. Ampilogov, S. Leble
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34. Application of the ionospheric ray tracing for reproduction of tid trace in vertical and oblique ionograms

Elizaveta R. Somina¹, Igor A. Nosikov^{1,2}, Maxim V. Klimenko^{2,1}, Konstantin G. Ratovsky³, Vera A. Ivanova³, Aleksei V. Podlesnyi³, Gennady A. Zhabankov⁴, Alexey V. Oinats³

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35. Autocorrelation and Fourier-analysis of solar flux index values and ionospheric F2 layer maximum critic frequency on Kaliningrad station

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36. Analysis of results obtained using the correction method for ionosphere empirical model assimilation by the data of the ground based gnss receivers

Andrey A. Gusakov¹, D. S. Kotova^{1,2}, V. B. Ovodenko², Yu. V. Yasyukevich^{3,4}, A. A. Mylnikova³, M. V. Klimenko², E.S. Andreeva⁵, A. E. Kozlovsky⁶

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37. Frequency-selective excitation for NMR in magnetic materials

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