

Annual International Conference

Days on Diffraction 2011

May 30 – June 3, 2011

St.Petersburg

Program

8.30 Registration & Coffee**9.20 Selected poster:** Alexander Plakhov: Invisible bodies with specular surface**9.40 Opening (Main Hall)**

	<i>Acoustic waves</i> (Hall 203) Chair: Vladimir Mozhaev	<i>Numerical methods I</i> (Hall 106) Chair: Yuri Zaslavsky	<i>Left-handed media</i> (Main Hall) Chair: Pavel Below
10.00	E.A. Vinogradov: Diffraction focusing of the radiation by acoustic (phononic) crystal	A. Vinokurov, V. Il'in, V. Farafonov, S. Barkanov: New solutions to the electrostatic problem for highly excentric axysymmetric particles	V.G. Veselago: Metamaterials with negative refraction and some relativistic effects
10.05			
10.20	G.V. Filippenko: The energy analysis of vibrations problem of different shells	Ya.L. Bogomolov, E.S. Semenov, A.D. Yunakovsky: Method of discrete sources for elliptic problems arising from collider simulation. Numerical aspects	I. Vendik, M. Odit, O. Vendik, D. Kholodnyak, S. Zubko, M. Sitnikova, P. Turalchuk, K. Zemlyakov, D. Kozlov, I. Munina, S. Turgaliev: Tunable metamaterials for THz electromagnetic spectrum
10.35			
10.40	V.N. Chukov: On violation of Bragg law of scattering	T.Z. Ismagilov, A.I. Kuzmin: Modelling photonic crystal waveguides using finite volume method	A.P. Sukhorukov, D.O. Saparina: Diffraction of wave beams in inhomogeneous metamaterials
10.50			
11.00	M.A. Mironov: Amplification of the sound waves in phonon crystals by subsonic electric current	A.G. Kyurkchan, N.I. Smirnova: About one new method of solving diffraction problems	

11.20

Coffee Break

	<i>Diffraction by edge-shaped bodies I</i> (Hall 203) Chair: Vassily Babich	<i>Electromagnetic waves</i> (Hall 106) Chair: Ivan Andronov	<i>Nonlinear Metamaterials I</i> (Main Hall) Chair: Yuri Kivshar
11.40	A.V. Shanin: Diffraction series on a unit sphere and multiply diffracted waves for a quarter-plane problem	R.F. Ndangali, S.V. Shabanov: Electromagnetic bound states in radiation continuum and applications to optical non-linear effects in periodic dielectric arrays	N.N. Rosanov, N.V. Vyssotina, A.N. Shatsev, I.V. Shadrivov, Yu.S. Kivshar: Switching waves and solitons in nonlinear magnetic metamaterials
12.00	K. Cherednichenko: High-frequency spectral analysis of thin periodic acoustic strips	L. Angermann, V.V. Yatsyk: Modeling and analysis of wave scattering and generation on cubically polarisable layered structures	A.K. Popov, S.A. Myslivets: Nonlinear electromagnetics in multi-domain negative index metamaterials
12.10			
12.20	R.C. Assier: Towards an ultimate modified Smyshlyaev formula for the problem of diffraction by a quarter-plane	B.A. Kochetov, A.Yu. Butrym: Transient Electromagnetic Fields in a Shielded Quasi-TEM Transmission Line	M. Lapine: Conformational nonlinearity and tunability in metamaterials
12.25			
12.40	A.V. Kozlov, V.G. Mozhaev: Exact solutions for wave resonances in rectangular pyramidal cavity	E.V. Golovacheva, A.M. Lerer: Diffraction of optic electromagnetic waves on metal nanodipole	D.V. Valovik, Yu.G. Smirnov: Electromagnetic TM wave propagation through a nonlinear metamaterial slab
12.55			D.V. Valovik: Electromagnetic TE wave propagation through a nonlinear metamaterial slab
13.00			

13.10

Lunch at Dom Kino restaurant

	<i>Elastic waves in complex media I</i> (Hall 106) Chair: Margarita Eglit	<i>Nonlinear Metamaterials II</i> (Main Hall) Chair: Nikolai Rosanov
14.35		I. Gabitov, A. Maimistov, Zh. Kudyshev: Second harmonic generation in spatially inhomogeneous metamaterials
15.00	E. Grekova: Small perturbations in the spherical prestressed state in a nonlinear isotropic elastic reduced	
15.05	Cosserat medium: waves and instabilities	V.V. Grimal'sky, Yu.G. Rapoport: Nonlinear surface plasmons and giant second harmonic generation under temporal resonance of main and second harmonic
15.20	L.A. Molotkov: Propagation of the normal waves in Biot rods with opened and closed pores on free boundaries	A.A. Zyablovsky, A.V. Dorofeenko, A.P. Vinogradov, A.A. Pukhov: Wave propagation in photonic crystal with gain
15.35		A.A. Pukhov, E.S. Andrianov, A.V. Dorofeenko, A.P. Vinogradov, A.A. Lisyansky: The non-radiative plasmon excitation in spaser forced by external optical field
15.40	G.L. Zavorokhin: Wave field from a point source on the boundary of half plane Biot	
15.50		A. Chipouline, V.A. Fedotov, A.E. Nikolaenko: Coupling classic and quantum objects: from nano-laser to quantum metamaterials
16.00	M. Cherdantsev, K.D. Cherednichenko, S. Neukamm: Homogenisation in finite elasticity for composites with a high contrast in the vicinity of rigid-body motions	

16.20

Coffee Break

	<i>Elastic waves in complex media II</i> (Hall 106) Chair: Elena Grekova	<i>Microwave metamaterials</i> (Main Hall) Chair: Constantin Simovski
16.40	M.E. Eglit, A.E. Yakubenko: Dispersion of elastic waves in microinhomogeneous media and structures	A.A. Stashkevich: Metamaterials based on ferromagnetic nano-elements: from the effective medium to magnonic behavior
17.00	S. Guo, P. McIver: Propagation of elastic waves through a lattice of cylindrical cavities	
17.10		I.V. Shadrivov: Parametric interactions in metamaterial structures
17.20	E. Osipov: Periodic problems of diffraction of an elastic wave in space	
17.40		D.A. Powell, K. Hannam, I.V. Shadrivov, Yu.S. Kivshar: Coupling effects in rotated split ring resonators
17.55		

	<i>Numerical methods II</i> (Hall 311) Chair: Aleksander Kyurkchan	<i>Localized waves I</i> (Hall 106) Chair: Aleksei Kiselev	<i>Transformation optics and sub-wavelength imaging</i> (Main Hall) Chair: John Pendry
9.00			A.V. Kildishev, V.P. Drachev, W. Cai, U.K. Chettiar, S. Xiao, X. Ni, L.J. Prokopeva, E.E. Narimanov, V.M. Shalaev: Transformation optics with metamaterials
9.20	M.Yu. Medvedik, Yu.G. Smirnov: Reconstruction of complex permittivity of a nonhomogeneous body in a rectangular waveguide using the method of volume singular integral equation	E.A. Mashkovich, M.I. Bakunov: Tilted-front laser pulses for efficient terahertz generation: Effects of diffraction and dispersion	
9.30			N.H. Shen, M. Kafesaki, S. Foteinopoulou, Th. Koschny, C.M. Soukoulis: Anisotropic left-handed metamaterials for imaging
9.40	Y.Y. Konovalov: Iterative computation of compactly supported solutions of functional-differential equations with linearly transformed argument	Ya.V. Izdebskaya, A.S. Desyatnikov, and Yu.S. Kivshar, G. Assanto: Spatially modulated optical vortex solitons in nematic liquid crystals	
10.00	A. Shcherbakov, A.V. Tishchenko: Generalized source method for light scattering and diffraction calculations	E.V. Razueva, E.G. Abramochkin: Radial Airy function and related light beams	S. Maslovski, Y. Rapoport, S. Tretyakov: Perfect lensing with phase-conjugating surfaces: approaching practical realization
10.20	N.K. Vdovicheva, A.N. Reznik, I.A. Shereshevskii: Numerical method for the inverse problem of near field microscopy of layered media	M. Zamboni-Rached: Non-diffracting beams resistant to attenuation in absorbing media	
10.40			

10.45

Coffee Break

	<i>Spectral theory methods I</i> (Hall 311) Chair: Sergei Dobrokhotov	<i>Plasmonics and diffraction</i> (Hall 106) Chair: Tatiana Zaboronkova	<i>Homogenization I</i> (Main Hall) Chair: Didier Felbacq
11.00	A.I. Esina, A.I. Shafarevich: Spectrum and eigenfunctions of the operator of an induction of a magnetic field on a two-dimensional surface of rotation	M.V. Perel, D.Yu. Zaika: Asymptotics of surface plasmons near curved interfaces	A. Andryieuski, R. Malureanu, S. Ha, A.A. Sukhorukov, Yu.S. Kivshar, A.V. Lavrinenko: Wave propagation phenomena in metamaterials for retrieving of effective parameters
11.20	A.Ya. Kazakov: Monodromy of the deformed hypergeometric equation	O.V. Polischuk, V.V. Popov: Resonant scattering of electromagnetic waves at a two-dimensional electron system with lateral metal gates	
11.30			A.A. Orlov, A.V. Chebykin, P.M. Voroshilov, P.A. Belov, Yu.Kivshar: Nonlocality in Multilayered Metal-Dielectric Optical Metamaterials
11.40	Ya.A. Butko, O.G. Smolyanov: Quantum dynamics of particles with position dependent mass via Feynman formulae	A.A. Dolgiy, V.M. Onufriyenko: The abnormal electromagnetic skin effect and fields diffraction in fractal medium	
12.00	V.V. Borzov, E.V. Damaskinsky: Differential equations for the simplest N -symmetric generalized Chebyshev polynomials	S.V. Grigoriev, A.V. Syromyatnikov, A.P. Chumakov, N.A. Grigoryeva, K.S. Napolskii, I.V. Roslyakov, A.A. Eliseev, A.V. Petukhov, H. Eckerlebe: Diffraction in nanostructures: does scattering go beyond the Born approximation?	D. Lafarge, N. Nemati: Theory of wave propagation and dispersion in fluid-saturated porous media allowing for spatial dispersion
12.15			E. Pshenay-Severin, A. Chipouline, J. Petschulat, U. Hübner, T. Pertsch: Magnetic properties of metamaterials based on asymmetric double-wire structures
12.20	V. Lotoreichik, S. Simonov: Wigner–von Neumann perturbations of the Kronig–Penney model		
12.30			A.S. Shalin: Broadband optical blooming of a medium by a nanocrystalline layer
12.40			

12.45

Lunch at *Dom Aktyora* restaurant

	<i>Asymptotic methods I</i> (Hall 311) Chair: Victor Zalipaev	<i>Numerical methods III</i> (Hall 106) Chair: Aleksander Vinokurov	<i>Homogenization II</i> (Main Hall) Chair: Andrey Lavrinenko
14.30	S.Yu. Dobrokhotov, D.S. Minenkov: Asymptotic solutions of 3-D Laplace equation in the layer with fast oscillating boundary		A.P. Vinogradov, A.I. Ignatov, A.M. Merzlikin, S.A. Tretyakov, C.R. Simovski: Additional effective medium parameters for composite materials (excess surface currents)
14.50	E.I. Smirnova, A.Yu. Trifonov: Semiclassical localized solutions of the the two-component Hartree equation with the periodic Hermit matrix Hamiltonian	I.A. Shereshevskii, I.M. Nefedov: Simulation of the vortex dynamics in the mesoscopic superconducting films	
15.00			D. Felbacq, G. Bouchitté: Limit analysis of time-harmonic Maxwell equations with fast oscillating coefficients and dispersion
15.10	S.Yu. Dobrokhotov: 1-D linear and nonlinear run-up problem: focal points in nonlinear wave equation with degenerating velocity	Yu.M. Zaslavsky, V.Yu. Zaslavsky: Numerical analysis of elastic waves in a multilayered solid sphere excited by surface pulse-vibration force	
15.30	D.A. Lozhnikov, S.A. Sergeev, S.Yu. Dobrokhotov: On a behaviour of localized solution of the 2-D wave equation with variable velocity for small time	M.Ya. Semkiv: Wave propagation in elastic waveguides with a finite length cracks	D. Morits, C. Simovski: Negative effective permeability at optical frequencies produced by clusters of plasmonic particles
15.45			S.V. Maly: The electrodynamic analysis of composites and meta-materials on the basis of the method of minimal autonomous blocks
15.50	I.Kh. Khusnullin, R.R. Gadyl'shin: Schrödinger operator on axis with potentials depending on two parameters	L.I. Goray: Integral equation based inverse diffraction problem solving for low-dimensional periodically-arranged nanocrystals	
16.00			

16.10

Coffee Break

	<i>Water waves</i> (Hall 311) Chair: Nikolay Kuznetsov	<i>Numerical modeling</i> (Main Hall) Chair: Alexander Kildishev
16.40		Xingjie Ni, Fan Gu, L.J. Prokopeva, A.V. Kildishev: Nanophotonics simulation tools in the cloud: PhotonicsSHA-2D and PhotonicsCL at nanoHUB.org
16.55		<i>Computer Simulation Technology (CST) Studio Suite</i>
17.00	N.G. Kuznetsov, O.V. Motygin: On the coupled time-harmonic motion of water and a freely floating body	R. Ehmann, V. Sokol: Simulation of extremely large objects containing small details
17.20	O.V. Motygin, N.G. Kuznetsov: On trapping of time-harmonic water waves by an axisymmetric, motionless, freely floating body	
17.40	V. Maximov, I. Nudner, G. Khakimzyanov, K. Semenov: The Solitary Wave-Structure Interaction	<i>Ansoft HFSS</i> A. Gettikh: What is new in version 13
18.00		
18.25		

19.30

Bus tour

Plenary talk

Chair: Aleksei Kiselev

9.05 Yuri S. Kivshar
Shaping of light in metamaterial and plasmonic structures

9.50 **Coffee Break & Posters**

1. D. Alexandrov, B. Kashtan: Kinematic inverse problem for transversely isotropic medium
2. L. Angermann, V.V. Yatsyk: Modeling and analysis of wave scattering and generation on cubically polarisable layered structures
3. A. Anzulevich, L. Butko, V. Buchelnikov, I. Bychkov, L. Yashina, S. Moiseev: Microwave heating of composite metallic powders
4. A. Badanin, E. Korotyaev, A. Vdovina: Schrödinger operator on armchair nano-tube
5. L. Butko, V. Buchelnikov, I. Bychkov, A. Anzulevich, I. Zotov, A. Fedy: Absorption of the electromagnetic wave in structure of nonmagnetic conductor – magnet
6. I.V. Bychkov, I.S. Zotov, A.A. Fedy: Composite materials based on electromagnetic crystal
7. V.N. Chukov: The new laws of diffuse scattering and oscillations of indicatrix envelope in the short-wavelength limit
8. A.V. Chumakova, S.V. Grigoriev, N.A. Grigorieva, A.A. Mistonov, K.S. Napolskii, N. Sapoletova, A.V. Petoukhov, D. Belov, Wim G. Bouwman: The study of inverse Co-based photonic crystal by microradian X-ray diffraction
9. F.F. Gorbatshevich, I. Kukkonen, M.V. Kovalevsky, O.M. Trishina: Nonlinear effects by propagating of elastic waves in the samples of Outokumpu drill hole
10. D.V. Ivanov, A.A. Ezerskaya, S.A. Kozlov: The diffraction of single cycle terahertz waves
11. L.A. Kochetova, S.L. Prosvirnin, V.R. Tuz: Bistable wave transmission through a grating of nonlinear dielectric bars
12. V.V. Korneichik: Separation of variables in acoustically concordant fluid media
13. M.D. Kovalev: Planar waveguides: 3 kinds of dispersion equations and the number of optical modes
14. I.P. Krasnov: About problem of interaction of field and substance in classical electrodynamics
15. V.F. Kravchenko and D.V. Churikov: Atomic functions in nonparametric estimations of probability density functions and their derivatives
16. V.F. Kravchenko and D.V. Churikov: New constructions of complex orthogonal Kravchenko wavelets
17. A.G. Kulikovskii, E.I. Sveshnikova: Oscillations passing through a layer of nonlinear noncompressible elastic medium
18. V.S. Makin, R.S. Makin: Lateral relativistic electron beam synergetic creation and transport by petawatt laser radiation
19. V.S. Makin, R.S. Makin: Overcoming diffraction limit in optics by nonlinear laser-matter interaction
20. S.V. Maly, A.S. Malaya: Virtual metamaterials — the analysis and synthesis
21. S. Moiseev, A. Anzulevich : Quarter-wave splitter based on heterogeneous composite with prolate silver nanoparticles
22. Nargesi Khorramabad, S.M., Ayaz Ghorbani: A new method for the calculation of diffraction loss due to building
23. A.B. Plachenov: Stability conditions and explicit formulae for basic mode two-mirror optical cavities of two classes of rotating
24. Yu.G. Rapoport, V.V. Grimalsky: Transformational optics, complex geometrical optics and nonlinear electromagnetic energy concentrator
25. R.A. Shigapov, B.M. Kashtan: Oscillations of a fluid layer sandwiched between different elastic half-spaces

26. Nandakishor Sirdeshpande: Energy efficient routing in wireless sensor networks
27. A.P. Slobozhanyuk, D.S. Filonov, M.K. Khodzitsky, P.A. Belov: Influence of interface plane angle on transmission properties of superlens
28. D.E. Syresin, T.V. Zharnikov: Method of dispersion curves calculation for waves with noninteger azimuthal wavenumbers in radially inhomogeneous cylindrical elastic waveguides
29. A.M. Tagirdzhanov: Electromagnetic waves produced by abruptly starting luminal source
30. A.B. Utkin: Causal model of launching an X-wave by a superluminal rectilinear current pulse
31. S.N. Vdovichev, A.A. Fraerman, B.A. Gribkov, S.A. Gusev, A.Yu. Klimov, V.V. Rogov: Ferromagnetic nanodots as metamaterials for a superconducting current of Josephson junctions and magneto optic
32. I.S. Volvach, S.V. Volvach: Acoustic stimulation of occurrence of polaritons in thin films of surface-active substances
33. S.V. Vol'vach, J.S. Vol'vach, V.K. Myloslavskiy: Research of photochromic effect in mixed and two-layer AgCl-CuCl films
34. N.F. Yashina, T.M. Zaboronkova: Electromagnetic surface waves guided by the boundary between bi-anisotropic composite and dielectric media

Plenary talks

Chair: Pavel Belov

11.30 J.B. Pendry

Transformation optics at optical frequencies

12.15 Anatoly V. Zayats

Metamaterials as a platform for active plasmonics

13.00 **Lunch at *Imperator* restaurant**

14.00 **Excursion**

18.00 **Picnic party at Peterhof forest**

	<i>Geophysics</i> (Hall 311) Chair: Lev Molotkov	<i>Diffraction by edge-shaped bodies II</i> (Hall 106) Chair: Andrei Shanin	<i>Nanophotonic</i> (Main Hall) Chair: Anatoly Zayats
9.00			E.-H. Lee: VLSI Photonics: Nanophotonic integration using metamaterial, plasmonic, photonic crystal devices and nano-optics
9.20		V.M. Babich, B.A. Samokish, N.V. Mokeeva : Diffraction a plane wave by a transparent wedge. Calculation of the diffraction coefficients of wave scattered by vertex of the wedge	H.I. Lee: Analysis for metamaterials having losses and origins of bandgaps
9.30			
9.40		V. Valyaev, A. Shanin: Embedding formulae for Laplace–Beltrami problems on the sphere with a cut	
10.00	P.G. Malischewsky: Seismological implications of impedance-like boundary conditions	D.P. Kouzov, Yu.A. Solovyeva: Diffraction of nonstationary linearly inhomogeneous wave, which slides off a semi-infinite screen	C.R. Simovski, O. Luukkonen: Edge waves and their use for the broadband field concentration
15.45			
10.20	E. Efimova, I. Silvestrov: SVD of seismic data inversion problem in case of viscoelastic media	V.M. Levin, J.W. Ding, Yu.S. Petronyuk: Edge diffraction phenomena in formation of acoustic images	
10.30			

10.40

Coffee Break

	<i>Elastic waves</i> (Hall 311) Chair: Danila Prikazchikov	<i>Wavelets</i> (Hall 106) Chair: Maria Perel	<i>Quantum metamaterials</i> (Main Hall) Chair: El-Hang Lee
11.00	V.M. Levin, K.V. Zakutailov, M. Goryunova: Field singularities in focused beam interaction with anisotropic specimens	M.V. Altaisky, N.E. Kaputkina: Scale-dependent corrections to Casimir effect	P.E. Vorobev, V.V. Lebedev, S.S. Vergeles: Enhancement of electric field between two metallic granules due to plasmonic resonance
11.15			S.S. Vergeles, V.V. Lebedev, P.E. Vorobev: Surface plasmon propagation in a metallic nanocylinder array
11.20	A.P. Kiselev: Structured elastic waves	E.A. Gorodnitskiy, M.V. Perel: The Poincaré wavelet transform: implementation and interpretation	A.N. Poddubny, A. Potemkin, P.A. Belov, Yu.S. Kivshar: Purcell effect for distributed light source in hyperbolic medium
11.30			K. Elsayad, K.G. Heinze: Enhanced radiative emission of dyes coupled to long range surface plasmons in asymmetric structures
11.40	T.A. Hovhannisyan: Reflection of magnetoelastic bound plane waves from the boundary of elastic half-space	V.F. Kravchenko, D.V. Churikov: Two-dimensional analytical Kravchenko–Rvachev wavelets in digital signal and image processing	I.S. Nefedov: Electromagnetic wave properties of carbon nanotube films in the mid infrared range
11.45			
12.00	D.P. Kouzov, M.G. Zhuchkova: Rayleigh wave’s transmission through a surface crack in elastic half-space	N. Bagraev, G. Martin, B. Pavlov, A. Yafyasov: Landau–Zener phenomenon on a quasi-2D periodic sandwich	
12.20			

12.30

Lunch at Dom Aktyora restaurant

	<i>Spectral theory methods II</i> (Hall 311) Chair: Boris Pavlov	<i>Diffraction II</i> (Hall 106) Chair Michail Lyalinov	<i>Active plasmonics and photonics</i> (Main Hall) Chair: V. Myroshnychenko
14.30	A. Badanin, E. Korotyaev: Even order periodic operators on the real line	D.A. Prikazchikov, J. Kaplunov: Flexural edge waves with general time dependence	N. Engheta: Metatronics
14.50	A. Frolov, E. Karchevskiy: Generalized modes of optical fiber	D. Jüstel, G. Friesecke, R.D. James: Towards x-ray diffraction by objective structures: A Bravais-like classification of isometry groups	

15.10	S.A. Nazarov: The enforced stability of eigenvalues embedded into the continuous spectrum	P.A. Krutitskii: Properties of a solution to the Dirichlet problem for the Helmholtz equation in a planar domain with cracks	
15.15			S.V. Fedorov, N.N. Rosanov, R.S. Savel'ev, A.A. Sukhorukov, Yu.S. Kivshar: Broadband compensation of losses in layered optical metamaterials with dispersive gain
15.30	I.Yu. Popov, A.N. Skorynina: Spectral analysis of the connected semicrystals model	I. Alexandrova, N. Pleshchinskii: Problem of electromagnetic wave diffraction on the screen and transmission problem	A.V. Dorofeenko, A.A. Zyablovsky, A.P. Vinogradov, A.A. Pukhov: Magneto-optical Switching of the Tamm State in VC Laser
15.45			L.J. Prokopeva, M.P. Fedoruk, J. Trieschmann, A.V. Kildishev, T.A. Klar: Time domain simulation of an active plasmonic metamaterial
15.50	V.M. Shelkovich: Systems of equations admitting delta-shocks in modeling of physical processes	T. Gilles: Diffraction by a subwavelength concaved perfectly conducting wedge	A.V. Dorofeenko, I.A. Nechepurenko, A.P. Vinogradov, A.A. Pukhov: Lasing of surface plasmons in metallic groove
16.00			
16.10			

16.15 **Coffee break**

	<i>Asymptotic methods II</i> (Hall 311) Chair: Serguei Nazarov	<i>Plasmas</i> (Hall 106) Chair Ilya Shereshevskii	<i>Nanoparticles and nanoantennae</i> (Main Hall) Chair: Nader Engheta
16.40	A. Bensouissi, A. Ifa, M. Rouleux: Andreev reflection and the semi-classical Bogoliubov–de Gennes Hamiltonian: resonant states	S.N. Galyamin, A.V. Tyukhtin: Reversed Cherenkov-transition radiation of a charge passing from vacuum into anisotropic medium	V. Myroshnychenko, F. J. García de Abajo, G. Boudarham, J. Nelayah, O. Stéphan, M. Kociak, C. Colliex, G. Adamo, A.I. Denisyuk, K. MacDonald, N.I. Zheludev, E. Carbó-Argibay, J. Rodríguez-Fernández, I. Pastoriza-Santos, J. Pérez-Juste, L.M. Liz-Marzán: Modelling the optical response of metal nanoparticles
17.00	V. Zalipaev: Semiclassical analysis of electron dynamics in graphene structures in magnetic field	S.I. Knizhin, M.V. Tinin, Yu.A. Kravtsov: Diffraction tomography of inhomogeneous plasma with double weighted Fourier transform	R.E. Noskov and A.A. Zharov: Plasmon-driven spontaneous symmetry breaking in clusters of nonlinear metallic nanoparticles
17.10			L.A. Ambrosio and H.E. Hernández-Figueroa: Emphasizing the metamaterial behaviour of the Mie scattering coefficients and Debye series for negative refractive index spherical particles
17.20	I.V. Andronov: High frequency diffraction by elongated bodies of revolution	A.V. Kudrin, A.S. Zaitseva, T.M. Zaboronkova, C.Krafft: Electrodynamics characteristics of a strip loop antenna located on the surface of a gyrotropic cylinder	A.I. Denisyuk, M.A. Tinskaya, M.I. Petrov: Tunable optical antennas based on metallic nanoshells with nanoknobs
17.25			A. Andryieuski, R. Malureanu, A. Lavrinenko: Plasmonic nanoantenna based coupler for telecom range
17.40	H. Hoel, C. Bayer, P. Plechac, R. Tempone, A. Szepessy: How accurate is molecular dynamics?	O.V. Gallyamova, A.I. Slepko: Interaction between relativistic beam and scattered field in relativistic diffraction generator	V.P. Drachev, K. Lee, J. Irudayaraj: Gold nanoparticles from nano-antennas to networks: fundamentals and applications
17.55			
18.00			
18.10			
18.25			

	<i>Nonlinear problems</i> Chair: Vadim Levin	(Hall 311)	<i>Anisotropic and bianisotropic metamaterials</i> (Main Hall) Chair: Igor Nefedov
9.00			D.N. Chigrin, C. Kremers, and S.V. Zhukovsky: Dichroism, chirality and optical activity in planar metamaterials
9.20	M. Cherkay, S. Vakulenko: Energy control for Frenkel–Kontorova model		
9.30			V. Khardikov, E. Iarko and S. Prosvirnin: Trapped mode resonances in optic planar structures with asymmetry metal or dielectric elements
9.40	M.I. Belishev, A.L. Pestov: Characterization of dynamical data in one-dimensional BC-method		
9.45			S.I. Maslovski: Motion-induced repulsive Casimir–Lifshitz forces
10.00	V. Gusev, R. Zhostkow: Analytical solutions for diffraction problem of nonlinear acoustic wave beam in the stratified atmosphere		M.V. Gorkunov, B.I. Sturman, E.V. Podivilov: Extraordinary transmission of perfect-metal and real-metal slits and gratings
10.20	A.V. Sadovnikov, A.G. Rozhnev: Nonlinear dynamics of the Bragg soliton propagation in the 2D grating structure		
10.30			V.I. Demidchik, R.V. Kornev, V.G. Semenchik: Electrodynamic analysis of biisotropic composite materials
10.40			

10.45 **Coffee break**

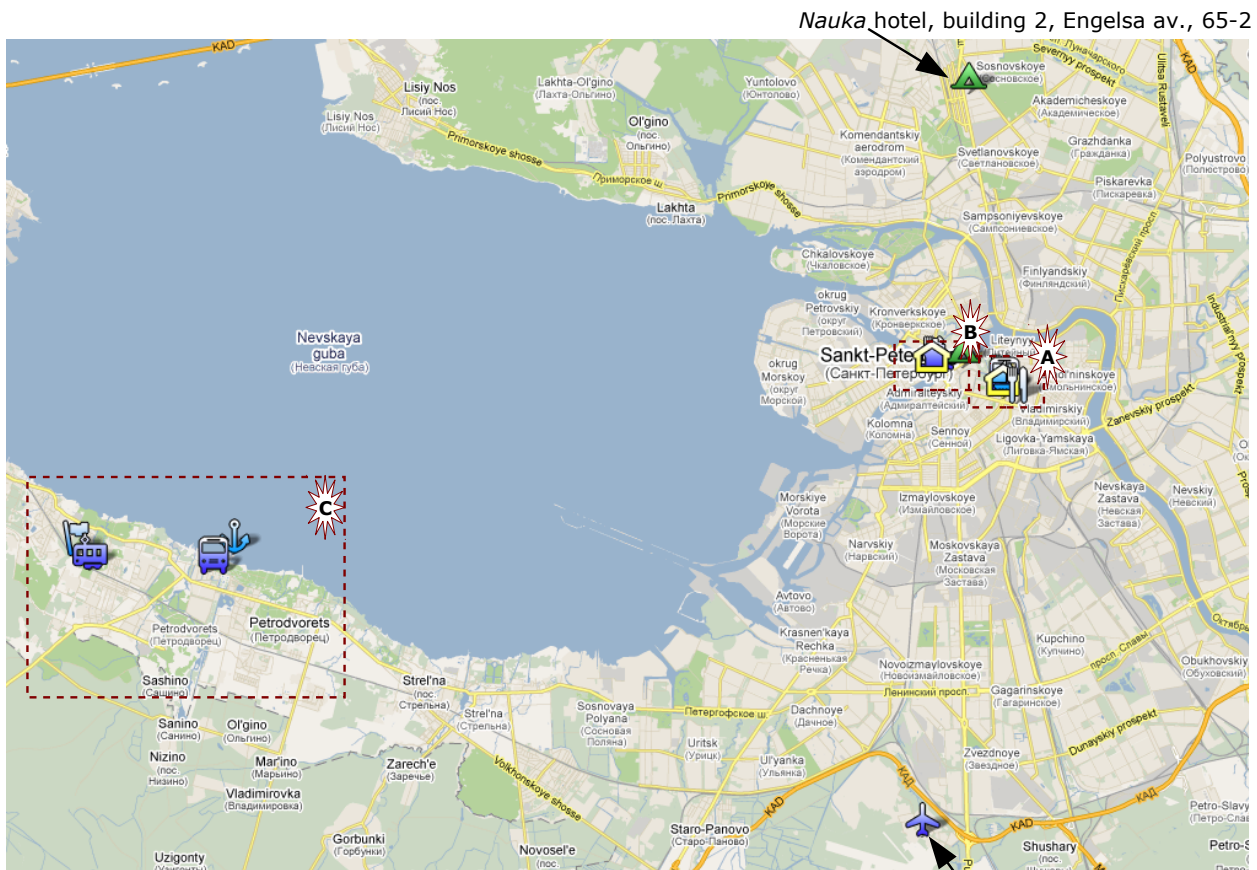
	<i>Localized waves II</i> Chair: Evgeny Abramochkin	(Hall 311)	<i>Photonic crystals I</i> (Main Hall) Chair: Mikhail Limonov
11.00	E.G. Abramochkin, E.V. Razueva: Ince–Gaussian beams and Hermite–Laguerre–Gaussian beams: a comparison		T.P. White, A.A. Sukhorukov: Effect of loss in dispersion-engineered slow light waveguides
11.20	Yu.N. Makov: New aspects in the search of exact analytical wave solutions of different equations on the base of the relatively undistorted wave anzats		
11.30			A. Petrov, M. Castellanos, J. Hampe, M. Eich: Slow-light waveguides in 2D triangular lattice line-defect waveguides
11.40	E.L. Aero, A.N. Bulygin, Yu.V. Pavlov: Functionally invariant solutions of triple sine-Gordon equation		
11.45			H.S. Lee, A. Petrov, M. Eich, R. Kubrin, R. Janssen, G. Schneider: Multilayer 3D photonic crystals for application as highly reflective thermal barrier coatings
12.00			V. Dmitriev, M. Kawakatsu: A novel optical component: compact nonreciprocal divider based on 2D photonic crystals
12.30			M.V. Perel, M.S. Sidorenko: Effects associated with a saddle point of the dispersion surface of a photonic crystal

12.45 **Lunch at Dom Aktyora restaurant**

	<i>Photonic crystals II</i>	(Main Hall)	Chair: Andrey Sukhorukov
14.30	M.V. Rybin, M.F. Limonov: Optical properties of 1D disordered photonic crystals		
14.45	K.B. Samusev, I.S. Sinev, M.V. Rybin, M.F. Limonov: 2D to 3D diffraction transition in photonic structures		
15.00	N.A. Grigoryeva, A.A. Mistonov, S.V. Grigoriev, A.V. Vasilieva, K.S. Napolskii, N.A. Sapoletova, A.A. Eliseev, A.V. Petukhov, D.V. Byelov, D.Yu. Chernyshov, A. Snegirev: Structural and magnetic properties of inverse opal photonic crystals studied by small-angle x-ray and polarized neutron diffraction		
15.15	V.G. Fedotov, A.V. Sel'kin: New interference effects in spectra of opal-like photonic crystals under multiple diffraction regime		
15.30	A.K. Samusev, E.Yu. Trofimova, D.A. Kurdyukov, V.G. Golubev: Two-dimensional optical diffraction from thin opal films		
15.45	I.S. Sinev, K.B. Samusev, A.K. Samusev, M.F. Limonov: 3D optical diffraction and selective switching of diffraction reflexes in opal-based photonic crystals		
16.00			

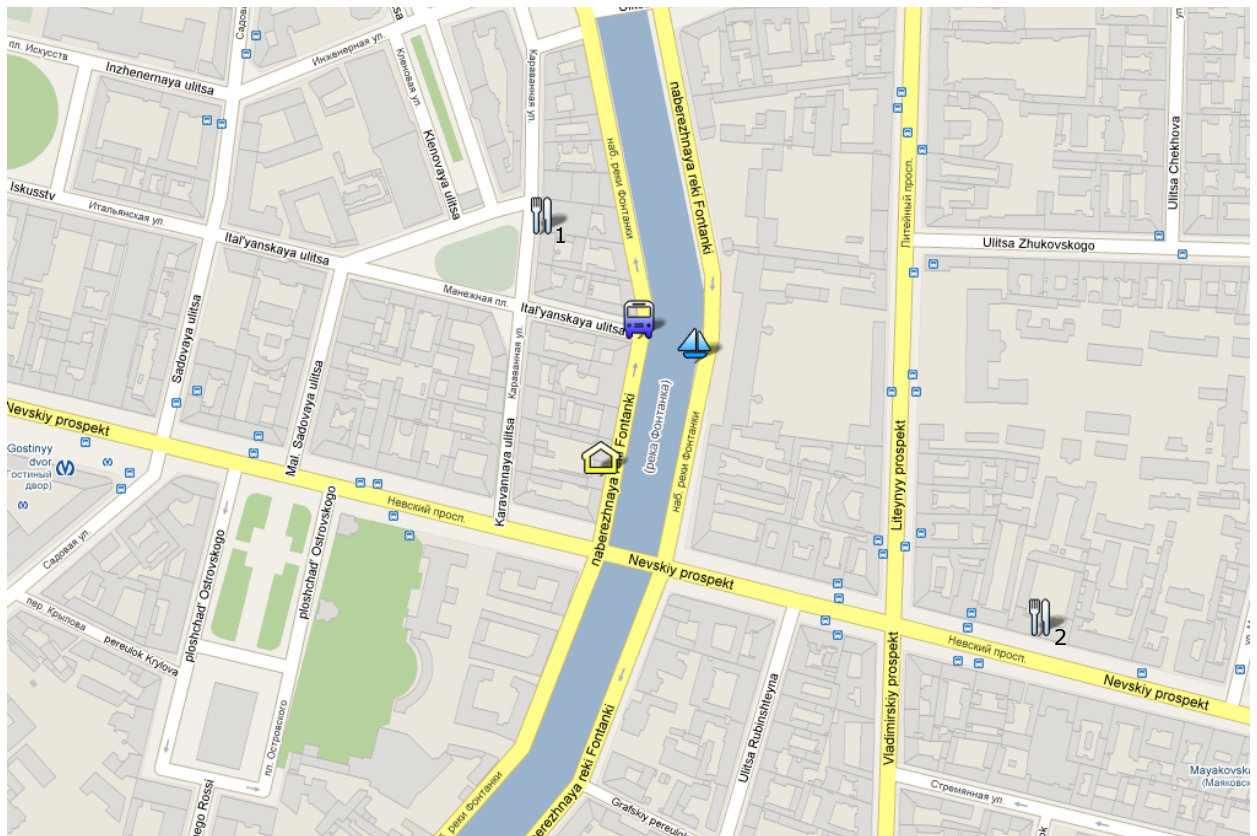
Maps of the conference events

(see interactive maps at conference site <http://eimi.imi.ras.ru/~dd>)



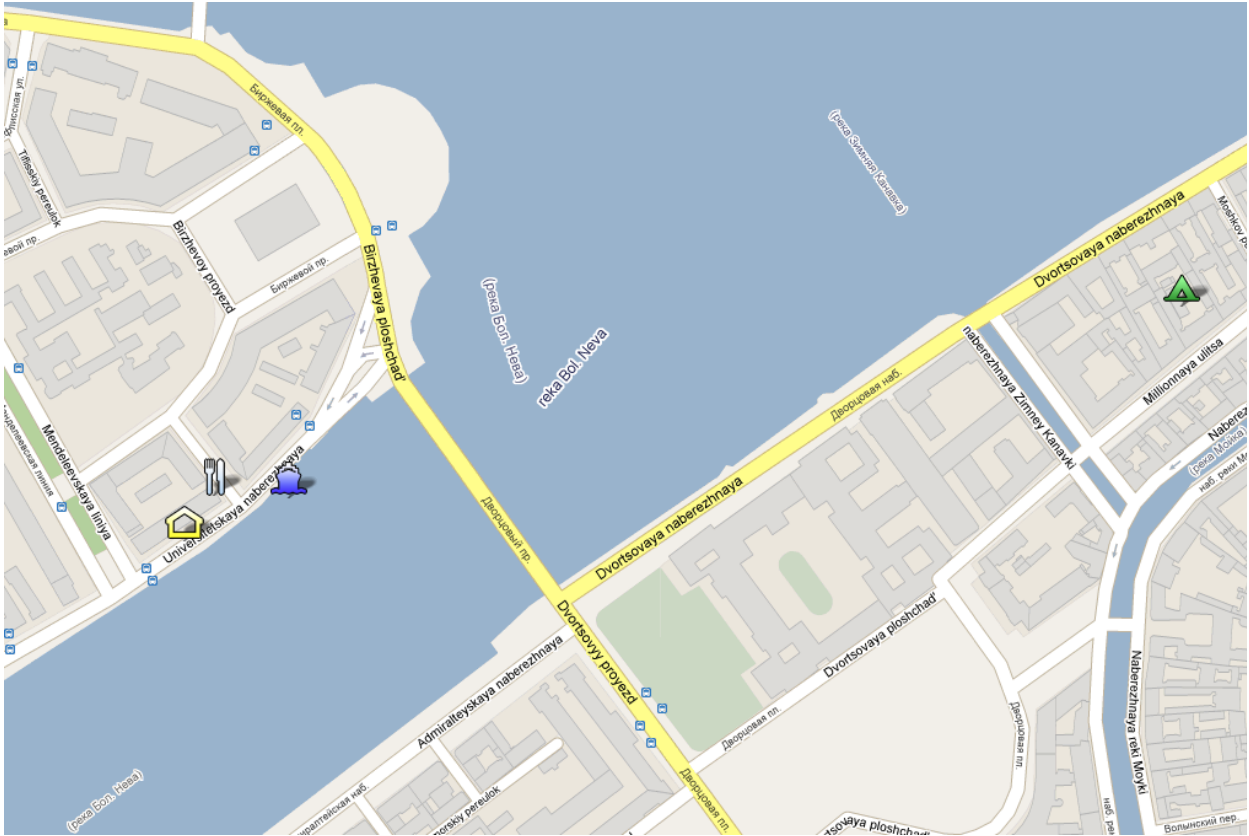
Nauka hotel, building 2, Engelsa av., 65-2

airport Pulkovo II



-  Mathematical Institute, Fontanka 27 (Sessions on Mon, Tue, Thu, Fri)
-  ¹ Lunch on Monday, *Dom Kino* restaurant Karavannaya st., 12
-  ² Lunch on Tue, Thu, Fri. *Dom Aktyora* restaurant Nevsky av., 86
-  Bus tour, Tuesday
-  Boat tour, Thursday

B



Scientific Centre of Russian Academy of Sciences, 5 Universitetskaya emb. (Sessions on Wednesday)



Lunch on Wednesday, *Imperator* restaurant, Tamozhennyi lane, 2

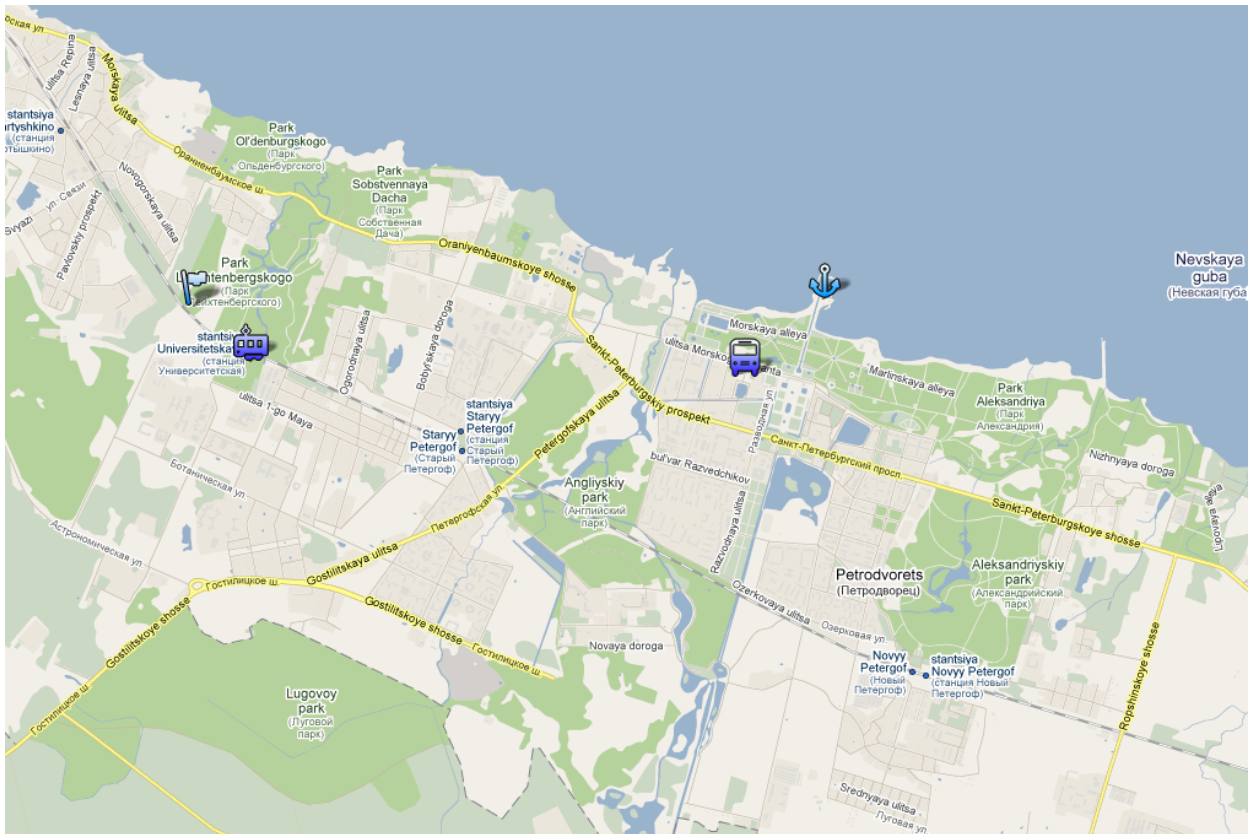


Boat to Peterhof, Wednesday



Nauka hotel, building 1 Millionnaya st., 27

C



Arrival to Peterhof, Wednesday



Bus to picnic



Forest picnic



"University" train station