

Annual International Conference

Days on Diffraction 2016

June 27 – July 1, 2016

St. Petersburg

Program

8.30 Registration & Coffee**10.00 Opening (Main Hall)**

	<i>Mechanics of continuum (I)</i> (Main Hall) Chair: Jeremiah Rushchitsky	<i>Numerical methods (I)</i> (Hall 311) Chair: Ilya Shereshevskii
10.10	Tomasz Danek, Michael A. Slawinski: On elasticity-tensor symmetries: material symmetry, symmetry-group average and spatial average	Goray L.I.: Generalization of energy balance for diffraction by randomly rough lossy 2D surfaces
10.30	Babnikov M.B., Krivtsov A.M., Tsvetkov D.V.: Heat transfer in a harmonic crystal on an elastic foundation	Ya.L. Bogomolov, M.A. Borodov, A.D. Yunakovsky: Method of discrete sources as an effective solver for waveguides with sharp corners
10.50	Ul'yanov S.V.: Light scattering from smectic C* film with anisotropic electrostatic interaction	Fabian L. Müller, Christoph Schwab: Finite elements for linear wave propagation in polygonal domains
11.10	Aero E.L., Bulygin A.N., Pavlov Yu.V.: Methods of construction of exact analytical solutions of non-autonomous nonlinear Klein–Fock–Gordon equation	Pawel Wojda: The finite difference methods of computation

11.30 Coffee break

	<i>Diffraction (I)</i> (Main Hall) Chair: Maria Perel	<i>Numerical methods (II)</i> (Hall 311) Chair: Leonid Goray
11.50	Shanin A.V., Korolkov A.I.: Diffraction by an impedance strip in parabolic approximation	Melnikov A.S., Shereshevskii I.A., Vdovicheva N.K.: On Bogoliubov – de Gennes equation for Kitaev chain
12.10	Shanin A.V.: Dispersion diagrams and first arriving signals in layered waveguides	Klushin A.M., Kurin V.V., Shereshevskii I.A., Vdovicheva N.K.: Simulation of Josephson antenna in 3D space
12.30	Baskin L.M., Kabardov M.M., Sharkova N.M.: Electron transport in a multi-resonator system formed by constrictions of a quantum waveguide	Spiridonov A.O., Karchevskii E.M.: Mathematical and numerical analysis of the spectral characteristics of dielectric microcavities with active regions
12.50	A. Popov, I. Prokopovich, D. Edemskii: Experimental implementation of microwave subsurface holography	Lyudmila A. Dmitrieva, Yuri A. Kuperin, Nikolai M. Smetanin, German A. Chernykh: Method of calculating Lyapunov exponents for time series using artificial neural networks committees

Poster session and lunch at Baku restaurant**12.50 Posters (I) Numerics**

Lutz Angermann, Vasyl V. Yatsyk, Mykola V. Yatsyk: A mathematical model for resonance scattering and generation of oscillations by nonlinear layered or grating-like media.

Belyayev Yu.N., Bozhok E.V., Malyshkin D.S.: Coefficients of elastic waves conversion in crystal indium.

Belyayev Yu.N., Malyshkin D.S., Zhibalova Yu.A.: Coefficients of elastic waves conversion by the crystal of BaTiO₃.

Demin D.B., Kyurkchan A.G., Kleev A.I.: Modeling of electromagnetic scattering on small particles by means of pattern equation method.

Roman O. Evstigneev, Mikhail Yu. Medvedik, Marina A. Moskaleva, Aleksei A. Tsupak: The numerical solution of the problem of electromagnetic wave diffraction by a system of free located bodies screens and wires.

A.G. Kyurkchan, S.A. Manenkov: Application of the modified method of discrete sources to the solution of the problem of a flow of a compact body and periodically rough surface.

B.A. Lagovsky, A.B. Samokhin, V.I. Nefedov: Superresolution based on interpolation and extrapolation of received signals.

Maly S.V., Arlova H.S.: A technique of multichannel scattering matrices calculation in solving electrodynamic and acoustic problems by the minimal autonomous blocks method.

Utkin A.B.: Spacetime triangle diagram technique for sectoral horn waveguides.

	<i>Mathematical approaches</i> (Main Hall) Chair: Alexander Kazakov
15.00	Chugainova A.P.: Uniqueness of self-similar solutions obeying the problems of arbitrary discontinuity disintegration for the generalized Hopf equation with a complex nonlinearity
15.20	Blokhin A.M., Tkachev D.L.: The problem of flow about infinite plane wedge with inviscous non-heat-conducting gas. Linear stability of a weak shock wave
15.40	Borzov V.V., Damaskinsky E.V.: On the spectrum of a discrete Schrödinger equation in one-dimensional perturbation
16.00	Altaisky M.V.: Renormalization group and wavelet transform
16.20	Vasilchuk V.: Asymptotic distribution of the spectrum of some symmetric polynomials of unitary invariant random matrix ensembles

16.40 **Coffee break**

	<i>Heun's equations and their applications</i> (Main Hall) Chair: Andrei Shanin
17.00	Plamen Fiziev: New approach to the connection problem for general Heun's functions
17.20	A.M. Ishkhanyan, M.V. Hakobyan, T.A. Ishkhanyan: Bi-confluent Heun potentials solvable in terms of confluent hypergeometric functions
17.40	A.M. Ishkhanyan: Single-confluent Heun solutions of the one-dimensional stationary Schrödinger equation
18.00	A.Ya. Kazakov: Confluent Heun equation with single added apparent singularity: elementary, gauge and integral
18.20	symmetries

	<i>Spectral theory methods (I)</i> (Hall 311) Chair: Michel Rouleux	<i>Numerical methods (III)</i> (Hall 203) Chair: Fabian Müller
9.20	Suslina T.A. : Homogenization of high-order elliptic equations	Vladislav V. Kravchenko, Sergii M. Torba, Raúl Castillo-Pérez: Analysis of graded-index optical fibers by the spectral parameter power series method
9.40	Svetlana Pastukhova: Homogenization of “double porosity” models for fourth order equations. Spectral problems	Kravchenko O.V., Kravchenko V.F., Churikov D.V.: Application of $ch_{a,n}$ atomic basis to numerical simulation of wave propagation problem
10.00	Dobrokhotov S.Yu., Nazaikinskii V.E., Tirozzi B.: Homogenization in the Cauchy problem for a wave equation with rapidly varying coefficients	Machikhin A.S., Burmak L.I.: Calculation of interference pattern after diffraction of two interfering image-carrying beams by acoustic wave in uniaxial crystal
10.20	H. Boumaza, O. Lafitte: Precised description of the spectral bands for a 2D periodic Schrödinger operator	Shchelik G.S., Sofronov I.L.: Application of semi-analytical finite element method (SAFE) to inversion of acoustic logging data in non-cylindrical boreholes in anisotropic formation
10.40	Dorodnyi M.A., Suslina T.A.: Homogenization of hyperbolic-type equations	Astrakhantseva A.A., Chebotarev A.Yu., Grenkin G.V., Kovtanyuk A.E.: Numerical analysis of the complex heat transfer in a layered medium

11.00 **Coffee break**

	<i>Diffraction (II)</i> (Hall 311) Chair: Mikhail Lyalinov	<i>Inverse problems</i> (Hall 203) Chair: Ivan Andronov
11.20	Anna Kirpichnikova: Fock–Leontovich parabolic equation method on prolonged bodies with Neumann boundary conditions	Nakonechny A.G., Podlipenko Y.K., Shestopalov Y.V.: Guaranteed estimation of solutions to Helmholtz problems from pointwise noisy observations
11.40	Kirpichnikova N.Ya., Popov M.M., Semtchenok N.N.: Shortwave diffraction by prolate bodies of revolution. Results of numerical experiments	Saritskaya Zh.Yu.: Stability of inverse coefficient problems' solutions for semilinear equations
12.00	Kurseeva V.Yu., Valovik D.V.: On the infinitely many electromagnetic TE eigenmodes in a plane layered waveguide filled with nonlinear medium: analytical results	Valeriia Sedaikina: Acoustical imaging in semi-geodesic coordinates
12.20	Perel M.V., Sidorenko M.S.: Asymptotic study of two-scale electromagnetic field in layered periodic structure	Smirnov Yu.G., Derevyanchuk E.D.: Rotation method for the reconstruction of anisotropic electromagnetic characteristics of metamaterials

12.40 **Poster session and lunch at Baku restaurant**

Posters (II) Diffraction and Waveguides

Bagmutov A.S., Popov I.Yu.: Current-voltage characteristics for two quantum waveguides, connected to quantum resonators.

Belyayev Yu.N., Malyshkin D.S.: Dependences spectra of elastic waves on thickness of the scattering layer.

Vitalii N. Chukov: On the Laue–Bragg–Wulff scattering of the acoustic Rayleigh wave by surface roughness.

Faleeva M.P., Popov I.Y.: Bound state for dielectric waveguide with locally perturbed core.

Kholodova S.E., Peregudin S.I.: On the problem of propagation of MHD waves.

Kuzmina E.A., Shestopalov Y.V.: Existence of complex waves in Goubau line: mathematical aspects.

Kuznetsov E.V., Merzlikin A.M.: Scattering of a surface wave on a controlled inhomogeneity.

Pryanishnikova E.A., Belyaeva N.A., Stolin A.M., Stelmakh L.S.: Mathematical model of the flow of compressible material in cylindrical channel with variable cross section.

N.F. Yashina, T.M. Zaboronkova, C. Krafft: Interaction of nonsymmetric electromagnetic waves guided by an anisotropic cylinder.

K. Zhelyazkova, M. Petrov, B. Katranchev, G. Dyankov: Guided modes and surface plasmon exploration of cholesteric liquid crystal cell.

	<i>Spectral theory methods (II)</i> Chair: Svetlana Pastukhova	(Hall 311)	<i>Electromagnetics</i> Chair: Tatiana Zaboronkova	(Hall 203)
15.00	Evgeny Korotyaev: Resonances of fourth order differential operators		Sergey N. Galyamin, Andrey V. Tyukhtin, Stanislav S. Baturin, Victor V. Vorobev, Aleksandra A. Grigoreva: Radiation from open ended cylindrical waveguide with a dielectric filling	
15.20	Sloushch V.A.: Estimates for the singular numbers of the sandwiched Airy transformation		A.B. Samokhin, A.S. Samokhina: FFT techniques for numerical solution of volume singular integral equations of electromagnetics	
15.40	Andrey Badanin, Evgeny Korotyaev: Trace formulas for fourth order operators on unit interval		A.V. Kudrin, T.M. Zaboronkova, A.S. Zaitseva, C. Krafft: Electrodynamics characteristics of a loop antenna located on the surface of a uniaxial anisotropic cylinder	
16.00	Petrova Y.P.: Spectral asymptotics in some problems with integral constraints		Kazuya Kobayashi: Wiener–Hopf analysis of the radar cross section of a finite parallel-plate waveguide with four-layer material loading	
16.20	Saburova N.Yu., Korotyaev E.L.: Magnetic Schrödinger operators on periodic discrete graphs		Andronov I.V., Bilous P.Yu.: Currents induced on the surface of a strongly elongated spheroid	
16.40			V. ZalipaeV, V. Vialov: Electromagnetic guided waves on infinite periodic linear arrays of thin metallic conductors	

16.40 **Coffee break**

	<i>Spectral theory methods (III)</i> Chair: Tatiana Suslina	(Hall 311)
17.00	Boris Plamenevskii, Aleksandr Poretskii: Electromagnetic waveguides with several cylindrical ends and non-homogeneous filling	
17.20	Kolonitskii S.B.: Multiplicity of solutions of the Dirichlet problem with fractional p-Laplacian in spherical annulus	
17.40	Shafarevich A.I., Tsvetkova A.V.: The Laplacian on a homogeneous tree with general matching conditions. The wave equation	
18.00	Budylin A.M., Koptelov Ya.Yu., Levin S.B.: To the question of absolutely continuous spectrum eigenfunctions asymptotics for the case of three three-dimensional dissimilarly charged quantum particles scattering problem	
18.20	Rastegaev N.V.: On spectral asymptotics of the tensor product of operators with almost regular marginal asymptotics	
18.40		

19.30

Boat tour

	Localized waves (I) Chair: Pavel Petrov	(Hall 311)	Mathematical modelling in biology and medicine (I) (Hall 203) Chair: Grigory Panasenko
9.20	Garbuzov F.E., Gula I.A., Samsonov A.M., Semenov A.A.: The mathematical model of a longitudinal deformation wave propagation in multilayered structures		
9.40	Evgeniya V. Razueva, Eugeny G. Abramochkin: Integral representation of spiral light beams		Vladimir Kozlov: Age-structured population model on several patches
10.00	Irina A. So, Aleksei P. Kiselev, Alexandr B. Plachenov: Gaussian beam in a gradual transition from a waveguide to an antiwaveguide		Sergei A. Nazarov: Transmission conditions in a one-dimensional model of bifurcating arteria
10.20	Agnieszka Popiołek-Masajada, Jan Masajada, Łukasz Płociniczak: Optical vortex microscope-analytical model		German L. Zavorokhin: A fractal graph model of capillary type systems
10.40	Alexander S. Blagoveshchensky, Aleksei P. Kiselev: A relation between two simple localized solutions of the wave equation		Kovtanyuk A.E., Prokhorov I.V., Chebotarev A.Yu.: A method of diagnostics of layered biological tissues

11.00 **Coffee break**

	Localized waves (II) Chair: Alexey Popov	(Hall 311)	Mathematical modelling in biology and medicine (II) (Hall 203) Chair: Vladimir Kozlov
11.20	Liu T., Solntsev A.S., Neshev D.N., Sukhorukov A.A., Boes A., Mitchell A.: Bidirectional adiabatic light transfer in coupled waveguides		Grigory Panasenko, Konstantin Pileckas: Asymptotic analysis of the non-steady Navier–Stokes equations in thin structures
11.40	Kniazev M.A., Kozlov S.A., Dolgaleva K.: Noncollinear interaction of few-cycle optical waves in dispersive nonlinear medium		Neely S.T., Rasetshwane D.M.: Acoustic reflectance probes the inner ear
12.00	Shestakov P.Yu., Marchenko S.V.: Tunneling of Gaussian light pulses in chirped Bragg grating		V. Kozlov, U. Wennergren, S. Vakulenko: Hamiltonian methods for complex food webs
12.20	Kiselev A.D., Plutenko D.O.: Optical-force-induced dynamics of Mie scatterers in Laguerre–Gaussian beams and near-field structures		D. Grigoriev, S. Vakulenko, J. Reinitz, A. Weber: Genetic networks can learn fitness landscape

12.40 **Lunch at Baku restaurant**

	Water waves (I) Chair: Sergey Dobrokhotov	(Hall 311)	
15.20	Denisova I.V., Solonnikov V.A.: Solvability of interface problems for the compressible and incompressible Navier–Stokes equations near the equilibrium		
15.40	Nikolay Kuznetsov: On the Benjamin–Lighthill conjecture for water waves with vorticity		
16.00	Lyalinov M.A., Polyanskaya S.V.: Eigenoscillations in a water-wave problem for an infinite pool of special form		
16.20	N. Kuznetsov, O. Motygin: Freely floating bodies trapping time-harmonic waves in water covered by brash ice		

16.40 **Coffee break**

	Water waves (II) Chair: Nikolay Kuznetsov	(Hall 311)	
17.00	Bulatov V.V., Vladimirov Yu.V.: Uniform asymptotics of far internal gravity waves fields from pulsating sources		
17.20	Peregudin S.I., Kholodova S.E.: Long waves above the deformable bottom		
17.40	Vasily Maximov, Sergey Kshevetskii: Numerical simulation of internal waves generation by the flow over uneven bottom in the stratified liquid		
18.00	Filippenko G.V.: The energy flux analysis of the “shell” type waves in the infinite cylindrical shell filled with acoustical fluid		
18.20			

	<i>Mechanics of continuum (II)</i> (Hall 311) Chair: Michael Slawinski
9.20	Rushchitsky J.J., Yurchuk V.N.: Approximate approach to description of evolution of plane nonlinear elastic wave with different types of initial profile
9.40	Belyaev A.K., Lobachev A.M., Modestov V.S., Semenov A.S., Shtukin L.V., Tretyakov D.A., Polyanskiy V.A., Yakovlev Yu.A.: Propagation of sound waves in stressed elasto-plastic material
10.00	Abramian A.K., Vakulenko S.A.: Localized waves and modes in beams connecting to nonlinear elastic foundation
10.20	Gavrilov S.N., Mochalova Yu.A., Shishkina E.V.: Trapped modes of oscillation and localized buckling of a tectonic plate as a possible reason of an earthquake
10.40	Chebotarev A.Yu., Kovtanyuk A.E., Grenkin G.V., Prokhorov I.V.: Analysis of a diffraction problem for equations of complex heat transfer

11.00 **Coffee break**

	<i>Localized waves (III)</i> (Hall 311) Chair: Aleksey Kiselev
11.20	Delitsyn A.L.: Mode matching method for resonance scattering and mode localization
11.40	Eugeny G. Abramochkin, Evgeniya V. Razueva: Three-Airy beams and Fresnel transform
12.00	Kislin D.A., Kozlov S.A.: Self-action features of nonparaxial optical pulses in a medium with cubic nonlinearity
12.20	Puzyrev D.N., Kozlov S.A.: Diffraction spectrum change in few-cycle wave structure
12.40	Mamaikin M.S., Komissarova M.V., Zakharova I.G.: Propagation of light bullets in media with quadratic nonlinearity

13.00 **Lunch at Baku restaurant**

	<i>Asymptotic methods (I)</i> (Hall 311) Chair: Olivier Lafitte	<i>Acoustics (I)</i> (Hall 203) Chair: Mikhail Golub
15.00	A. Fedotov: On the reflection coefficient for the Stark–Wannier equation	
15.20	A. Fedotov: On difference equations with meromorphic coefficients	Trofimov M.Yu., Kozitskiy S.B., Zakharenko A.D.: Weak shear modulus in the acoustic mode parabolic equation
15.40	A. Fedotov, E. Shchetka: Complex WKB method for difference equations in unbounded domains	Petrov P.S., Petrova T.N.: On sound propagation in a shallow-water acoustical waveguide with variable bottom slope
16.00	Hanen Louati, Michel Rouleux: Semiclassical quantization rules for a periodic orbit of hyperbolic type	Gusev V.A.: Oblique incidence and propagation of intense acoustic beams in a fluid layer with bubbles
16.20	Sergeev S.A.: Formulas of van Vleck type for the Cauchy problem for differential and pseudodifferential equations in the one-dimensional case	Khusnutdinova K.R., Tranter M.R.: Modelling of nonlinear bulk strain waves in inhomogeneous layered bars

16.40 **Coffee break**

	<i>Asymptotic methods (II)</i> (Hall 311) Chair: Alexander Fedotov	<i>Acoustics (II)</i> (Hall 203) Chair: Mikhail Trofimov
17.00	Dobrokhotov S., Klevin A., Cardinali A., Tirozzi B.: High frequency Gaussian beams for cold plasma in a toroidal domain	Josue Roberto Hernandez Juarez: Effective methods of numerical estimates of acoustic fields in the stratified ocean generated by moving airborne sources
17.20	Vladislav V. Kravchenko: Efficient construction of transmutations and a new representation for solutions of Sturm–Liouville equations, uniform with respect to the spectral parameter	Golub M.V., Shpak A.N., Müller I., Fritzen C.-P.: Numerical simulation of Lamb wave excitation by the partially debonded rectangular strip-like piezoelectric actuator based on the integral approach and hp-FEM
17.40	Anikin A.Yu.: Non-commutative normal forms and inverse spectral problems	Zhuchkova M.G.: Wave propagation in a floating elastic plate with a periodic support

18.00	B. Despres, L.M. Imbert-Gerard, O. Lafitte: The hybrid resonance plasma of ions and electrons with imposed magnetic field understood through Bessel functions	Golub M.V., Fomenko S.I., Alexandrov A.A., Chen A.L., Wang Y.S., Zhang Ch.: Band-gaps and low transmission pass-bands in layered functionally graded piezoelectric phononic crystals
18.20	Il'yasov Kh.Kh., Nazaikinskii V.E., Sekerzh-Zen'kovich S.Ya., Tolchennikov A.A.: Asymptotic estimate of the 2011 tsunami source parameters on the basis of mareograms recorded by the South Iwate GPS Buoy and the DART 21418 station	
18.40 19.00	Pereskokov A.V.: New type of semiclassical asymptotics eigenstates near the boundaries of spectral clusters for Schrödinger-type operators	

8.15 **Departure of the buses from Mathematical Institute (Fontanka 27) to Petrodvorets**

9.00 **Posters**

Plenary talk — Chair: Pavel Belov

9.50 Alexander B. Khanikaev: *Reconfigurable and all-dielectric photonic topological insulators*

10.30 **Coffee Break & Posters**

S.A. Avdonin, A.S. Blagoveshchensky, A. Choque Rivero, V.S. Mikhaylov: Dynamical inverse problem for two-velocity systems on finite trees.

A.S. Blagoveshchensky, F.N. Podymaka: On the Cauchy problem for the wave equation with data on a non-spatially oriented plane.

Bagaev A.A., Pis'mak Yu.M.: The 0D quantum field theory: Multiple integrals via background field formalism.

Bratov V.A., Kaplunov J., Prikazchikov D.A.: On steady-state moving load problems for elastic half-space.

Budylin A.M., Levin S.B.: To the question of absolutely continuous spectrum eigenfunctions asymptotics justification for the case of three one-dimensional quantum particles scattering problem with the short-range pare potentials.

Tsu-Chi Chang, Ying-Yu Lai, Yu-Hsun Chou, Tien-Chang Lu: Lasing characteristics in a ZnO microcavity with designable shape fabricated by focused ion beam milling.

Eglit M.E., Yakubenko T.A., Yakubenko A.E.: Averaged equations of higher order for microinhomogeneous media.

Gerasimov D.A., Popov I.Yu., Popov A.I.: Resonant states for quantum ring with two infinite leads.

Glushkov E.V., Glushkova N.V., Miakishева O.A.: Guided waves and energy flows in the coupled structure: monopole source – acoustic liquid – immersed laminate plate.

Kuo-Bin Hong, Chun-Chieh Yang, Tien-Chang Lu: GaAs-based high index contrast photonic crystal surface emitting lasers.

Shen-Che Huang, Kuo-Bin Hong, Tien-Chang Lu, Sailing He: Design of hybrid realization of high-index contrast gratings reflectors on silicon-on-insulator platform.

Kozitskiy S.B., Trofimov M.Yu., Zakharenko A.D.: Boundary layers and normal mode parameters in a system with double-diffusive convection at large Rayleigh numbers.

Krasnov I.P.: On electromagnetic forces and works, connected with it.

Tien-Chang Lu: Wide-bandgap optoelectronics with micro/nano-scale architectures.

Makin V.S., Makin R.S., Pestov Yu.I.: Abnormal spatial nanogratings formation by long pulse durations laser radiation on condensed matter surfaces.

Evelina V. Prozorova: Influence of dispersion and structure molecules on time relaxation.

Rudnitsky A.S.: Phase-shifting exposure in photolithography using a Gaussian beam of an odd order.

Skvortsov D.S., Konobeeva N.N., Belonenko M.B.: Ultrashort optical pulses in germanene in the 3D case.

Smolkina M.O., Popov I.Y.: Nodal count theorem for quantum tree graphs with δ -coupling.

V. Zverzhcovsky, A. Bolotova, A. Kretushev, T. Vyshenskaya: Phase images of living lymphocytes and its quantitative parameters obtained from optical model.

Plenary talk — Chair: Aleksei Kiselev

12.20 S.Yu. Dobrokhotov: *Caustics, focal points, and tsunami wave problems*

13.00 **Lunch**

14.00 **Excursion**

18.00 **Picnic party at Peterhof forest**

Program of the Nanophotonics and Metamaterials Workshop

Monday, June 27, 2016

Holiday Inn, Moskovskiy pr., 97A

Plenary talks for WHOLE Lasers and Photonics Congress (see lpc.ifmo.ru)

11:00	Opening
11:20	Boris N. Chichkov: 3D laser printing of nanoparticles and living cells
11:55	Eli Yablonovitch: Why we need to replace the transistor and what would be the newly required material properties
12:30	Stefan Maier: Applications of plasmonic and dielectric nanoantennas in nano photonics
13:05	Mathias Fink: Wave control with space-time manipulations

13:40 **Lunch**

Metamaterials I, Chair: Ilya Shadrivov

14:50	<u>Pavel Ginzburg</u> , Andrey A. Bogdanov, Aliaksandra Ivinskaya, Alexander S. Shalin: Opto-mechanical metamaterials
15:20	B.I. Afinogenov, I.V. Soboleva, V.O. Bessonov, <u>A.A. Fedyanin</u> : Nanophotonics and optical trapping with surface electromagnetic waves
15:50	<u>Kruk S.S.</u> , Wong Z.J., Pshenay-Severin E., O'Brien K., Neshev D.N., Zhang X., Kivshar Yu.S.: Magnetic hyperbolic dispersion in optical metamaterials
16:05	<u>Zharova N.A.</u> , Zharov A.A., Zharov A.A., Jr.: Spectral diffusion of light in deformed (conformally squeezed and stretched) hyperbolic metamaterial

16:20 **Coffee break**

Metamaterials II, Chair: Pavel Ginzburg

16:35	Ilya Shadrivov: Liquid metamaterials
17:05	<u>Zharov A.A.</u> , Zharov A.A. Jr., Zharova N.A.: On the influence of the thermal disorientation of meta-atoms on electromagnetic properties of liquid metacrystals
17:20	<u>Andrea Colombi</u> , Richard V. Craster: Full control of the A_0 mode in a plate using a locally resonant metamaterial
17:35	<u>Lemoult F.</u> , Kaina N., Fink M., Lerosey G.: Locally resonant metamaterials beyond homogenization: subwavelength control of waves, negative refraction and other exotic phenomena

18:05 **Welcome party**

Nanophotonics and radiative heat transfer, Chair: Constantin Simovski

9:15	Shanhui Fan: Nanophotonics: controlling the flow of light and heat
10:00	<u>A.Yu. Petrov</u> , P.N. Dyachenko, S. Lang, E.W. Leib, J. do Rosario, S. Molesky, Z. Jacob, T. Krekeler, M. Ritter, M. Störmer, T. Vossmeier, H. Weller, G. Schneider, M. Eich: Tungsten based metamaterials and photonic crystals for selective thermal emitters
10:15	Stanislav Maslovski: Metamaterial thermal superemitters and superabsorbers
10:30	<u>Mirmoosa M.S.</u> , Simovski C.R.: Magnetic Purcell factor in polaritonic wire media
10:45	<u>Dyakov S.A.</u> , Gippius N.A., Dai J., Yan M., Qiu M.: Bistability effect in near-field radiative heat transfer

11:00 **Coffee break****Plasmonics and nanolasers**, Chair: Shanhui Fan

11:20	Ivanov A.V., Lagarkov A.N., <u>Sarychev A.K.</u> : Metal-dielectric substrates for high-sensitive chemical detection
11:50	Boubacar Kante: Bound state in the continuum nanophotonic laser
12:20	<u>Yu-Hsun Chou</u> , Tzy-Rong Lin, Chien-Chung Lin, Tien-Chang Lu: Ag based SPP nanolaser
12:35	<u>Benimetskiy F.A.</u> , Plekhanov A.I., Kuchyanov A.S., Parkhomenko R.G., Basova T.V.: Characterization of the structure and stimulated emission of spherical and cylindrical spasers
12:50	<u>Alexander A. Zharov Jr.</u> , Alexander A. Zharov, Nina A. Zharova: Manipulations with surface plasmon excitation via the scattering of light by a nanoparticle: scanning and switching

13:00 **Lunch at Baku restaurant****Quantum phenomena I**, Chair: Vladimir Drachev

14:55	K.V. Shulga, M.V. Fistul, I. Besedin, S. Butz, E. Il'ichev, <u>A.V. Ustinov</u> : Magnetically induced transparency of superconducting qubits array
15:25	Rachel Grange: Enhancing nonlinear optical signal in Perovskite nanostructures
15:55	<u>Yulin A.V.</u> , Shalin, A.S. Ginzburg, P.: Dynamics of the dissipative domain walls in the systems with time dependent drive
16:10	Altaisky M.V., <u>Kaputkina N.E.</u> , Krylov V.A.: Advantages of quantum dot arrays for non-algorithmic information processing by quantum neural networks
16:25	<u>Polischuk O.V.</u> , Popov V.V., Melnikova V.S.: Wide-aperture superabsorption of terahertz radiation by plasmonic periodic array of graphene nanoribbons

16:40 **Coffee break****Quantum phenomena II**, Chair: Alexey Ustinov

17:00	<u>Gorlach M.A.</u> , Poddubny A.N.: Two-photon excitations in nonlinear topological Su-Schrieffer-Heeger model
17:15	<u>Hasan M.</u> , Iorsh, I.V., I.A. Shelykh: Topological properties of the illuminated arrays of mesoscopic rings
17:30	Natalie Firsova: Quantum description of nanoantenna properties of a graphene membrane
17:45	Chul Kang, Inhee Maeng, <u>Chul Sik Kee</u> , Jung Woo Leem, Jae Su Yu, Tae Heon Kim, Jong Seok Lee: Strong emission of terahertz radiation from two dimensional arrays of nanostructures on Ge wafers
18:00	<u>Zagursky D.Yu.</u> , Trofimov V.A., Zakharova I.G.: Broadening of few-cycle THz pulse spectrum at electromagnetic energy absorption in multi-level medium
18:15	<u>M.A. Kaliteevski</u> , G. Pozina, E.V. Nikitina, D.V. Denisov, N.K. Polyakov, E.V. Pirogov, L.I. Gorai, K.A. Ivanov, A.Yu. Egorov, S.J. Clark: Coherent radiative mode in InAs-monolayer Bragg structures
18:30	<u>P. Chhantyal</u> , T. Birr, U. Zywiets, B.N. Chichkov, C. Reinhardt, S. Naskar, N. Bigall: Quantum nanoparticles doped waveguide for light propagation
18:45 19:00	<u>Mikhail V. Rybin</u> , Sergei F. Mingaleev, Mikhail F. Limonov, Yuri S. Kivshar: Purcell effect and Lamb shift for photonic modes

19.30

Boat tour

All-dielectric nanophotonics I, Chair: Nicolas Bonod

9:15	Yuri Kivshar: All-dielectric resonant nanophotonics and metasurfaces
10:00	<u>Kruk S.S.</u> , Hopkins B., Kravchenko I., Miroshnichenko A., Neshev D.N., Kivshar Yu.S.: Broadband all-dielectric metasurfaces for polarization control with near-unity efficiency
10:15	<u>Andryieuski A.</u> , Kuznetsova S.M., Odit M., Zhukovsky S.V., Kapitanova P., Kivshar Y.S., Lavrinenko A.V.: Water based tunable all-dielectric microwave metamaterials
10:30	<u>Golovan L.A.</u> , Kholodov M.M., Presnov D.E., Zaboltnov S.V., Efimova A.I., Timoshenko V.Yu., Neskromnaya A.V., Petrov G.I., Yakovlev V.V.: Nonlinear-optical anisotropy of silicon nanowire arrays
10:45	<u>Yue Sun</u> , A.E. Miroshnichenko, A.A. Sukhorukov: Opto-mechanical interactions in silicon nanoparticles

11:00 **Coffee break***All-dielectric nanophotonics II*, Chair: Maxim Scherbakov

11:20	<u>O. Mitrofanov</u> , I. Khromova, T. Siday, R.J. Thompson, I. Brener, T.S. Luk, J.L. Reno: THz near-field microscopy: application to spectroscopy of sub-wavelength resonators
11:50	<u>Shorokhov A.S.</u> , Melik-Gaykazyan E.V., Shcherbakov M.R., Fedyanin A.A., Smirnova D.A., Hopkins B., Chong K.E., Choi D.-Y., Miroshnichenko A.E., Neshev D.N., Kivshar Y.S.: Third-harmonic generation spectroscopy of magnetic Fano resonances in oligomers of silicon nanoparticles
12:05	<u>Melik-Gaykazyan E.V.</u> , Zubuyuk V.V., Shorokhov A.S., Kroychuk M.K., Shcherbakov M.R., Dolgova T.V., Fedyanin A.A., Choi D.-Y., Neshev D.N., Kivshar Y.S.: Unidirectional second-harmonic generation from silicon nanodisks
12:20	M.V. Rybin, D.S. Filonov, K.B. Samusev, P.A. Belov, Y.S. Kivshar, <u>M.F. Limonov</u> : Concept of phase transitions between photonic crystals and all-dielectric metamaterials
12:35	<u>Savelev R.S.</u> , Yulin A.V., Krasnok A.E.: Solitary waves in chains of silicon nanoparticles
12:50	<u>Kapitanova P.V.</u> , Song M., Belov P.A.: Wireless power transfer system based on high-index dielectric resonators

13:05 **Poster session and lunch at Baku restaurant***Wednesday Poster session on All-dielectric nanophotonics*

Baryshnikova K.V., Shalin A.S., Terekhov P.D., Khromova I.A., Evlyukhin A.B.: Nonradiating anapole modes of dielectric nanoparticles in microwave range.

M. Danaeifar, N. Granpayeh: Analysis of metasurface based structures by using equivalent conductivity method.

Dmitriev P.A., Baranov D.G., Milichko V.A., Makarov S.V., Mukhin I.S., Samusev A.K., Krasnok A.E., Belov P.A., Kivshar Y.S.: Enhancement of Raman scattering by magnetic resonances of crystalline silicon nanoparticles.

T. Fischer, U. Zywiets, T. Birr, A.B. Evlyukhin, C. Reinhardt, B.N. Chichkov: Controlling light on the nanoscale by ultra-flat particle lenses.

Friziuk K.S., Krasnok A.E., Petrov M.I.: Purcell enhanced Raman scattering from silicon nanoparticles.

Kolodny S.A., Yali Sun, Zuev D.A., Makarov S.V., Milichko V.A., Starikov S.V., Mukhin I.S., Morozov I.A., Belov P.A., Krasnok A.E.: Influence of fs-laser modification on coupling effects between hybrid nanoparticles.

Kovrov A.E., Kadochkin A.S., Mukhin I.S., Voroshilov P.M., Simovski C.R., Shalin A.S.: Optically asymmetric structures for transparent electrodes.

Lepeshov S.I., Zuev D.A., Makarov S.V., Krasnok A.E., Belov P.A.: Tuning of hybrid oligomers via fs-laser reshaping at nanoscale.

Li S.V., Baranov D.G., Krasnok A.E., Belov P.A.: Chiral near-field formation with all-dielectric nanoantennas.

Zhijie Ma, Stephen Hanham, Pablo Albella, Stefan Maier, Minghui Hong: Terahertz all-dielectric magnetic mirror metasurfaces.

Voytova T.A., Makarov S.V., Tsympkin A.N., Milichko V.A., Mukhin I.S., Yulin A.V., Putilin S.E., Baranov M.A., Krasnok A.E., Belov P.A.: Third harmonic generation from the silicon self-organized nanostructured surface.

Zograf G.P., Makarov S.V., Zuev D.A., Milichko V.A., Mukhin I.A., Krasnok A.E., Belov P.A.: Novel method for fabrication of high-index metal-dielectric core-shell nanoparticles for advanced optical applications.

All-dielectric nanophotonics III, Chair: Alexander Khanikaev

14:55	Nicolas Bonod: Silicon: an interesting material for optical antennas
15:25	<u>Tribelsky M.I.</u> , Miroshnichenko A.E.: Light scattering by particles with high refractive index
15:40	<u>Zuev D.A.</u> , Makarov S.V., Milichko V.A., Krasnok A.E., Belov P.A. Baranov D.G., Miroshnichenko A.E., Mukhin I.S., Morozov I.A.: Reversible and non-reversible tuning of hybrid optical nanoresonators
15:55	<u>Sinev I.S.</u> , Iorsh I.V., Bogdanov A.A., Permyakov D.V., Komissarenko F.E., Mukhin I.S., Samusev A.K., Miroshnichenko A.E., Kivshar Y.S.: Light scattering and localization by silicon nanoparticle on metal
16:10	<u>Babicheva V.E.</u> , Petrov M.I., Baryshnikova K.V., Belov P.A.: Substrate-mediated antireflective properties of silicon nanoparticle array
16:25	Friziuk K.S., Milichko V.A., <u>Petrov M.I.</u> , Zuev D.A., A.V. Baranov, M.A. Baranov, Mukhin I.S., Makarov S.V., Krasnok A.E., Belov P.A.: Raman scattering governed by dark resonant modes in silicon nanoparticles

16:40 **Coffee break***Metasurfaces*, Chair: Yuri Kivshar

17:00	<u>U. Zywietz</u> , T. Fischer, T. Birr, A.B. Evlyukhin, C. Reinhardt, B.N. Chichkov: Laser printed nanoparticles to control light on the nanoscale
17:30	<u>Simovski C.R.</u> , Albooyeh M., Tretyakov S.A.: Electromagnetic characterization of p-m metasurfaces
18:00	J.D. Baena, <u>S.B. Glybovski</u> , J.P. del Risco, A.P. Slobzhanyuk, P.A. Belov: Experimental characterization of microwave self-complementary metasurfaces for linear-to-circular polarization transform
18:15	<u>Kondratov A.V.</u> , Gorkunov M.V., Darinskii A.N.: Optical chirality of 2D- and 3D-chiral metal hole arrays
18:30	<u>Aliaksandra Ivinskaya</u> , Pavel Ginzburg, Alexander S. Shalin: Plasmonic substrates for optical tweezers
18:45	<u>V.G. Kravets</u> , F. Schedin, O.P. Marshall, A.N. Grigorenko: Nanoscale conductive filaments and quantized optical properties of plasmonic nanoarrays
19:00	

Nanophotonics, Chair: Oleg Mitrofanov

9:15	<u>Shcherbakov, M.R.</u> , Vabishchevich, P.P., Shorokhov, A.S., Fedyanin, A.A., Chong, K.E., Choi, D.-Y., Staude, I., Miroshnichenko, A.E., Neshev, D.N., Kivshar, Yu.S.: Ultrafast semiconductor metasurfaces: all-optical switching beyond free carriers
9:45	Vladimir P. Drachev: Plasmonics from deep UV to far IR
10:15	<u>Sarychev A.K.</u> , Vergeles S.S., Tartakovsky G.: Transducer of light to longitudinal electric field in sub-wavelength volume
10:30	<u>Doskolovich L.L.</u> , Bykov D.A., Bezus E.A.: Optical implementation of differential operators with resonant nanophotonic structures

11:00 **Coffee break****Multilayered structures**, Chair: Leonid Doskolovich

11:20	<u>Kononchuk R.</u> , Smith K., Chabanov A.A., Makri E., Kottos T., Vitebskiy I.: Hypersensitive transport in asymmetric photonic layered media
11:35	<u>Popov V.V.</u> , Novitsky A.V.: Bianisotropic effective medium for subwavelength multilayers
11:50	Tobias Birr: Time resolved ultrafast surface plasmon-polaritons
12:05	<u>Ladutenko K.S.</u> , Belov P.A., Peña O., Mirzaei A., Miroshnichenko A.E., Shadrivov I.V.: Efficient absorption of light by nanoparticles designed by a stochastic optimizer
12:20	<u>Alekseev G.V.</u> , Lobanov A.V., Larkina O.S.: Theoretical analysis of material body cloaking problems using the optimization method
12:35	Miniaci M., <u>Krushynska A.O.</u> , Bosia F., Pugno N.M.: Large-scale mechanical metamaterials for seismic wave shielding
12:50	Yuliya Spivak: Numerical analysis of 2D approximate cloaking problem with using M layered shell

13:05 **Poster session and lunch at Baku restaurant****Thursday Poster session on Radioengineering**

Butko L.N., Anzulevich A.P., Pavlov D.: Focusing of electromagnetic waves through the wired structure.

V.S. Butylkin, Yu.N. Kazantsev, G.A. Kraftmakher, V.P. Mal'tsev: Voltage controlled nonreciprocal metastructure ferrite/array of twice split rings with varactors.

Dadoenkova Yu.S., Bentivegna F.F.L., Dadoenkova N.N., Lyubchanskii I.L., Lee Y.P.: Goos-Hänchen shift of a light beam upon reflection from a magnetic film on a non-magnetic substrate: effect of misfit strain.

G.A. Kraftmakher, V.S. Butylkin, Yu.N. Kazantsev, V.P. Mal'tsev: Identifying microwave magnetic response of chiral elements through reflection for new applications.

I. Munina, P. Turalchuk, E. Kunakovskaya, I. Vendik, M. Derkach: Estimation of attenuation of EM waves propagating through interface biological tissue/free space.

A. Nikulin, S. Glybovski, I. Melchakova, P. Belov, B. Larrat, E. Georget, S. Enoch, R. Abdeddaim: Tuning and matching of antennas for preclinical MRI with metamaterial structures.

Dmitrii Pavlov, Leonid Butko, Anton Anzulevich: Refraction angle of electromagnetic wave on a wired structure prism.

A. Rusakov, Irina B. Vendik, K. Kanjanasit, J.Hong, D.Filonov: Ultra-wideband antenna with single- and dual-band notched characteristics based on electric ring resonator.

Treviño C., Kononchuk R., Smith K., Vitebskiy I., Chabanov A.A.: Induced transmission and enhanced Faraday rotation in ferromagnetic thin films.

Pavel Turalchuk, Irina Munina, Vladimir Yashenko, Orest Vendik: Two-mode loop antenna with doubled gain.

D.V. Zhirihin, S.B. Glybovski, P.A. Belov, C.R. Simovski, S.A. Tretyakov: A perfectly absorbing mushroom metasurface for two arbitrary angles of incidence.

Photonic crystals, Chair: Mikhail Limonov

14:55	Sylgacheva D.A., <u>Khokhlov N.E.</u> , Kalish A.N., Belotelov V.I., Dagesyan S.A., Shaposhnikov A.N., Berzhansky V.N.: Magneto-optical nonreciprocity of the waveguide modes of photonic crystals in transverse magnetic field
15:10	Evgeniy Shkondin, Flemming Jensen, Osamu Takayama, Pernille Voss Larsen, Mikkel Dysseholm Mar, Radu Malureanu, <u>Andrei V. Lavrinenko</u> : Advances in ALD fabrication of 1D and 2D arrays
15:25	Mikhail Lapine: On the convergence from finite size and discrete structure towards homogeneous metamaterials
15:40	<u>Mikhail V. Rybin</u> , Mikhail F. Limonov: Complex photonic band diagram and PT-symmetry in periodic media
15:55	<u>Dolganov P.V.</u> , Dolganov V.K.: Optical properties, density of photonic states and dispersion of light in liquid-crystalline photonic crystals
16:10	<u>Dadoenkova Yu.S.</u> , Bentivegna F.F.L., Dadoenkova N.N., Lyubchanskii I.L., Petrov R.V., Bichurin M.I.: Electric and magnetic tuning of the Goos-Hänchen shift of a light beam upon reflection from a magneto-electric heterostructure
16:25	<u>Dadoenkova N.N.</u> , Dadoenkova Yu.S., Panyaev I.S., Rozhleys I.A., Lyubchanskii I.L., Krawczyk M., Sannikov D.G.: Complex photonic structure based on magneto-optic waveguide and photonic crystal

16:40 **Coffee break****Radioengineering**, Chair: Stanislav Maslovski

17:00	<u>Galyamin S.N.</u> , Tyukhtin A.V., Peshkov A.A.: Electromagnetic field of a charge flying into chiral isotropic medium
17:15	<u>Hartmann M.</u> , Wohler M., Schühler M., Weisgerber L., Thielecke J., Heuberger A.: A Dual frequency antenna for RSSI-based DOA estimation: from theory to prototype
17:30	<u>Irina Vendik</u> , Orest Vendik, Vladimir Pleskachev, Vitaly Kirillov: Modeling and experimental investigations of on-body electromagnetic wave propagation
17:45	<u>Rustomji K.</u> , Abdeddaim R., Kuhlmeier B., Enoch S.: Measurements of polarisation dependent Purcell Factor in microwave metamaterials
18:00	<u>Kosulnikov S.Yu.</u> , Vovchuk D.A., Filonov D.S., Glybovski S.B., Mirmoosa M.S., Nefedov I.S., Tretyakov S.A., Belov P.A., Simovski C.R.: Wire media for molding electromagnetic fields
18:15	<u>Nefedov I.S.</u> , Boardman A.D.: Surface and leaky waves in a waveguide, filled with graphene-based hyperbolic metamaterial
18:30	<u>A.A. Hurshkainen</u> , S.B. Glybovski, I.V. Melchakova, I.J. Voogt, C.A.T. van den Berg, A.J.E. Raaijmakers: Decoupling of antennas with wire metasurface structures: MRI applications
18:45 19:00	Shchelokova, A.V., <u>Melchakova I.V.</u> , Belov, P.A., Slobozhanyuk, A.P.: Metasurfaces for magnetic resonance imaging

8.15 **Departure of the buses from Mathematical Institute (Fontanka 27) to Petrodvorets**

9.00 **Posters**

Plenary talk — Chair: Pavel Belov

9.50 Alexander B. Khanikaev: *Reconfigurable and all-dielectric photonic topological insulators*

10.30 **Coffee Break & Posters on Nanophotonics and Metamaterials**

I.Yu. Chestnov, M.V. Charukhchyan, A.P. Alodjants, X. Ma, O.A. Egorov: Nonlinear dynamics of coherent exciton-polaritons in a periodic potential.

E.D. Chubchev, A.A. Pukhov, A.P. Vinogradov: Applicability of two-level approximation describing dynamics of spaser with four-level metamolecule.

D.A. Baranov, R. Malureanu, O. Takayma, A.K. Samusev, I.V. Iorsh, A.A. Bogdanov, A.V. Lavrinenko: Attenuated total reflection spectroscopy of hybrid localized optical surface states in anisotropic metasurface.

Bair Damdinov, Anton Demin, Tutyana Dembelova: Viscoelastic properties of colloids.

V.I. Demidchik, R.V. Kornev: The influence of non-uniformly scaled conducting inclusions on range properties of a layer of bi-isotropic composite material.

Dolganov P.V., Dolganov V.K., Gordeev S.O.: Local optical anisotropy, diffraction and orientational order parameter in cholesteric photonic crystals.

Fomenko S.I., Aleksandrov A.A.: Simulation and analysis of wave propagation in periodic and aperiodic composites.

K.A. Ivanov, E.I. Girshova, S.J. Clark, M.A. Kaliteevski, A.J. Gallant: Anharmonic Bloch oscillations in biased artificial and natural superlattices.

Golenitskii K.U., Bogdanov A.A.: Tamm–Langmuir surface waves.

Grachev A.A., Sadovnikov A.V., Beginin E.N., Sharaevskii Yu.P., Sheshukova S.E: Discrete diffraction and refraction of spin waves in magnonic waveguide lattice.

M.A. Kaliteevski, V.A. Mazlin, K.A. Ivanov, A.R. Gubaydullin: Quantization of electromagnetic field in an inhomogeneous medium based on scattering matrix formalism (S-quantization).

Konobeeva N.N., Ten A.V., Belonenko M.B: About dipole moment in doped carbon nanotubes.

K.L. Koshelev, A.A. Bogdanov: Slow light in nonlocal anisotropic metamaterials.

Mamonov E.A., Kolmychek I.A., Maydykovskiy A.I., Magnitskiy S.A., Murzina T.V.: Chirality of planar G-shaped metamaterials evidenced by polarization-resolved SHG microscopy.

Merzlikin A.M., Puzko R.S.: Self-averaging of effective refractive index in layered system.

Mikhail Omelyanovich, Sergey Makarov, Valentin Milichko, Constantin Simovski: Full broadband absorption of perovskite solar cells with plasmonic nanoparticles.

S. Pasechnik, D. Shmeliova, A.Chopic, Denis Semerenko, Semen Charlamov, Alexander Dubtsov: Electrically controlled porous polymer films filled with liquid crystals: new possibilities for photonics and THz applications.

Sadrieva Z.F., Sinev I.S., Samusev A.K., Iorsh I.V., Bogdanov A.A., Lavrinenko A.V.: Optical bound state in the continuum in one-dimensional photonic crystal slab: theory and experiment.

K.B. Samusev, A.D. Sinelnik, M.V. Rybin, S.Y. Lukashenko, Y.S. Kivshar, M.F. Limonov: Transition from photonic crystals to metasurfaces in optical Laue diffraction.

Shishkov V.Yu., Andrianov E.S., Pukhov A.A., Vinogradov A.P.: Canonical quantization of surface plasmon polaritons.

Ivan A. Starkov, Alexander S. Starkov: Application of the matrix homogenization method to the Maxwell equations.

A.A. Starovoytov, T.A. Vartanyan, V.I. Belotitskii, Yu.A. Kumzerov, A.A. Sysoeva, N.O. Alexeeva, V.G. Solovyev: Emission of cyanine dye embedded in nanopores of anodic alumina matrix.

Vavulin D.N., Sukhorukov A.A.: Generation of photon pairs through spontaneous four-wave mixing in nonlinear waveguides with the account of losses.

Yermakov O.Y., Bogdanov A.A., Iorsh I.V., Lavrinenko A.V.: New degrees of freedom of spin-optonics implemented by using hybrid surface waves localized at hyperbolic metasurface.

Plenary talk — Chair: Aleksei Kiselev

12.20 S.Yu. Dobrokhotov: *Caustics, focal points, and tsunami wave problems*

13.00 **Lunch**

14.00 **Excursion**

18.00 **Picnic party at Peterhof forest**

PDMI area map



Map of the picnic area

