



Detailed Program

Section A – Chemistry

October, 2 (Wednesday)

Oral Section 12.40 – 14.00 (aud. 229)

1. **Golikova Aleksandra, Toikka Maria, Trofimova Maya** – “Solubility and liquid-liquid equilibrium in quaternary reacting system ethanol - ethyl acetate - acetic acid - water at 30 °C and 40 °C”. (*Saint-Petersburg State University, St. Petersburg*)
2. **Savinov Sergey** – “Optical digital spectrography with arc discharge in microelement analysis of liquid samples”. (*Saint-Petersburg State University, St. Petersburg*)

Poster Section 15.00 – 16.30 (hall, 2-nd floor, Faculty of Physics)

- A-01. Araslanova Svetlana** – “Studying the influence of reducing agent in the process of laser-induced deposition of copper from solution”. (*Saint-Petersburg State University, St. Petersburg*)
- A-02. Belyaev Andrey** – “Synthesis, characterization and photophysical properties of luminescent bimetallic Au(I) complexes with 9,10-bis(diphenylphosphino)anthracene”. (*Saint-Petersburg State University, St. Petersburg*)
- A-03. Budalyaeva Rinata** – “Optimization of sample preparation methods nails for digital spectrographic trace element analysis”. (*Saint-Petersburg State University, St. Petersburg*)
- A-04. Gorshkova Ksenia** – “Optimization of the solution to obtain a microthermocouple by the method of LCLD”. (*Saint-Petersburg State University, St. Petersburg*)
- A-05. Kireev Alexey** – “Surface enhanced raman scattering of brilliant green on Au-Ag-C nanoparticles”. (*Saint-Petersburg State University, St. Petersburg*)
- A-06. Kisel Kristina** – “Homo- and bridging heterometallic complexes of rhenium with transition metals: synthesis and structure characterization”. (*Saint-Petersburg State University, St. Petersburg*)
- A-07. Mitrofanov Andrey** – “Microwave synthesis of ultrafine alumina powder”. (*Saint-Petersburg State University, St. Petersburg*)
- A-08. Olshin Pavel** – “Composition influence on the lithium-phosphate glasses structure”. (*Saint-Petersburg State University, St. Petersburg*)
- A-09. Solomatina Anastasiya** – “Switching on luminescence of a platinum(II) complex by conjugation with human serum albumin”. (*Saint-Petersburg State University, St. Petersburg*)
- A-10. Timofeeva Tatyana** – “Study Digital atomic emission spectrographic determination of trace contaminants in cosmetic shadows”. (*Saint-Petersburg State University, St. Petersburg*)
- A-11. Titova Anna** – “Digital atomic emission spectrographic analysis of vine”. (*Saint-Petersburg State University, St. Petersburg*)
- A-12. Vasileva Anna** – “Adsorption properties of chalcogenide films to protein or DNA for the biochip application”. (*Saint-Petersburg State University, St. Petersburg*)
- A-13. Zhigley Elvira** – “Development of method for determining the reaction products of organic compounds occurring in laser-induced deposition of copper from solution”. (*Saint-Petersburg State University, St. Petersburg*)

Section B – Geo- and Astrophysics

October, 2 (Wednesday)

Oral Section 12.30 – 14.00 (aud. 227)

1. **Abakumov Ivan** – “Time-lapse anomalies reconstruction via joint inversion of direct waves and reflection images: application to crosswell data”. (*Saint-Petersburg State University, St. Petersburg*)
2. **Abakumov Ivan** – “Extension of the i-CRS stacking operator for the 3D”. (*Saint-Petersburg State University, St. Petersburg*)
3. **Korsunov Igor** – “Evolution of isolated OB associations in the Milky Way”. (*Saint-Petersburg State University, St. Petersburg*)
4. **Savchenko Sergey** – “Spiral structure and bulge/disc decomposition analysis”. (*Saint-Petersburg State University, St. Petersburg*)

Poster Section 15.00 – 16.30 (hall, 2-nd floor, Faculty of Physics)

- B-01. Korolkova Olga** – “Multiwavelength evolution of the solar complex activity”. (*Saint-Petersburg State University, St. Petersburg*)

Section C – Mathematics and Mechanics

October, 3 (Thursday)

Oral Section 10.30– 12.00 part I (aud. B-04)
12.40– 14.00 part II (aud. B-04)

1. **Darovskaya Ksenia** – “On the solvability of ordinary differential equations with integral conditions”. (*Peoples' Friendship University of Russia*)
2. **Kashchenko Aleksandra** “Stability of CW Solutions of Fourier Domain Mode Locked Laser”. (*Yaroslavl Demidov State University*)
3. **Koeppen Thomas** – “Design and Control Strategies of Anti –Lock Bracking Systems”. (*University of Cologne*)
4. **Li Li** – “Limit cycles in economics”. (*University of Cologne*)
5. **Mashkin Timur** – “Scattering of Solitons for Coupled Wave-Particle Equations”. (*University of Cologne*)
6. **Moryakova Alena** – “Analysis of the oscillatory regimes of the second-order nonlinear delay differential equation”. (*Yaroslavl Demidov State University*)
7. **Neverova Daria** – “Regularity of solutions to functional differential equations”. (*Peoples' Friendship University of Russia*)
8. **Preobrazhenskaia Margarita** – “The research of attractors of quasi-linear Korteweg-de Vries equation”. (*Yaroslavl Demidov State University*)
9. **Stojanoska Irena** – “Geometric Sparsity and Structured Compressed Sensing”. (*Technische Universität Berlin*)
10. **Tasevich Alla** – “On strongly elliptic functional–differential equation with orthotropic contractions”. (*Peoples' Friendship University of Russia*)

Section D – Solid State Physics

October, 3 (Wednesday)

Oral Section 12.40 – 14.00 part I (aud. B-04)

15.00 – 16.30 part II (aud. B-04)

1. **Borisov Evgenii** - “Plasmon-LO-phonon modes in Gallium Nitride Epitaxial layers doped with Silicon”. (*Saint-Petersburg State University*)
2. **Grebenyuk Georgy** - “Synthesis of ultrathin magnetic films of transition metals silicides (Fe, Co, Mn) on silicon surface”. (*Ioffe Physical Technical Institute*)
3. **Konyushenko Marina** - “X-ray reflectometry study of Al₂O₃-based heterostructures” (*Saint-Petersburg State University*)
4. **Romanenko Konstantin** - “Dynamical Diffraction of Light in Opal-like Photonic Crystals: 1D Spatially Periodic Structure Approximation” (*Saint-Petersburg State University*)
5. **Rusinova Mariia** - “Spin-orbit coupling induced electronic structure of 3ML Au/W(110) and 3ML Au/Mo(110) surfaces”. (*Saint-Petersburg State University*)
6. **Telyatnik Rodion** - “Determination of misfit stresses, curvatures, defects and thermomechanical properties of Si-SiC(111)-AlN(0001)-AlGaN thin-film heterostructure. Ab initio, FEM and experimental studies” (*Institute of Problems of Mechanical Engineering of RAS*)
7. **Zagrebina Elena** - “Characterization of pristine and fluorinated nanodiamonds by X-ray absorption spectroscopy.” (*Saint-Petersburg State University*)

Poster Section 17.00 – 18.00 (hall, 2-nd floor, Faculty of Physics)

- D-01. Bekasov Vladimir** - “Investigation of electronic properties of the Si – low-melting salt interfaces”. (*Saint-Petersburg State University*)
- D-02. Bokai Kirill** - “Growth of graphene with boron impurities and its electronic structure”. (*Saint-Petersburg State University*)
- D-03. Medvedev Oleg** - “Optical and electric properties of GaN crystals grown by HVPE”. (*Saint-Petersburg State University*)
- D-04. Mikheenko Evgenii** - “DFT modeling of the MoS₂ nanoparticles”. (*Saint-Petersburg State University*)
- D-05. Milov Igor** - “X-ray transitions in single Mg, Mg⁺⁺ and in MgO crystal”. (*Saint-Petersburg State University*)
- D-06. Nikolaev Filipp** - “Structure and morphology of selenium containing nanosystems”. (*Saint-Petersburg State University*)
- D-07. Ozhmegov Egor** - “Interionic luminescence Mn²⁺ in heterostructures with ultrathin layers MnTe”. (*Saint-Petersburg State University*)
- D-08. Pudikov Dmitrii** - “Synthesis and electronic structure of graphene fabricated with the solid-state carbon source on the thin film Ni (111) adsorbed on the single crystal graphite (HOPG)”. (*Saint-Petersburg State University*)
- D-09. Shlyakhov Ilya** - “Combined DLTS/EBIC study of dislocation related electronic states in plastically deformed silicon”. (*Saint-Petersburg State University*)
- D-10. Zashikhin Georgy** - “The comparison of different methods of graphene synthesis”. (*Saint-Petersburg State University*)

D-11. Zharinov Vyacheslav - “Quantum conductance along dislocation networks produced by silicon wafer bonding”. (*Saint-Petersburg State University*)

Section E – Applied Physics

September, 30 (Monday)

Oral Section 12.40 – 14.00 (*aud. 227*)

1. **Merzlaya Anastasia** - “Migration of the radionuclides from nuclear accidents in the forest ecosystem”. (*Saint-Petersburg State University*)

Poster Section 15.00 – 16.30 (*hall, 2-nd floor, Faculty of Physics*)

E-01. Antipov Makhail - “Poly(methyl methacrylate) modified by zirconium dioxide nanoparticles”. (*Saint-Petersburg State University*)

E-02. Belyaev Vladimir - “The research into the conductivity of a loaded piezoelectric transducer”. (*Saint-Petersburg State University*)

E-03. Thomas Papke - “Structuring of photosensitive polymer films by Surface Plasmon near fields”. (*University of Potsdam*)

Section F – Optics and Spectroscopy

October, 2 (Wednesday)

Oral Section 12.40 – 14.00 part I (aud. B-02)

15.00 – 16.30 part II (aud. B-02)

1. **Arkhipov Rostislav** - “Theoretical Analysis of Mode-Locked Semiconductor Lasers with External Periodic Forcing”. (*Weierstrass Insitute/Saint-Petersburg State University*)
2. **Arkhipov Rostislav** - “Transient Cherenkov Radiation from a Periodic Resonant Medium Excited by an Ultrashort Laser Pulse Propagating at Superluminal Velocity”. (*Weierstrass Insitute/Saint-Petersburg State University*)
3. **Borovykh Stanislav** - “Computer simulation of two charged particles dynamics on a circle”. (*Saint Petersburg State University*)
4. **Kolesnikov Ilya** - “Luminescence of Y₃Al₅O₁₂:Eu³⁺ nanoparticles prepared by modified Pechini method”. (*Saint Petersburg State University*)
5. **Petrova Olga** - “Study of the unique copper–constainig biomineral from endemic Baikal Lake sponges by synchrotron radiation”. (*Komi science center of RAN*)
6. **Savinov Sergey** - “Study of instrument function of optical digital spectrograph”. (*Saint Petersburg State University*)
7. **Zalialiutdinov Timur** - “Two-photon transitions with cascades and two-photon level widths”. (*Saint Petersburg State University*)

Poster Section 17.00 – 18.00 (hall, 2-nd floor, Faculty of Physics)

- F-01. Andrianova Yana** - “The effect of electrolytes on geletion processes in aqueous cysteine–silver nitrate based solutions”. (*Tver State University*)
- F-02. Kalanov Dmitry** - “Resonance radiation trapping in free-burning arc inhomogeneous plasma”. (*Saint Petersburg State University*)
- F-03. Korshunov Artem** - “Study of the ‘memory effect’ at breakdown in argon and argon-nitrogen mixture”. (*Saint Petersburg State University*)
- F-04. Oleinik Yuriy** - “Experimental study of electrical breakdown in a long discharge tube”. (*Saint Petersburg State University*)
- F-05. Shaytanov Leonid** - “Effect of F-doping on photocatalytic activity of titania”. (*Saint Petersburg State University*)
- F-06. Sitnikova Vera** - “Effect of the shape and orientation of filler particles in polymer materials on scattering studied by IR spectroscopy”. (*Tver State University*)
- F-07. Solovev Ivan** - “Design of a high definition monochromator”. (*Saint Petersburg State University*)
- F-08. Zhukov Alexey** - “Verification of two independent models for spectroscopic determination of the H₂, HD, D₂ partial densities in non-equilibrium hydrogen-deuterium plasmas”. (*Saint Petersburg State University*)

Section G – Theoretical, Mathematical and Computational Physics

September, 30 (Monday)

Oral Section 12.40 – 14.00 part I, (aud. B-04)

15.00 – 16.30 part II, (aud. B-04)

1. **Andronov Evgeny** - “Long-range rapidly correlations in a two-component model”. (*Saint-Petersburg State University*)
2. **Batalov Lev** - “The renormalization of the spin-wave spectrum in three-dimensional antiferromagnetic with dipolar interaction”. (*Saint-Petersburg State University*)
3. **Batalova Anastasiya** - “Some aspects of fractional derivatives application in biophysical models”. (*Saint-Petersburg State University*)
4. **Bozhevolnov Astislav** - “Streaking of near-threshold photoelectrons produced in laser-assisted attosecond photoionization”. (*Saint-Petersburg State University*)
5. **Gulitskiy Nikolay** - “Renormalization group analysis of the inertial-range behaviour of a passive vector field in a random shear flow”. (*Saint-Petersburg State University*)
6. **Maltsev Ilia** - “Calculations of excitation and pair-creation probabilities in low-energy $U92^+ - U91^+(1s)$ collisions in the monopole approximation”. (*Saint-Petersburg State University*)
7. **Martemyanov Andrey** - “Spectral properties of quasi-periodic Schrodinger equation”. (*Saint-Petersburg State University*)
8. **Neverov Dmitry** - “Difference in using rapidity and pseudo-rapidity windows for $\langle PT \rangle$:Nch correlations in pp collisions with PYTHIA8 event generator”. (*Saint-Petersburg State University*)
9. **Pismenskiy Artem** - “Calculation of self-energy diagrams in the ϕ^4 theory with help of recurrence relations”. (*Saint-Petersburg State University*)
10. **Rozenbaum Efim** - “Dual kinetic balance method in finite-basis-set expansions for axially symmetric Dirac equation”. (*Saint-Petersburg State University*)
11. **Rusov Aleksey** - “ $B \rightarrow \pi$ transition form factors”. (*Yaroslavl Demidov State University*)
12. **Sosnova Ksenia** - “Exterior complex scaling method in TDDFT: HHG of Ar atoms in strong laser fields”. (*Saint-Petersburg State University*)

Poster Section 18.00 – 18.30 (hall, 2-nd floor, Faculty of Physics)

- G-01. Belyaev Vasilii** - “Equation of state of high density matter in the model of Nambu-Jona-Lasinio”. (*Yaroslavl Demidov State University*)
- G-02. Ivanova Irina** - “Solution of the time-dependent Dirac equation for the $U91+(1s) - U92+$ collision with the partial wave expansion”. (*Saint-Petersburg State University*)
- G-03. Kakin Polina** - “Splint in case of special embeddings”. (*Saint-Petersburg State University*)
- G-04. Kalagov Georgii**, “BV Higher order asymptotics and critical exponents in the ϕ^3 -theory (Saint Petersburg State University).
- G-05. Katanaeva Alisa** - “Effective models for the radial Regge trajectories”. (*Saint-Petersburg State University*)

G-06. Oleneva Yulia - “Change of a chemical composition of an herb of *Achillea millefolium* under the influence of an anthropogenic factor”. (*Tver State University*)

G-07. Raev Dmitriy - “Computersimulation of self–association processes in Gemini and Monomeric Surfactant solutions”. (*Saint-Petersburg State University*)

G-08. Semenova Elizaveta - “Canonical formalism for embedding theory with partial gauge fixing”. (*Saint-Petersburg State University*)

G-09. Tuzov Nikolay - “Investigation of stability of solutions of 5-dimensional cosmological model”. (*Saint-Petersburg State University*)

Section H – Biophysics

October, 3 (Thursday)

Oral Section 10.30 – 12.00 (aud. 225)

1. **Kozhenkov Pavel** - “Models of DNA Interaction With Ruthenium Compounds Containing Biological Active Ligands”. (*Saint-Petersburg State University*)
2. **Parr Marina** - “UVC-induced DNA destructions in vitro”. (*Saint-Petersburg State University*)
3. **Varshavskiy Mikhail** - “DNA-Metallic Nanoparticles Systems” (*Saint-Petersburg State University*)

Poster Section 12.40 – 14.00 (hall, 2-nd floor, Faculty of Physics)

- H-01. Akhmadeeva Liliya** - “Conformation and molecular characteristics of poly-2-acrylamido-2-methyl-propane tsetilammoniya in solution”. (*Saint-Petersburg State University*)
- H-02. Alekseev Georgii** - “Study of DNA interaction with the metallized diphtalocyanines”. (*Saint-Petersburg State University*)
- H-03. Sakhatskiy Aleksandr** - “Dielectric properties of liquid crystal complex on the base of Ytterbium”. (*Saint-Petersburg State University*)
- H-04. Ushkov Pavel** - “DNA Interaction with divalent cations in the presence of EDTA”. (*Saint-Petersburg State University*)

Section I – Resonance Phenomena in Condensed Matter

September, 30 (Monday)

Oral Section 12.40 – 14.00 (aud. 229)

1. **Klyukin Konstantin** - “Ab initio simulation of hydrogen diffusion paths in magnesium dihydride”. (Saint-Petersburg State University)
2. **Kupriyanov Paul** - “A model of behavior of nuclear magnetization in alternating magnetic field of low frequency”. (Saint-Petersburg State University)
3. **Rabdano Sevastyan** - “Temperature features of hydrophobic and hydrophilic interactions”. (Saint-Petersburg State University)
4. **Tupikina Elena** - “Structure of hydrogen bonded complexes formed by strong CH-acids: NMR, IR, X-Ray and QM investigation of 1,1-dinitroethane”. (Saint-Petersburg State University)

Poster Section 15.00– 16.30 (hall, 2-nd floor, Faculty of Physics)

- I-01. Bubnov Philipp** - “Behavior of Sodium Lauroyl Sarcosinate with Added Cosurfactants in Aqueous Solution”. (Saint-Petersburg State University)
- I-02. Bystrov Sergey** - “Analysis of translational diffusion in binary system glycerol–heavy water by NMR”. (Saint-Petersburg State University)
- I-03. Dmitriev Roman** - “Investigation of the 1,5Tmagnetic field inhomogeneity with dimensional projections of the phantoms”. (Saint-Petersburg State University)
- I-04. Ivlieva Valeriya** - “Hydrogen site occupancy in the $Ti_{1-x}Nb_xH_y$ hydrides by protonNMR”. (Saint-Petersburg State University)
- I-05. Klues Michael** - “Comparative experimental and theoretical NEXAFS-study of Acenes and Azaacenes”. (Philipps University of Marburg)
- I-06. Kultaeva Anastasia** - “Study of radiation defects in paleontological objects by electron paramagnetic resonance”. (Saint-Petersburg State University)