INTERNATIONAL INTERGOVERNMENTAL ORGANIZATION
JOINT INSTITUTE FOR NUCLEAR RESEARCH

BOGOLIUBOV LABORATORY OF THEORETICAL PHYSICS
EXPLORING THE LAWS OF NATURE FROM QUANTUM TO COSMOS

SMHS -2025

Dubna

List of Participants

Plenary Talks

A. Golubov	**Full counting statistics for unconventional superconductor junctions** *"Moscow Institute of Physics and Technology (MIPT)"*	A. Mel'nikov	**Interplay of superconductivity and altermagnetism in hybrid systems** *"Moscow Institute of Physics and Technology (MIPT)"*
I. Burmistrov	**Bulk-edge correspondence at the spin-to-integer quantum Hall effect crossover in topological superconductors** *"L.D. Landau Institute for Theoretical Physics"*	 Y. Shukrinov	**Peculiarities of mutual influence of superconductivity and magnetism in Josephson structures with ferromagnet.** *"JINR"*
 Y. Fominov	**Superconducting diode effect** *"Landau Institute for Theoretical Physics (Chernogolovka)"*	I. I. Soloviev	**Integrated cryogenic superconductor qubit control system** *Lomonosov Moscow State University* *Skobeltsyn Institute of Nuclear Physics*
N. Klenov	**Superconducting neuromorphic frontiers: Josephson junctions in adiabatic and spiking neural networks** *"Lomonosov Moscow State University"*	V. Krasnov	**Josephson emission: junction as an active antenna** *"Stockholm University "*

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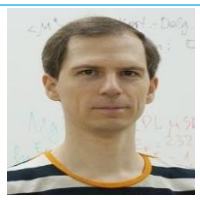
Invited Talks

 *D. Anghel*	**Resonance phenomena and kapitza pendulum effects in a nanomagnet coupled to a Josephson junction and under external radiation** *"JINR"*	 *S. Kuzmichev*	**Observation of the Leggett collective plasma oscillation and the spin exciton in two-gap superconductors using SNS-Andreev spectroscopy** *"Lomonosov Moscow State University"*
 *A. Bobkov*	**Anomalous Josephson effect and superconducting diode effect in Josephson junctions via RET2Si2 intermetallic magnets** *"Moscow Institute of Physics and Technology (MIPT)"*	 *T. Kuzmicheva*	**Single-gap superconductivity of alkali-metal ferroselenides with isovalent substitution** *"Lomonosov Moscow State University"*
 *V. Bol'ginov*	**Numerical modeling for the design of superconducting neurons** *"Osipyan Institute of Solid State Physics RAS (ISSP RAS)"*	*A. Neilo*	**Superconductor-ferromagnet spin valve with tunable inductance** *"Lomonosov Moscow State University"*
T. Golikova	**Controllable supercurrent and 0-π transition via quasiparticle injection in mesoscopic multiterminal SNS Josephson junctions** *" Osipyan Institute of Solid State Physics RAS (ISSP RAS)"*	 *A. Pankratov*	**Detectors for radioastronomy and axion search** *"Institute for Physics of Microstructures of RAS and Nizhny Novgorod State Technical University"*
 *M. Khapaev*	**Finite difference balance method for discontinuous solutions of the Usadel equations** *"Lomonosov Moscow State University, VMK, Dep. of Numerical Methods, Russia"*	 *A. Putilov*	**Vortex structure and intervortex interaction in superconducting structures with intrinsic diode effect** *"Moscow Institute of Physics and Technology (MIPT)"*
 *A. Kopasov*	**Effects of the in-plane magnetic field in van der Waals bilayers with interlayer superconducting ordering** *"National University of Science and Technology "MISIS" "*	A. Semenov	**Quantum Coulomb drag mediated by cotunneling of fluxons** *"P.N. Lebedev Physical Institute"*

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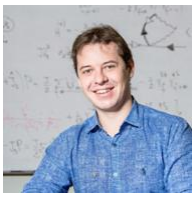
Invited Talks

M. Skvortsov	**Thermal phase slips in superconducting films** *"Landau Institute for Theoretical Physics"*	V. Yukalov	**Rabi-Josephson dynamical transition in trapped superfluids** *"JINR"*
 M. Shustin	**The fate of Majorana zero modes under Markovian dissipation** *"L.D. Landau Institute for Theoretical Physics, cad. Semenova av.1-a, Chernogolovka"*	V. Zhaketov	**Polarized neutron scattering for 2d periodic and fibonacci heterostructures** *"JINR"*
 J. Tekic	**Self-generated time crystal in superconductor ferromagnet heterostructure** *Vinča" Institute of Nuclear Sciences, Laboratory for Theoretical and Condensed Matter Physics,University of Belgrade*		

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Oral Talks

 T. Enderova	**DC and AC study of anisotropic transport properties in the topological insulator Bi1.06Sn0.04Sb0.9Te2S** *"Zavoisky Physical-Technical Institute, FRC Kazan Scientific Center of RAS"*	 K. Kulikov	**The uniqueness of the locking phenomena in φ_0 Josephson junction** *"JINR"*
 D. Kalashnikov	**Nonreciprocal phenomena in the asymmetric superconducting interferometer with external microwave irradiation** *"Moscow Institute of Physics and Technology (MIPT)"*	 S. Larionov	**Peculiarities of the vortex dynamics in a granular niobium superconducting bridge** *"Advanced Mesoscience and Nanotechnology Centre, Moscow Institute of Physics and Technology; All-Russian Research Institute of Automatics n.a. N.L. Dukhov (VNIIA)"*
 M. Khrenov	**Josephson Oscillator for On-Chip Qubit Excitation and Two-Tone Spectroscopy** *"Russian Quantum Center, Skolkovo, Moscow Region 143027, Russia;"*	 K. Polevoy	**Transport properties of planar Nb/Al/Nb Josephson junction** *"Moscow Institute of Physics and Technology (MIPT)"*
 E. Kovalenko	**Current steps in voltage-biased φ_0 Josephson junction under a harmonic magnetic field** *"Center for the Development of Digital Technologies, Krasnogorsk"*	 I. Rahmonov	**Resonant control of magnetization in a shunted φ_0 junction with LC circuit** *"JINR"*

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Poster Presentations

 M. Nashaat AbdelGhani	**Magnetic moment bifurcation on different synchronized voltage steps in φ_0 junction** *"JINR"*	 D. Kokaev	***Parametric resonance in a Phi-0 Josephson junction*** *"MLIT, JINR"*
 D. Annenkov	***Domain wall superconductivity in van der Waals structures with ferroelectric ordering*** *"Moscow Institute of Physics and Technology (National Research University)"*	 D. Malkin	***Investigation of magnetization dynamics in φ_0 Josephson junctions under the influence of an external EM field*** *"JINR"*
 M. Bashashin	***High-performance numerical study of physical characteristics of superconducting Josephson structures in dependence of parameters of the models*** *"MLIT, JINR"*	 A. Rahmonova	**Development of toolkit for mathematical modeling of a DC-SQUID** *"MLIT, JINR"*
 Y. Dmitrievtsev	***Superconducting orbital diode effect in SN bilayers*** *"Landau Institute for Theoretical Physics, Russia"*	 V. Sakhin	**Magnetotransport of Pb/Bi1.08Sn0.02Sb0.9Te2S heterostructures** *"Zavoisky Physical-Technical Institute, FRC Kazan Scientific Center of RAS"*
 A. Ionin	**Progress of implementation of the superconducting neuron prototype** *"Institute of Solid State Physics"*	 R. Tyumenev	**Development and measurement of a cryogenic microwave generator based on Josephson junction planar technology** *"Moscow Institute of Physics and Technology (MIPT)"*
 O. Kibardina	***Possibility of magnetization controlling in a shunted φ_0 junction*** *"MLIT, JINR"*		

Attendee

E. Nikonov
"JINR"

E. Yukalova
"Laboratory of Information Technologies, JINR"