

SCIENTIFIC PROGRAMME
VII INTERNATIONAL AND TECHNICAL CONFERENCE
INNOVATIVE DESIGNS AND TECHNOLOGIES OF NUCLEAR POWER
(ISTC NIKIET – 2026)
27–29 October 2026, NIKIET JSC, Moscow, Russia

27 October 2026

08:30–09:30	Registration of the participants in the conference				Building 4, lobby
PLENARY SESSION					Conference hall building 4, 3rd floor
09:35–09:40	Opening address by Andrey V. KAPLIENKO , Chairman of the Organization Committee, Director General – General Designer, NIKIET JSC				
09:40–09:45	Welcoming address by Yevgeniy O. ADAMOV , Chairman of the Programme Committee, Scientific Adviser, NIKIET JSC				
09:45–09:50	Welcoming address by Oleg N. SHUBIN , First Deputy Director General – Director of the Nuclear Weapons Complex Directorate, Rosatom State Corporation				
09:50–09:55	Welcoming address by Aleksandr M. LOKSHIN , First Deputy Director General for Development of New Nuclear Power Products, Rosatom State Corporation				
09:55–10:00	Welcoming address by Yevgeniy B. SIDOROV , Executive Director, Nuclear Society of Russia Interregional Association				
Chairman – Andrey V. Kaplienکو					
1.	10:00–10:25	Vadim V. LEMEKHOV	NIKIET JSC, Proryv JSC, Russia	Justification and progress of manufacturing the equipment for the BREST-OD-300 reactor plant	
2.	10:25–10:50	Vitaliy V. SHILO	Beloyarsk NPP, Russia	BN reactor plants. From pilot commercial operation to readiness for implementation of the commercial plant project	
3.	10:50–11:15	Prof. YONG Song Проф. Юн Сун	International Academy of Neutron Science, China	Design and R&D Status of China Lead-Based Reactor	
4.	11:15–11:40	Vladimir V. ARTISYUK	IAEA	IAEA's activities to support the evolution of nuclear and thermonuclear energy technologies	
Coffee break, 11:40–12:10					

27 October 2026

Chairman – Yuriy S. Strebkov

5.	12:10–12:35	Vladimir G. ASMOLOV	Adviser to Director General, Rosatom State Corporation, Russia	Place of thermal neutron reactors in the future nuclear power system of Russia
6.	12:35–13:00	Aleksandr Ye. SOLODUKHIN	TsNIIMASh JSC, Russia	Space nuclear power, evolution and application
7.	13:00–13:25	Anatoly V. KRASILNIKOV	ITER Project Center, Russia	TRT diagnostic and plasma control complexes concepts on the base and with drive of the ITER fusion technologies development in Russia
8.	13:25–13:50	Irina L. TAZHIBAYEVA	NNC RK, Kazakhstan	Scientific-research activities in the field of controlled thermonuclear fusion in the Republic of Kazakhstan

Lunch, 13:50–14:50

Chairman – Aleksey V. Slobodchikov

9.	14:50–15:15	Denis G. KULIKOV	NIKIET JSC, Russia	Small-scale nuclear generation in the context of global energy transformation: SNPP concept based on SHELF-M transportable reactor module
10.	15:15–15:40	Vitaliy V. PETRUNIN	Afrikantov OKBM JSC, Russia	Nuclear Co-located Industrial Complex with HTGR and CPPP
11.	15:40–16:05	Igor T. TRETYAKOV	NIKIET JSC, Russia	A line of 0.4 to 25 MW multipurpose pool-type research reactors for the Nuclear Science and Technology Center
12.	16:05–16:30	Lyudmila M. ZABUDKO	Proryv JSC, Russia	Results of the development and performance study of optimal for fast reactors mixed uranium-plutonium nitride fuel within the framework of the “Proryv” project

Coffee break, 16:30–17:00

Chairman – Aleksandr V. LOPATKIN

13.	17:00–17:25	Viktor K. IVANOV	Proryv JSC, Russia	Ecological and economic justification of the advantages of a rad-equivalent approach to radioactive waste management taking into account the ALARA principle
14.	17:25–17:50	Aleksey V. SLOBODCHIKOV	NIKIET JSC, Russia	Development of a new generation KR-2.0 channel uranium-graphite reactor power unit project
15.	17:50–18:15	Nastasya A. MOSUNOVA	IBRAE RAS, Russia	Codes of new generation of the Proryv project: current state and examples of use for solving applied problems

End of Plenary Session

18:30–21:00

Welcome reception (2nd floor, building 4)

28 October 2026

SECTIONAL SESSIONS

SECTION 1

INNOVATIVE DESIGNS OF NUCLEAR PLANTS FOR VARIOUS APPLICATIONS

Conference hall
building 4, 3rd floor

Chairman – Vadim V. Lemekhov

1.	09:30–09:50	Valery N. CHIGAREV	Proryv JSC, Russia	Conceptual design solution for the power section of the NPP with the BREST-OD-300 reactor unit with a gas topping system
2.	09:50–10:10	Roman O. YUDIN	Atomenergoproekt JSC, Russia	Rationale for the use of heavy-duty concrete for the BREST-OD-300 RU
3.	10:10–10:30	Dmitry A. SOBOLEV	JSC NPO CKTI, Russia	Technical and economic optimization of main technical solutions for thermal-mechanical equipment of the BR-1200 turbine island
4.	10:30–10:50	Ilya V. POPOV	NIKIET JSC, Russia	Thermohydraulic stability study of BR-1200 RP's SG
5.	10:50–11:10	Sergey Yu. GRISHNYACHY	OKB Hidropress JSC, Russia	Steam generator for large sodium-cooled fast neutron reactor plants

Coffee break, 11:10–11:40

6.	11:40–12:00	Ivan V. TORMYSHEV	IPPE JSC, Russia	Modular nuclear power plant with lead-bismuth coolant and a gas turbine power converter for Arctic conditions (SVGT-1)
7.	12:00–12:20	Nikolay A. PRIBATURIN	IT SB RAS, Russia	Experimental study of transient processes in a small-scale multi-loop circuit with heavy liquid metal coolant
8.	12:20–12:40	Aleksandr Yu. MAKSIMOV	Proryv JSC, Russia	On technical aspects of ensuring radiation safety of Generation IV nuclear energy systems
9.	12:40–13:00	Dmitriy V. LYALYUEV	FSUE Aleksandrov NITI, Russia	Development of next-generation digital twins creation technology using the example of virtual test bench complex implementation
10.	13:00–13:20	Sergey Yu. SHTONDA	Keldysh Research Center JSC, Russia	The organization of the parameters control and recording system during experimental testing of power conversion system units of high-power propulsion systems

Lunch, 13:20–14:20

Chairman – Igor T. Tretyakov

11.	14:20–14:40	Yuriy V. NABOYSHCHIKOV	RIAR JSC, Russia	Assessment of MBIR reactor potential to conduct advanced experimental research
12.	14:40–15:00	Oleg V. MUDARISOV	FSUE "MCC", Russia	The development of the first Russian molten salt research reactor at the Mining and Chemical Complex, FSUE
13.	15:00–15:20	Marat A. TUKTAROV	NIKIET JSC, Russia	Engineering conceptualization of a molten salt curium burner reactor

28 October 2026

14.	15:20–15:40	Ivan M. ROZHDESTVENSKIY	NIKIET JSC, Russia	Physical characteristics of dual-purpose pressure-tube reactor
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15.	15:40–16:00	Aleksey N. BIRYUKOV	NIKIET JSC, Russia	Production of medical isotopes at operating RBMK-1000 power units: technology, safety, and operational experience
<i>Coffee break, 16:00–16:30</i>				
Chairman – Aleksey V. Slobodchikov				
16.	16:30–16:50	Igor A. BAZULIN	NRC Kurchatov Institute, Russia	Concept of a channel-type graphite reactor for isotope production and an evaluation of its parameters
17.	16:50–17:10	Dmitry I. KOLOGREYEV	PC RCS Energia, Russia	Analysis of nuclear reactor - powered spacecraft projects to fly beyond LEO
18.	17:10–17:30	Dmitry V. SOROKIN	SEC NRS, Russia	Issues of regulation of the spacecraft safety with nuclear reactors
<i>End of Section 1</i>				
SECTION 2 NUCLEAR FUEL, COOLANTS AND NEW MATERIALS				Room 304, 3rd floor, building 4
Chairman – Andrey A. PULINETS				
1.	9:30–9:50	Svyatoslav N. SIKORIN	Scientific Institution “JIPNR-Sosny”, Belarus	Experimental research of multiplying systems with uranium-zirconium carbonitride nuclear fuel
2.	9:50–10:10	Mikhail T. SLEPOV	Novovoronezh NPP, Russia	The use of neutron noise methods for monitoring the condition of V-generation fuel assemblies
3.	10:10–10:30	Vladimir V. STEGAYLOV	JIHT RAS, Russia	An ML-based atomistic model of point defects in uranium mononitride to describe self-diffusion and decomposition experiments
4.	10:30–10:50	Andrey A. MOKRUSHIN	LUCH JSC, Russia	Russian microspherical fuel
5.	10:50–11:10	Yana A. SUTYAGINA	RIAR JSC, Russia	Testing of fuel rods in the MIR.M1 reactor channel under the design-basis LOCA
<i>Coffee break, 11:10–11:40</i>				
28 October 2026				
Chairman – Oleg P. Arkhipov				
6.	11:40–12:00	Vyacheslav O. IVANOV	NIKIET JSC, Russia	Primary structural material for a molten salt research reactor: selection criteria and experimental evaluation
7.	12:00–12:20	Fedor A. BASKOV	Kompozit JSC, Russia	Heat-resistant molybdenum-based alloys with nitride strengthening
8.	12:20–12:40	Saule M. IRMAGAMBETOVA	NRNU MEPhI, Russia	Development and manufacturing of cladding ODS-steels for advanced fast reactors
9.	12:40–13:00	Matvey V. SHISHIMIROV	NIKIET JSC, Russia	Manufacturing technology for large-scale forgings from an advanced austenitic steel for new-generation reactor systems
10.	13:00–13:20	Ivan A. NIKITCHENKO	NIKIET JSC, Russia	Development of Rosatom standards to justify materials for reactor plants with molten salt research reactors
<i>Lunch, 13:20–14:20</i>				

Chairman – Matvey V. Shishimirov				
11.	14:20–14:40	Mikhail M. BAKRADZE	NRC “Kurchatov Institute”, Russia	Deployment of additive technologies and materials developed by NRC “Kurchatov Institute” in high-technology industries
12.	14:40–15:00	Ivan A. LOGACHEV	Komposit JSC, Russia	Features of the structure and properties of materials produced by selective laser melting
13.	15:00–15:20	Nikolay V. TARASOV	OKB Hidropress JSC, Russia	Specific features of 3D printing of a support structure-free spacer grid for a steam generator from metal powder composition
14.	15:20–15:40	Artem D. MURAVYEV	SEC NRS, Russia	Phase transition in the fuel of molten salt reactors
15.	15:40–16:00	Vladimir V. ULYANOV	Novotech LLC, Russia	Analysis of methods for purifying liquid metal coolants
Coffee break, 16:00–16:30				
Chairman – Aleksey B. Korostelev				
16.	16:30–16:50	Aleksandr A. ZMITRODAN	FSUE Aleksandrov NITI, Russia	Development of water chemistry control system, modular coolant cleanup system and low-waste decontamination system of Shelf-M SNPP
17.	16:50–17:10	Nikolay A. PROKHOROV	Atomenergoproekt JSC, Russia	Selection of secondary circuit water chemistry for power unit BR-1200
18.	17:10–17:30	Pavel S. STYAZHKIN	Atomenergoproekt JSC, Russia	Modeling of corrosion processes in the selection of TPP and NPP structural materials
19.	17:30–17:50	Viktor S. MODESTOV	St. Petersburg Polytechnic University, Russia	On approaches to erosion-corrosion damages prognosis at Russian NPPs
20.	17:50–18:10	Aleksey P. MIKHEYEV	NRU MPEI, Russia	Comparative analysis of the effect of power increase on erosion-corrosion wear of pipelines in the condensate-feedwater path of NPPs
End of Section 2				
28 October 2026				
SECTION 3 CLOSED FUEL CYCLE TECHNOLOGIES, SNF AND RW HANDLING				Room 301, 3rd floor, building 4
Chairman – Aleksandr V. Lopatkin				
1.	09:30–09:55	Dmitry S. KLIMENKO	NIKIET JSC, Russia	Transmutation of curium and curium-ameridium mixtures in a molten salt reactor
2.	09:55–10:20	Ilya S. KUSTIKOV	Beloyarsk NPP, Russia	Analysis and selection of the optimal option for spent and fresh nuclear fuel management at a power unit with a BN-1200m reactor plant
3.	10:20–10:45	Anzhela G. ANOSHINA	Atomenergoproekt JSC, Russia	Possibility of using passive principles to create a system for heat removal from spent nuclear fuel pool in relation to nuclear power plants with fast neutron reactors
4.	10:45–11:10	Mikhail S. MORKIN	NIKIET JSC, Russia	A study into the transport of the nuclear fuel fission product simulator gas in components of the lead-cooled reactor plant's fuel cladding failure detection system using a time-of-flight gas mass spectrometer
Coffee break, 11:10–11:40				

Chairman – Andrey V. Moiseyev				
5.	11:40–12:05	Maksim V. VORIVONCHIK	IBRAE RAS, Russia	Development of models and a computational module for simulating the behavior of fission products and tritium in technological systems of nuclear facilities
6.	12:05–12:30	Marina S. KAPLINA	RIAR JSC, Russia	Irradiation testing of HTGR fuel compacts in the SM-3 reactor
7.	12:30–12:55	Ostap A. KUCHEROV	VNIINM JSC, Russia	Physicochemical justification of the molten salt research reactor's gas cleaning system for removal of tritium and krypton and xenon isotopes from the fuel circuit
8.	12:55–13:20	Nikita M. SIDOROV	NIKIET JSC, Russia	Determination of the graphite stack dismantling sequence for RBMK-1000 reactors based on the specific activity of ¹⁴ C during decommissioning
Lunch, 13:20–14:20				
Chairman – Sergey G. Ryasnyanskiy				
9.	14:20–14:45	Artem A. BEREZIN	Afrikantov OKBM JSC, Russia	Method for reducing the volume of liquid radioactive waste generated during operation of floating power units with RITM-type reactor plants
10.	14:45–15:10	Denis A. LAPSHIN	Afrikantov OKBM JSC, Russia	Considering complex mechanical effects during transportation and processing operations when designing spent nuclear fuel containers
11.	15:10–15:35	Ilya S. NESTERENKO	SEC NRS, Russia	Computational analysis of heat dissipation from finned transport packaging with spent nuclear fuel
12.	15:35–16:00	Mariya D. RAZUMEYEVA	CDB ME "Rubin", Russia	Assessment of radiation impact factors in the operation of underwater energy facilities
Coffee break, 16:00–16:30				
28 October 2026				
13.	16:30–16:55	Aleksandr A. LEBEDEV	Aleksandra-Plus LLC, Russia	Practical experience in the application of ultrasonic and combined technologies in the nuclear industry: development prospects
14.	16:55–17:20	Yuriy A. SVETLICHNY	RADON FSUE, FSBI FMBC, Russia	Radiation safety assessment of aerosols in working room air during decommissioning of a radiochemical enterprise
15.	17:20–17:45	Vitaliy N. KOCHANOV	NIKIET JSC, Russia	Development of solutions to ensure full cycle of handling spent guide tubes with CPS rods
16.	17:45–18:10	Anatoliy V. GRIGORYEV	NIKIET JSC, Russia	Retrofitting option for radiation-hazardous nuclear legacy facilities in the northwest of Russia to support operation of small nuclear power plants in the Northern Sea Route area
End of Section 3				
SECTION 4 SMALL SIZE POWER (STATIONARY, FLOATING, TRANSPORTABLE, PROPULSION PLANTS) to open on 29 October 2026, 09:30				Room 301, 3rd floor, building 4

SECTION 5 NEW ALGORITHMS AND CODES FOR JUSTIFICATION OF DESIGNS AND SAFE OPERATION. RESULTS OF COMPUTATIONAL AND EXPERIMENTAL JUSTIFICATION OF INNOVATIVE DESIGNS					Room 208, 2nd floor, building
Chairman – Dmitry A. Afremov					
1.	09:30–09:50	Pavel A. ZAYTSEV	Rosatom Nauka JSC, Russia	High-temperature measurements in simulation of design-basis, beyond-design-basis and severe accidents of reactor plants at thermophysical test facilities	
2.	09:50–10:10	OUYANG Shize	University of Science and Technology of China	Transient safety analysis of PLOHS in LFRS using a dual strategy multi scale coupling method	
3.	10:10–10:30	Andrey P. ZHIRNOV	NIKIET JSC, Russia	Computational study of the neutron-physical characteristics of BREST-OD-300 at the power unit start-up stage	
4.	10:30–10:50	Ivan S. SAPOZHNIKOV	NIKIET JSC, Russia	Development and verification of a coupled CFD model of the BREST-OD-300 reactor core	
5.	10:50–11:10	Igor A. IGNATYEV	IBRAE RAS, Russia	ODETTA calculation code: key features and experience of using in fast reactor shielding calculations	
<i>Coffee break, 11:10–11:40</i>					
6.	11:40–12:00	Ilya A. FEDOROV	NIKIET JSC, Russia	Calculation of the neutronic properties of the BR-1200 reactor with isotopically modified mixed nitride U-Pu fuel with a liquid-metal sublayer	
28 October 2026					
7.	12:00–12:20	Stanislav V. PESHKOV	IBRAE RAS, Russia	Development of neutron models in the multiphysics code EUCLID/V2 accounting for melting and relocation of core materials during severe accidents	
8.	12:20–12:40	Dmitry P. VEPREV	IBRAE RAS, Russia	Speeding up calculations of beyond design basis accidents in fast reactors with the EUCLID/V1 multiphysics code	
9.	12:40–13:00	Svetlana A. SOLOMONOVA	IBRAE RAS, Russia	Optimization of the construction of nuclide transformation chains in the BPSD code	
10.	13:00–13:20	Darya S. CHUPOVA	IBRAE RAS, Russia	The MOROOSIA module within the ATLANT/V1.0 integral code: a domestic replacement for the COCOSYS code for RBMK-1000 accident localization system calculations	
<i>Lunch, 13:20–14:20</i>					
Chairman – Sergey I. Aleksandrov					
11.	14:20–14:40	Aleksandr V. VAKARIN	FSUE Aleksandrov NITI, Russia	Simulation of natural circulation in advanced reactors with heavy liquid metal coolant using KORSAR/LMC computer code	
12.	14:40–15:00	Stepan S. CHEPILKO	FSUE Aleksandrov NITI, Russia	Development of object-oriented framework for two-phase flows modelling based on KORSAR computer code	
13.	15:00–15:20	Sergey G. SEMAKIN	FSUE Aleksandrov NITI, Russia	Development and cross-verification of critical flow models in object-oriented framework based on KORSAR computer code	

14.	15:20–15:40	Pavel D. LOBANOV	IT SB RAS, Russia	Research into local hydrodynamics and heat exchange in the SHELF-M reactor FA model
15.	15:40–16:00	Artem S. ZALESOV	OKB Hidropress JSC, Russia	Current status and development prospects of subchannel codes for modeling thermal-hydraulic processes in fast reactor cores
<i>Coffee break, 16:00–16:30</i>				
16.	16:30–16:50	Aleksey A. KRUTIKOV	NIKIET JSC, Russia	Implementation of a subchannel fuel assembly calculation methodology in the StarCCM+ CFD code
17.	16:50–17:10	Anton V. ZADOROZHNY	IBRAE RAS, Russia	Capabilities of the BERKUT code for simulating fuel and absorber rods in fast reactor conditions
18.	17:10–17:30	Ilya Ye. IVANOV	VNIIAES JSC, Russia	Application of the MNT-CUDA 3.0 engineering code system for computational support of channel-type reactor design, operation, and decommissioning
19.	17:30–17:50	Ivan S. SAPOZHNIKOV	NIKIET JSC, Russia	Computational justification of operation modes of BR-1200 reactor plant using 1D-3D coupled thermohydraulic model
<i>Day 2 of Section 5 – 29 October 2026 (room 208, 2nd floor, building 4)</i>				
28 October 2026				
SECTION 6 FUSION TECHNOLOGY to open on 29 October 2026, 09:30				Room 306, 3rd floor, building 4
SECTION 7 Strength, reliability, methods and means of monitoring and diagnostics				Room 306, 3rd floor, building 4
Chairman – Oleg P. Arkhipov				
1.	09:30–09:50	Viktor S. MODESTOV	St. Petersburg Polytechnic University, Russia	Experience in calculating the strength of the reactor unit of the BREST-OD-300 reactor plant
2.	09:50–10:10	Aleksey V. LUKIN	St. Petersburg Polytechnic University, Russia	Current challenges in the strength justification of the reactor block vessel of the BR-1200 reactor plant
3.	10:10–10:30	Sergey A. SOLOVYEV	Afrikantov OKBM JSC, Russia	Issues of justification of reactor plant equipment strength analysis under external impacts
4.	10:30–10:50	Sergey S. NEFEDOV	Proryv JSC, Russia	Assessment of reinforced concrete NPP structures subjected to aircraft impact
5.	10:50–11:10	Ilnar R. MURTAZIN	St. Petersburg Polytechnic University, Russia	Strength calculation features of a metal-concrete reactor module vessel using nonlinear models of concrete deformation
<i>Coffee break, 11:10–11:40</i>				
Chairman – Aleksey B. Korostelev				
6.	11:40–12:00	Vladimir G. FEDOSOV	AEM-tekhnologii JSC, Russia	On the conservatism of allowable compressive load assessment for nuclear power plant equipment in the plastic buckling range

7.	12:00–12:20	Sergey V. TIMOFEYEV	NIKIET JSC, Russia	Vibration of components of nuclear power plants with HLMC
8.	12:20–12:40	Aleksandr V. GAYEV	AAEM JSC, Russia	Methods for developing, verifying, and validating the rational digital models for assessing the stress-strain and vibration state of resource-determining elements of equipment and pipelines
9.	12:40–13:00	Roman V. FEDORENKO	St. Petersburg Polytechnic University, Russia	A methodology for shakedown and long-term cyclic strength analysis of reactor vessel metal structures under high-temperature thermomechanical loading
10.	13:00–13:20	Viktor V. MAKAROV	OKB Hidropress JSC, Russia	Experimental studies of dynamics and strength of core components at reactor scram
<i>Lunch, 13:20–14:20</i>				
28 October 2026				
Chairman – Sergey V. Timofeyev				
11.	14:20–14:40	Maksim P. YEGRANOV	NIKIET JSC, Russia	Computational support for experimental development of RCPS for the BREST-OD-300 RP
12.	14:40–15:00	Aleksandr V. SMIRNOV	NIKIET JSC, Russia	Hydroelastic vibrations of SHELF-M RP fuel assembly
13.	15:00–15:20	Leonid V. FROMZEL	CVC LTD, Russia	NETSHOCK – code for analysis of transient gasdynamic processes in the piping systems and transient forces definition acting on the piping elements
14.	15:20–15:40	Aleksandr O. CHERNYAVSKIY	South Ural State University, Russia	Analysis of progressive deformation using finite element method
15.	15:40–16:00	Vladimir G. FEDOSOV	AEM-tekhnologii JSC, Russia	Assessment of the buckling resistance of nuclear power plant equipment and piping components under seismic loads
<i>Coffee break, 16:00–16:30</i>				
Chairman – Aleksey P. Rakhmanov				
16.	16:30–16:50	Aleksey V. KOZIN	Afrikantov OKBM JSC, Russia	Application of the “leak before break” (LBB) concept for small and medium reactor (SMR) pipelines
17.	16:50–17:10	Tatyana V. VORONINA	NRC Kurchatov Institute – PNPI, Russia	The highly sensitive leak monitoring technique for the PIK reactor vessel based on a deuterium concentration flow analyzer in heavy water
18.	17:10–17:30	Ivan K. KABARDIN	NSU, IT SB RAS, Russia	Development of an ultrasonic method for diagnostics of hydrodynamic characteristics inside nuclear power plants
19.	17:30–17:50	Viktor A. YURMANOV	NIKIET JSC, Russia	Ensuring the aggregate stability of a colloidal zinc oxide solution in the process of storage and transportation to nuclear facilities
20.	17:50–18:10	Anastasiya A. LOGVINOVA	Power Machines JSC, Russia	Resource tests of the output connecting bus of a high-power turbogenerator using a bus mock-up
<i>End of Section 7</i>				

Poster reports (see programme end for complete list)
28 October 2026, 18:10–19:00
Conference hall lobby, 3rd floor, building 4

29 October 2026 r.

SECTION 4

SMALL SIZE POWER (STATIONARY, FLOATING, TRANSPORTABLE, PROPULSION PLANTS)

Room 301, 3rd floor,
building 4

Chairman – Denis G. Kulikov

1.	09:30–09:55	Vladislav R. RADCHUK	OKB Hidropress JSC, Russia	Enhancing the stability of a nuclear power unit of a small modular nuclear power plant in an isolated power system in load-following mode
2.	09:55–10:20	Gennadiy V. KULAKOV	VNIINM JSC, Russia	Workability of zirconium alloy products in the core conditions of nuclear icebreakers and small-power nuclear plants
3.	10:20–10:45	Mikhail A. SEMENOV	Afrikantov OKBM JSC, Russia	Main features of the RITM-200N reactor and their impact on interfacing systems
4.	10:45–11:10	Aleksandr A. FAKEYEV	Afrikantov OKBM JSC, Russia	Safety validation of the RITM-200N reactor for small nuclear power plants

Coffee break, 11:10–11:40

5.	11:40–12:05	Yuriy K. SHVETSOV	Afrikantov OKBM JSC, Russia	Enhancing RITM-200 reactor plant safety in beyond design-basis accidents
6.	12:05–12:30	Nargiz Mamed kyzy EMINOVA	Afrikantov OKBM JSC, Russia	Approaches to designing biological shielding of RITM series reactor plants for icebreakers and floating NPPs
7.	12:30–12:55	Vitaliy S. MOISEYEV	RIAR JSC, Russia	Tests of SNPP SHELF-M safety and shim rods dummies in the SM-3 reactor
8.	12:55–13:20	Nikita A. MOROZOV	CDB ME "Rubin", Russia	Emergency cooldown injector systems for power plants of marine engineering facilities

Lunch, 13:20–14:20

Chairman – Vladimir V. Kudinov

9.	14:20–14:45	Aleksey A. MASLENNIKOV	PC RSC Energia, Russia	The design and ballistic studies of capability to use nuclear electric propulsion system for the research spacecraft delivery to Pluto
10.	14:45–15:10	Adelina Zh. SUTEYEVA	Krylov State Research Center, Russia	Comprehensive methodological approach to determining the reactor plant containment flooding system characteristics for floating power units
11.	15:10–15:35	Andrey O. PROSTODUSHEV	LUCH JSC, Russia	Experimental study of thermal energy parameters of a GaSb-based thermophotovoltaic cell

End of Section 4

29 October 2026

SECTION 5
NEW ALGORITHMS AND CODES FOR JUSTIFICATION OF DESIGN AND SAFE OPERATION. RESULTS OF COMPUTATIONAL AND EXPERIMENTAL JUSTIFICATION OF INNOVATIVE DESIGNS

Room 208, 2nd floor,
building 4

Chairman – Dmitriy A. Afremov

1.	09:30–09:50	Roman Ye. SHURYGIN	IBRAE RAS, Russia	Current development status of the COMPLEX integrated code for nuclear and radiation safety justification
2.	09:50–10:10	Darya D. LEGOSTAYEVA	IBRAE RAS, Russia	The development of the unified constructor for reactor core calculation models for the COMPLEX integrated code
3.	10:10–10:30	Dmitriy Yu. NIKULIN	IBRAE RAS, Russia	Modernization of the ionizing radiation source calculation module in the integral code COMPLEX
4.	10:30–10:50	Andrey V. GARBARUK	St. Petersburg Polytechnic University, Russia	Specialized RANS turbulence models: development principles and calibration methods
5.	10:50–11:10	Ilya V. YELKIN	NRC Kurchatov institute, Russia	Rupture of steam line with simultaneous rupture of steam generator tube and failure of the high-pressure pumps ECCS and application of the accident management procedure

Coffee break, 11:10–11:40

Chairman – Andrey P. Zhirnov

6.	11:40–12:00	Aleksey N. KUZNETSOV	FSUE Aleksandrov NITI, Russia	SAPFIR_RF&RC_M: a new-generation software package for neutronic calculation of nuclear propulsion reactors
7.	12:00–12:20	Mikhail S. ONEGIN	NRC Kurchatov institute – PNPI, Russia	Joint neutron-physical and thermohydraulic calculations of quasi-equilibrium states of the PIK reactor
8.	12:20–12:40	Vyacheslav I. ALMYASHEV	FSUE Aleksandrov NITI, Russia, ETU LETI, Russia	High-temperature processes during severe accidents at VVER nuclear power plants
9.	12:40–13:00	Gennadiy G. KULIKOV	NRNU MEPhI, Russia	Reasonability for accounting of neutron-induced ionization effect at numerical analyses of fast reactor cores
10.	13:00–13:20	Valentin D. GOLUBKOV	St. Petersburg Polytechnic University, Russia	Assessment of the capabilities of CFD-codes and recommendations for predicting heat transfer in subcooled wall boiling

End of Section 5

Lunch, 13:20–14:20

29 October 2026

SECTION 6
FUSION TECHNOLOGY

Room 306, 2nd floor,
building 4

Chairman – Igor V. Danilov

1.	09:30–09:50	Maksim N. SVIRIDENKO	NIKIET JSC, Russia	Hybrid thermonuclear plant blanket
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2.	09:50–10:10	Yana A. VASINA	JSC "SSC RF TRINITI", Russia	Development of a concept for using devices for lithiization of the TRT tokamak chamber
3.	10:10–10:30	Aleksandr I. GODES	OINPE MEPhI, Russia	Simulating tritium removal strategies for advanced D- ³ He fusion fuel as a method for reducing neutron damage to fusion reactor structural elements
4.	10:30–10:50	Aleksey A. MATYUSHENKO	St. Petersburg Polytechnic University, Russia	Numerical investigations of turbulent flow and heat transfer in the module blanket of a hybrid thermonuclear pebble-bed reactor
5.	10:50–11:10	Andrey Yu. LESHUKOV	NIKIET JSC, Russia	Experimental modules of thermonuclear reactor blankets. Development prospects of the ITER and TRT reactor designs and testing programs

Coffee break, 11:10–11:40

Chairman – Maksim N. Sviridenko

6.	11:40–12:00	Sergey N. TOMILOV	NIKIET JSC, Russia	Computational justification of the supply panel structures for the first wall of poloidal row 17
7.	12:00–12:20	Ivan I. PODDUBNY	NIKIET JSC, Russia	Qualification testing of coatings for various functions on the ITER blanket components
8.	12:20–12:40	Boris I. NIKULIN	NIKIET JSC, Russia	Upgrading and qualification testing of the ITER blanket flexible support assembly
9.	12:40–13:00	Aleksandr G. MOZGOVOY	Physical Institute of RAS, Znayuk LLC, Russia	Project for the creation of a neutron source based on compact torus colliders for small hybrid (fusion-fission) reactors
10.	13:00–13:20	Veronika O. KIRILLOVA	JSC "SSC RF TRINITI", Russia	Structural influence of the plasma facing TRT divertor components on resistance to thermal loads

Lunch, 13:20–14:20

Chairman – Ivan I. Poddubny

11.	14:20–14:40	Aleksandr A. OSIPOV	IPPE JSC, Russia	Thermodynamic stability of oxide compounds of steel components in the Li ₁₆ PB eutectic
12.	14:40–15:00	Kuzma S. PAZHITNYKH	SEC NRS, Russia	Possible approaches to tritium control in atmospheric air in the areas of prospective fusion facility sites
13.	15:00–15:20	Ivan A. BELYAEV	JIHT RAS, Russia	MHD flows during electrical discharges into a liquid metal cavity in a transverse magnetic field
14.	15:20–15:40	Ivan A. BELYAEV	JIHT RAS, Russia	Heat exchange during free convection in a vertical thermally static liquid metal cell

End of Section 6

16:00-17:30
Conference hall, 3rd floor, building 4

ROUND TABLE

NUCLEAR POWER IN SOLVING ENVIRONMENTAL POLLUTION AND GLOBAL WARMING ISSUES

Moderators: Boris A. Gabarayev, Vladimir P. Kuchinov, Boris G. Gordon

Closure of ISTC NIKIET-2026. Moderator – Yuriy S. Strebkov

Poster reports 28 October 2026, 18:10–19:00 Conference hall lobby, 3rd floor, building 4

No.	Presenter	Organization	Title
1.	Svyatoslav N. SIKORIN	Scientific Institution “JIPNR-Sosny”, Belarus	Criticality experiments for small-sized fast multiplying configurations with high enriched uranium nuclear fuel
2.	Mariya I. TURKINA	NRU MPEI, Russia	Thermal energy storage based on molten salt for the BREST-OD-300 reactor
3.	Kirill N. ILIYIN	Afrikantov OKBM JSC, Russia	Implementation of ejector for justification of residual heat removal system's heat exchanger operability of floating power unit reactor plant in natural circulation mode
4.	Denis V. KNYAZKIN	Afrikantov OKBM JSC, Russia	CAD SIMINTECH experience for implementation of computational task algorithms in APCS
5.	Aleksey D. POTEKHIN	NRU MPEI, Russia	Reducing the thermal resistance of the thermosyphon by intensifying heat exchange in the evaporator
6.	Vladislav A. SPIRIDONOV	NIKIET JSC, Russia	Justifying sites for installing primary transducers of the means for monitoring temperature and thermodynamic activity of oxygen in lead coolant of BR-1200 RP
7.	Kirill I. MARAKULIN	Kola NPP, Russia	Dependence of VVER-440 fuel load operating time on control element assemblies position and thermal power
8.	Vladislav D. GAYDAYENKO	NRU MPEI, Russia	Influence of viscosity and thermal conductivity parameters of the oxide phase of corium melt on heat transfer conditions at its boundaries under conditions of stratification of molten materials during a severe accident of a nuclear power plant
9.	Sergey V. DVORETSKIY	NRNU MEPhI, Russia	Hydrogen fuel cells for new generation PAR
10.	Feliks A. SHAMRAY	RIK Plus LLC, Russia	Design and manufacturing capabilities, economic potential of wire arc additive manufacturing (WAAM) in nuclear engineering
11.	Alena M. GOLOVLEVA	NIKIET JSC, Russia	Determination of the relative fission gas removal rate for the evaluation of the BREST-OD-300 fuel rod leakage
12.	Yana A. GORBUNOVA	NIKIET JSC, NRU MPEI, Russia	Dependence of the thermal state of a metallic melt layer under asymmetric side cooling conditions during a severe accident
13.	Yegor A. VISHNYAKOV	NIKIET JSC, Russia	Study of local flow characteristics in a heated seven-rod FA mockup with self-spacing fuel elements based on modified models
14.	Vladislav D. SIZAREV	NIKIET JSC, Russia	Rational arrangement of spacer grids of nuclear reactor fuel assemblies
15.	Polina A. BULGAKOVA	NIKIMT-Atomstroy JSC, Russia	Processing of radioactive sodium oxalate solutions
16.	Artur V. SHOVIKOV	Leningrad NPP, Russia	Detection of Ag-110m in KAB and FAK systems of LNPP-2: the results of routine radiation monitoring
17.	Vasiliy R. TARASOV	VNIINM JSC, Russia	Features of nitrogen-15 concentration and synthesis of mixed uranium-plutonium nitride based on it
18.	Dmitriy S. MIKHALYUK	CIFRA JSC, Russia	Numerical modeling of the compaction process for structural material segments from irradiated fuel assemblies
19.	Daniil V. PATORKIN	NRU MPEI, Russia	Thermodynamic analysis of a recompression S-CO ₂ cycle for the SHELF-M SMR

20.	Dmitriy S. KOVALEV	NRU MPEI, Russia	Thermodynamic analysis of methods for utilizing low-grade steam heat from small nuclear power plants for heat generation
21.	Dimitr G. CHERESHKOV	JINR, Russia	Assessment of the influence of different control and safety system placement in the IBR-4 active zone on its characteristics
22.	Gennadiy G. KULIKOV	NRNU MEPhI, Russia	Reasonability of taking magnetic neutron scattering by electrons into account in numerical analyses of thermal nuclear reactors
23.	Dmitriy S. KLIMENKO	NIKIET JSC, Russia	Neutronic features of filling the core of a molten salt research reactor during the physical start-up stage
24.	Yegor I. POLETAYEV	RIAR JSC, Russia	Nomenclature of in-reactor measurement tools and their application in nuclear research reactors of RIAR JSC
25.	Sofya A. SHALAGINOVA	Afrikantov OKBM JSC, Russia	Application of the QPass finite element software package for modeling heat releases from the RITM series reactor plant
26.	Ilya A. KONOVALOV	Afrikantov OKBM JSC, Russia	Development of the choked flow model for the next-generation computational codes
27.	Mark M. BEDRETDINOV	OKB Hidropress JSC, Russia	The results of pre-test calculations of experiments for loss of cooling accidents of VVER-1200 SFP modeling using KMS large scale facility
28.	Irina A. MOLOTOVA	SEC NRS, Russia	Theoretical and experimental study of post-crisis heat transfer during cooling of hot bodies in liquids
29.	Nikita D. FOMENKO	NVPI NRNU MEPhI, Russia	CFD modeling of the influence of biofouling on plate heat exchangers of intermediate circuits systems consumers of the reactor compartment
30.	Olga I. MYAZDRIKOVA	IPPE JSC, Russia	The results of LLEAK-3C 1.0 code validation based on the data of large leak studies at BOR-60 reactor
31.	Mikhail A. OSTROVSKIY	NRU MPEI, Russia	Thermodynamic analysis of options for applying external steam superheating at nuclear power plants
32.	Svetlana Yu. VOROBYEVA	NRU MPEI, VNIIAES JSC, Russia	Application of neural networks for modeling interphase mass transfer of radiolytic hydrogen in the primary system equipment of a VVER-type reactor
33.	Dmitriy Yu. USHAKOV	VNIIAES JSC, NRU MPEI, Russia	Application of the GA-DPSA approach and machine learning methods for accident analysis of VVER nuclear power plants
34.	Marsel E. KRYLOV	NRNU MEPhI, Russia	Cross-platform verification and validation of thermal-hydraulic models of nuclear installations
35.	Mariya M. ALYAUDINOVA	NRU MPEI, Russia	Investigation of heat transfer during water vapor condensation on a hierarchical hydrophobic surface
36.	Andrey M. SHULGA	NIKIET JSC, Russia	Verification of the MCU-NR software system for validation of the SHELF-M-based SNPP design
37.	Vasiliy I. MOROKO	NIKIET JSC, Russia	Using machine learning with reinforcement to create reactor plant control algorithms
38.	Ivan V. BURKOV	NIKIET JSC, Russia	Development of the FRIDAY automated preparation system for multi-group neutron cross-section libraries
39.	Vladimir Ye. POPOV	NIKIET JSC, Russia	Simulation of the IBR-2M nuclear power plant neutronics when using a new FA set with a modified isotopic composition of plutonium
40.	Aleksandra M. ATAYEVA	NIKIET JSC, Russia	Numerical simulation of radiant heat exchange in porous thermal insulating materials in conditions of no convective heat exchange
41.	Artem A. KLEMENTYEV	NIKIET JSC, Russia	Calculation of the passive feedback device drop dynamics in a liquid lead flow using CFD simulation
42.	Varvara A. YUFEREVA	NIKIET JSC, Russia	SADCO SS and ACCORD-med for calculating the accumulation of medical isotope activity

43.	Olga N. ANDRIANOVA	VNIIAES JSC, Russia	CROSS-CUDA: high-speed group nuclear data constant preparation system for enhancing the accuracy of engineering neutronic calculations
44.	Kirill S. KOVESHNIKOV	IBRAE RAS, Russia	Simulation of processes in an experimental mixing chamber using multidimensional CFD model integrated into the HYDRA-IBRAE/LM code
45.	Anton N. YURIN	NIKIET JSC, Russia	Peculiarities of using the leak before break concept for the small and medium size reactor pipelines of the diameter smaller than 150 mm
46.	Kirill I. SHUTKO	NIKIET JSC, Russia	Capabilities of express non-destructive testing for monitoring susceptibility to intergranular corrosion and intergranular stress corrosion cracking using new portable measuring system
47.	Yegor A. ISAKOV	St. Petersburg Polytechnic University, Russia	Structural behavior of steel-concrete composite structures with external steel-plate reinforcement under accidental heating
48.	Vladimir I. LEBEDINSKIY	SEC NRS, Russia	On the results of applying a simplified pump unit model for seismic fragility assessment
49.	Yuriy N. PODLASOV	MSZ JSC, Russia	Oxidation-free heat treatment and leak testing of welds in absorber rods for the BREST reactor core
50.	Yelizaveta D. ZAKHAROVA	NIKIET JSC, Russia	Computational and experimental justification of the PSI GTsNA test bench
51.	Yuriy M. KRIVCHENKOV	Power Machines JSC, Russia	Stress categories in the assessment of static strength of corner welds
52.	Aleksey R. ROMASHKOV	Kalinin NPP, Russia	Justification of changes in the scope and frequency of operational non-destructive testing of the reactor vessel metal of unit 4 of the Kalinin NPP using PSA methods