



# International Conference on Fast Reactors and Related Fuel Cycles FR22: Sustainable Clean Energy for the Future (CN-291)

## Tuesday, April 19, 2022

**Poster Session: Poster Session (1:00 PM - 5:40 PM)**

time	[id] title	presenter
1:00 P	[M08] Simple Design Comparison of uranium nitride pin cell assembly and matrix fuel assembly for a Lithium Cooled Fast Reactor	PINEDA, Raul
1:00 P	[M51] LARGE-SCALE HYDROGEN PRODUCTION; Fast-neutron Reactors Coupled to Thermochemical Copper-Chlorine Hydrogen Plant	EL-EMAM, Rami
1:00 P	[M98] Development of Burnup Analysis System for rotational and Spiral Fuel Shuffling scheme in Breed-and-Burn Fast Reactors	Dr HOANG VAN, Khanh
1:00 P	[M58] On substantial slowing down of the kinetics of fast transient processes in fast reactor	Dr KULIKOV, Evgeny
1:00 P	[M22] Hybrid high power fast breeder reactor with metallic fuel and additives consisting with lightweight atoms	DROBYSHEV, IURII
1:00 P	[M86] Leak-Before-Break Design of Double-Walled Once-Through Steam Generators for Lead Cooled Fast Reactor	KIM, Taeyong
1:00 P	[M6] The neutronic study of the nitride fuel loaded CiADS core	Dr ZHANG, Youpeng
1:00 P	[M59] Investigation of characteristics of fast power reactor with an additional function of large-scale production of plutonium-238	Dr KULIKOV, Evgeny
1:00 P	[M11] New Finite Element Neutron Kinetics Code System FENNECS/ATHLET for Coupled Safety Assessment of (Very) Small and Micro Reactors	BOUSQUET, Jeremy
1:00 P	[M34] The "ALFRED White Book": a business card of the project	LODI, Francesco GRASSO, Giacomo FIRPO, Gabriele Ms DIACONU, Daniela
1:00 P	[M78] INDUSTRIAL ENERGY COMPLEX WITH FAST NEUTRON REACTOR	PETRENKO, Andrey
1:00 P	[M01] DESIGN & DEVELOPMENT OF CUSTOM SHAPED BACK-UP SEAL IN SILICONE FOR PFBR	AITHAL, Sriramachandra
1:00 P	[M14] CFD ANALYSES OF THE ALFRED HOT PLENUM	VISSER, Dirk
3:10 P	[M83] A Study on the Development of a Procedure Complexity Evaluation and Optimization for Operating Procedures of China Experimental Fast Reactor	Mrs ZHOU, Qi
3:10 P	[M11] New Concepts and Methodologies for the Effective Deployment of Gen IV reactors	Mr WILCOX, BOMA
3:10 P	[M33] Two-Component Energy Industry under Conditions of Closed Nuclear Fuel Cycle: Economic Benefits	ROSLAYA, Mariia
3:10 P	[M75] Numerical Investigation of Cellular Convection in the Cover Gas space of Fast Breeder Test Reactor	Mr CHATURVEDI , Kanha
3:10 P	[M26] RISK FACTORS OF COMPLEX RADIATION AND NON-RADIATION EFFECTS ON THE HEALTH OF PERSONNEL IN ASSESSING THE IMPACT OF THE PRODUCTION OF INNOVATIVE FUEL FOR FAST REACTORS	Dr PARINOV, Oleg Prof. SAMOILOV, Alexander

3:10 P1381	Nuclear Hydrogen and Fast Reactors	Dr IORDACHE, Ioan
3:10 P1499	Novel Electrical, Electronics and Instrumentation systems for Fast Reactor Fuel Reprocessing Plants	Mr BHANU, Prakash Mr GEO, Mathews
3:10 P1196	ULTRASONOSCOPY SYSTEM "VIZUS" FOR SODIUM-COOLED BN-TYPE REACTORS	Mr LESIUKOV , Dmitrii
3:10 P1140	Sustainability of nuclear and non-nuclear power generation options under Russian conditions: a comparative evaluation study	KVIATKOVSKII, Stepan
3:10 P1148	EXPORT OF RBN WITH SNCD AND NUCLEAR PROLIFERATION RISKS	KUCHINOV, Vladimir
3:10 P1129	CORROSION HYDROGEN MASS TRANSFER IN FAST REACTOR STEAM GENERATORS OF THE SODIUM-WATER TYPE	SMYKOV, Vladimir
3:10 P1123	INTEGRATED RADIATION AND HYGIENIC APPROACH TO PRODUCTION SAFETY. ASSESSMENT OF THE IMPACT ON PUBLIC HEALTH	Dr METLYAEV, Evgeny
3:10 P1117	NEXT GENERATION NUCLEAR POWER: RADIOLOGICAL SUSTAINABILITY AND ECOLOGICAL ADVANTAGES	IVANOV, Viktor
3:10 P1108	Design of experimental scheme for activation method of China demonstration fast reactor	Ms HU, XIAO
3:10 P1198	Development of a 15 kg servo manipulator for remote handling applications	D, Jagadishan

**Wednesday, April 20, 2022****Poster Session: Poster Session (10:35 AM - 5:00 PM)**

time	[id] title	presenter
10:40	<del>P10</del> The working capacity analysis of boron carbide after two-year operation as an emergency protection material of the fast reactor	Mr KINEV, Evgenii
10:40	<del>P14</del> Irradiation Effects of T91 Ferritic/Martensitic Steel	Mr LI, Junhong
10:40	<del>P17</del> Impact of Cladding Material on Neutronic Balance in Breed-and-Burn fast reactors	OBARA, Toru
10:40	<del>P18</del> HEAT TRANSFER CALCULATION AND SERVICE LIFE TIME ESTIMATION OF SUBMERGED ELECTROMAGNETIC PUMP FOR LIQUID LEAD	FEDERIAEVA, Valeriia
10:40	<del>P21</del> ON MEASUREMENT OF OXYGEN CONCENTRATION IN SODIUM BY MEANS OF PLUG INDICATOR	LOGINOV, Nikolai
10:40	<del>P26</del> Influence of preheating temperature on delta-ferrite formation and mechanical properties of 12%Cr steel weld metals	Dr WU, Dong
10:40	<del>P44</del> NON-DESTRUCTIVE METHOD FOR DETERMINING STEEL CORROSION COEFFICIENTS IN LEAD	Mr GOLOSOV, Oleg
10:40	<del>P102</del> Irradiation-Thermo-Mechanical Coupling Analysis and Calculation of Fast Neutron Oxide Fuel Element	Mr CHEN, Qidong
10:40	<del>P171</del> CURRENT STATE AND ISSUES OF THE HEAVY LIQUID METAL COOLANT TECHNOLOGY DEVELOPMENT (PB, PB-BI)	Mr ASKHADULLIN, Radomir
10:40	<del>P45</del> Experimental study on sodium insulation interaction and its effect on structural material	Mr CH SSS, Avinash
10:40	<del>P50</del> DEVELOPMENT OF SUBMERGED ELECTROMAGNETIC PUMP FOR LIQUID LEAD	Mr OBUKHOV, Denis
10:40	<del>P53</del> Impact of Core Materials on The Fuel cladding Irradiation Damage in Breed-and-Burn Fast Reactors	Dr SAMBUU, Odmaa
1:40 P	<del>M62</del> Thermal Hydraulic Simulation of Loss of Flow Without Scram Test in FFTF using DYANA-P code	GOVINDARAJAN, Vikram
1:40 P	<del>M65</del> Preliminary Shielding Analysis for the Versatile Test Reactor	FEI, Tingzhou
1:40 P	<del>M68</del> SIMULATION OF THE FAST FLUX TEST FACILITY LOSS-OF-FLOW WITHOUT SCRAM ACCIDENT SCENARIO USING THE SAM COMPUTER CODE	HOLLRAH, Brent
1:40 P	<del>M91</del> Fast Reactor Source Term Modeling and Simulation Functional Requirements and Gap Assessment	SHAHBAZI, Shayan
1:40 P	<del>M74</del> Study on Sodium Fire PSA Methodology for Pool-Type Sodium cooled Fast Reactor	WANG, Jing
1:40 P	<del>M60</del> Increase of nuclear power plant hydrogen safety using zirconium accumulator	ORLOVA, Ekaterina
1:40 P	<del>M03</del> Experimental and Numerical Study on Temperature Fluctuation in The Upper Plenum of Fast Reactor	Mr DU, Yongqi
1:40 P	<del>M9</del> Modelling of the in-vessel source term during a hypothetical severe accident in an SFR	PATEL, PARTHKUMAR RAJENDRABHAI

1:40 PM	M159] Development of the Simplified Radionuclide Transport (SRT) Code Version 2.0 for Versatile Test Reactor (VTR) Mechanistic Source Term Calculations	GRABASKAS, David
1:40 PM	M180] Development of in-vessel source term evaluation method for ULOF events in sodium-cooled fast reactor	Mr SONODA, Hiroki
1:40 PM	M184] Model validation of the ASTERIA-SFR code related to freezing phenomena of liquid and liquid/particle mixtures based on THEFIS experimental results	Dr ISHIZU, Tomoko Mr FUJITA, Satoshi
1:40 PM	M148] Analysis of sodium fire accident after upgrade of ventilation system of primary loop's corridor	Mrs YANG, jiyin

**Thursday, April 21, 2022****Poster Session (10:30 AM - 5:00 PM)**

time	[id] title	presenter
10:40	<del>A10</del> Eddy Current Flow Meter flow rate measurements in liquid Sodium at the SUPERFENNEC loop	Dr GERBETH, Gunter
10:40	<del>A15</del> JUSTIFICATION OF CRITICAL EXPERIMENTS ON STAND FKBN-2 TO VERIFY NEUTRON-PHYSICAL SOFTWARE FOR CALCULATIONS OF THE MOLTEN-SALT REACTOR	Mr TRAPEZNIKOV, Mikhail
10:40	<del>A14</del> Experimental investigation of the fluid-structure interaction effect between adjacent equipment supports in a fast reactor	Mr DUAN, Dexuan
10:40	<del>A10</del> Experiment-calculated method for determination of prompt neutron lifetime in fast metal cores intended for verification of neutron transfer simulation codes	ANDREEV, Sergey
10:40	<del>A13</del> Cognitive Information Retrieval Based on Ontological Model of Knowledge Representation	MAKSIMOV, Nikolay
10:40	<del>A15</del> RADIATION-HYGIENIC ASSESSMENT OF INTERNAL EXPOSURE FACTORS OF PERSONNEL WORKING AT EXPERIMENTAL FACILITIES IN THE PRODUCTION OF MIXED NITRIDE URANIUM-PLUTONIUM FUEL	Mr KAREV, Andrey
10:40	<del>A18</del> ALFRED DHR system scaling verification and numerical pre-test analysis	Mr CAMELLO, Marco
10:40	<del>A12</del> Conceptual Core configuration for increasing Power of Fast Breeder Reactor to 40 MWt	Mr GANAPATHY, RAGHUKUMAR
10:40	<del>A16</del> VERSATILE TEST REACTOR: CORE SYSTEM DESIGN REQUIREMENTS TO SUPPORT ADVANCED REACTOR DEVELOPMENT	NELSON, Adam
10:40	<del>A11</del> COMPLEX RADIATION AND HYGIENE STUDIES OF RADIATION IMPACT FACTORS ON PRODUCTION PERSONNEL, MIXED NITRIDE URANIUM-PLUTONIUM FUEL FOR FAST NEUTRON REACTORS	Prof. SAMOYLOV, Alexander
10:40	<del>A12</del> Revealing the dependencies of partitioning americium-241 and uranium using sorption technology based on solid-phase extractant TODGA	Mr SAVELEV, Aleksandr
10:40	<del>A11</del> Evaluation of EPDM and Silicone rubber compounds for application in Reprocessing Plant	KRISHNAMURTHY, Ananthasivan
10:40	<del>A10</del> Design, manufacturing and transportation of high capacity High Level Liquid Waste Storage tanks	Mr DHANANJEYA, Kumst
10:40	<del>A14</del> INVESTIGATION OF THE SOLUBILITY OF ACTINIDE FLUORIDES FOR THE CHOICE OF A SALT SOLVENT FOR A MOLTEN-SALT REACTOR-BURNER OF MINOR ACTINIDES	САНИКОВА, Полина
1:40 P	<del>A16</del> Electrolytic reduction of the simulated oxide spent nuclear fuel in LiCl-Li <sub>2</sub> O melt	DEDYUKHIN, Alexander
1:40 P	<del>A1</del> Development of density control technologies for MOX pellet using dry recycled powders	NISHINA, Masahiro
1:40 P	<del>A134</del> Comparative analysis of minor actinides transmutation in a molten-salt burner reactor based on LiF-NaF-KF and LiF-BeF <sub>2</sub> salts	BELONOGOV, Mikhail
1:40 P	<del>A181</del> Optimization of Ruthenium concentration in PUREX Process during Fast reactor fuel Reprocessing	KRISHNAMURTHY, Ananthasivan
1:40 P	<del>A143</del> Electrical conductivity of multicomponent chloride melts, containing ions of mono-, di-, and trivalent metals	Prof. POTAPOV, Alexei

1:40 P[M84]	Assay of Waste drum based on Passive Neutron Counting Technique	Dr P, Sivakumar
1:40 P[M45]	Determination of the metallic and oxide compounds in models based on metallic uranium containing uranium dioxide, metallic neodymium, cerium as well as neodymium and cerium oxides	Prof. ZAIKOV, Yury
1:40 P[M95]	Development of Artificial Intelligence through PLC & SCADA to predict process related failure and abnormality in a Reprocessing Plant	KRISHNAMURTHY, Ananthasivan
1:40 P[M28]	Removal of Radiocesium from High-Level Liquid Waste using Inorganic Ion-exchangers	Ms KUMARI, Anshul
1:40 P[M68]	Transmutation of minor actinides in a fast reactor with uranium-cerium fuel	Ms TEREKHOVA, Anna
1:40 P[M57]	Controlled thermonuclear fusion: potential role of a joint (Th-U-Pu) nuclear fuel cycle	Dr KULIKOV, Evgeny
1:40 P[M4]	R&D on recovery and separation of americium and curium under "Proryv" project	Dr VIDANOV, Vitali
1:40 P[M41]	Reprocessing of nitride and metallic spent nuclear fuel using molten salts	Prof. POTAPOV, Alexei
1:40 P[M61]	Transmutation efficiency of minor actinides in fast-and thermal-spectrum molten salt reactors	Mr ASHRAF, O.

**Friday, April 22, 2022****Poster Session: Poster Session (10:30 AM - 3:30 PM)**

time	[id] title	presenter
10:30	A116] DEVELOPMENT OF THE TECHNICAL APPROACH FOR RESEARCH OF THE SODIUM COOLANT CURRENT IN THE INTEGRAL TYPE REACTOR	Mr ROGOZHNIKIN , Sergei
10:30	A111] ENDF/B-VIII.0 NUCLEAR DATA SENSITIVITY AND UNCERTAINTY (S/U) ANALYSIS OF KEY SAFETY-RELEVANT REACTIVITY COEFFICIENTS FOR THE ALFRED CORE	Mr CASTELLUCCIO, donato maurizio Dr LODI, francesco Dr PELUSO, vincenzo giuseppe Dr GRASSO, giacomo Dr SAROTTO, massimo
10:30	A113] Software for Simulation of Fast Reactor Operation in a Closed Nuclear Fuel Cycle (SC RTM-2)	POPOV, Ivan
10:30	A110] Integrated thermal hydraulic analysis of Hot and Cold Pools of a liquid sodium cooled 600 MWe fast reactor	MAITY, Ram Kumar
10:30	A117] COMPARATIVE ANALYSIS OF CALCULATIONAL AND EXPERIMENTAL DIFFERENCES OF THE NEUTRON-PHYSICAL CHARACTERISTICS OF THE BN-800 REACTOR	Mr MISHIN, Viacheslav
10:30	A111] Study on the Method of Correction of Fast Reactor Power Distribution by MCNP	Mrs JIA, Xiaochun
10:30	A118] CRITICALITY SENSITIVITY ANALYSIS IN RELATION TO EMPTIES OF A FAST REGENERATOR NUCLEAR REACTOR	FIEL, Joao Claudio
10:30	A116] Modeling of the coolant region in the ALFRED core in case of thermal expansion	Mr PERGREFFI, Roberto
10:30	A118] Application of Model Based System Engineering in Design of Digital Fast Reactor Nuclear Power Plant	YUJIE, Guo
10:30	A119] ELABORATION OF THE THERMAL-HYDRAULIC CHARACTERISTICS OF THE REACTOR PLANT BASED ON THE OPERATION EXPERIENCE OF THE POWER UNIT WITH BN-800 REACTOR	FADEEV, Iliia
10:30	A110] Characterization of the Molten Chloride Fast Reactor fuel cycle options	KREPEL, Jiri
1:30 P	M142] Thermodynamic simulation of the oxidation processes at the reprocessing of spent nuclear fuel in the LiCl-KCl melt	Prof. POTAPOV, Alexei
1:30 P	M113] Research on the Impact of Advanced Rule Design System on the Digitization of Reactor Building Model	WANG, Jin Prof. YANG, Hongyi
1:30 P	M145] Some results of using partial equations for calculations of transient processes in fast breeder reactors	Prof. SELEZNEV, Evgeny
1:30 P	M113] Verification and validation of the CEFR Serpent model for the generation of reference solutions and Cross Sections database for the deterministic code AZNHEX	Dr LOPEZ-SOLIS, Roberto
1:30 P	M116] Calculation of the materials activation with BPSD code	Mr BELOV, Alexander
1:30 P	M118] Integral code COMPLEX for radiation safety assessment of reactor and nuclear fuel cycle facilities	Mr BEREZNEV, Valerii
1:30 P	M135] Neutronic Calculation of CEFR Core using Different Nuclear Data Libraries	MOISE, Andreea
1:30 P	M118] Modeling of water leak into sodium in the BN-600 steam generator	MIAZDRIKOVA, Olga



1:30 PM	[165] ADS for Energy Production and <sup>233</sup> U breeding in HEU-Thorium Oxide system	Mr ALI, Ahmed
1:30 PM	[187] Mitigation of Sloshing Effects in High level Liquid Waste (HLW) Storage Tank for Nuclear Spent Fuel Applications	KRISHNAMURTHY, Ananthasivan
1:30 PM	[156] The Code Complex for Computational Evaluation of Technical Solutions and Optimization of Processes Parameters of CNFC	Dr MAKEEVA, Inga