



**RUSSIAN AND
INTERNATIONAL UNION
OF SCIENTIFIC AND
ENGINEERING ASSOCIATIONS**



IOP Conference Series

CONFERENCE PROGRAMME

II International Conference on Advanced Technologies in Aerospace, Mechanical and Automation Engineerin - MIST: Aerospace-2019

(Krasnoyarsk, Russia, November 18-21, 2019)

Conference website:

<http://conf.domnit.ru/ru/conferences/mist-aerospace-2019-ru/>

**Krasnoyarsk
2019**

ABOUT THE CONFERENCE

International and Russian Union of Scientific and Engineering Associations, Krasnoyarsk Regional Union of Scientific and Engineering Associations, Krasnoyarsk Science and Technology City Hall are organizing II International Scientific Conference «Advanced Technologies in Aerospace, Mechanical and Automation Engineering» - “MIST: Aerospace - 2019”.

The purpose of the Conference is to share the results and prospects of the achievements in using advanced scientific, innovative and information technologies in aerospace industry, mechanical engineering and automation, economics and organization of mechanical engineering production, automation engineering for industry 4.0, etc.

In the framework of the Conference an international workshop on the mathematical models and their applications (IWMMA-2019) will be held. The workshop will provide an international forum for the presentation of original results in mathematical modelling for software- and hardware applications in various fields of engineering, natural sciences, cybernetics, computer science, etc.

The Conference is jointly organised by the International and Russian Union of Scientific and Engineering Associations (Moscow, Russia), Krasnoyarsk Regional Union of Scientific and Engineering Associations and Krasnoyarsk Science and Technology City Hall. The main partner organisations in preparing and organising the Conference in Krasnoyarsk as well as of the previous scientific events are: JSC “Central Construction Bureau “Geophysics”, JSC “ISS-Reshetnev Company”, Siberian Federal University, Institute of Informatics and Telecommunications of Reshetnev University, Krasnoyarsk Scientific Centre of the Siberian Branch of the Russian Academy of Sciences. The event offers a platform for bringing together students, postdocs, innovative academics and industrial experts to exchange their ideas and contribute new engineering approaches to research mechanical and automation processes in various technological and information systems.

The program of the Conference consists of keynote and plenary talks and numerous presentations. The Conference provides the premier interdisciplinary and multidisciplinary forum for researchers, practitioners and educators to present and discuss the most recent innovations, trends, concerns, practical challenges encountered and the solutions adopted in the fields of aerospace technologies, materials sciences, mechanical engineering, cybernetics, data protection, ecological and power engineering, etc.

The programme of the Conference includes the following 5 sections:

- Aerospace Engineering;
- Mechanical Engineering and Industry;
- Mathematical Models and their Applications (IWMMA-2019);
- Cybernetics, Automation and Information Technologies;
- Ecology and Ecological Engineering; Power Engineering.

More than 350 reports were submitted to the Organizing Committee of the 2-nd International Conference “Advanced Technologies in Aerospace, Mechanical and Automation Engineering - MIST: Aerospace-II” and IWMMA-2019. 250 reports were selected after the review process. All the papers were subjected to rigorous peer-review by conference committee members and international reviewers. The papers were selected based on their quality and relevance to the Conference and Workshop directions. The papers present the recent advances in the field of aerospace engineering, mechanical engineering and industry, materials science, data protection in automation systems, cybernetics, information technologies, ecological engineering and power engineering. These papers reflect modern engineering approaches in all Conference directions. We chose the IOP Conference Series: Materials Science and Engineering to provide all contributors with the opportunity to publish their papers in an international, peer-reviewed journal. The Proceedings will be published in the 1st quarter of 2020.

We highly appreciate JSC “Academician M.F. Reshetnev Information Satellite Systems” for financial support of the 2-nd International Conference “Advanced Technologies in Aerospace, Mechanical and Automation Engineering - MIST: Aerospace-II”. We express our gratitude to Professor Eugene Semenko for the organization of the IWMMA Workshop. MIST: Aerospace-II Conference Committee highly appreciate the contribution of Professor Oleg Kravets (Voronezh State Technical University, Russia) for cooperation in organisation of our Conference. We are grateful to scientists and professors of Siberian Federal University, Saint Petersburg State University of Aerospace Instrumentation, Institute of Computational Modeling of Siberian Branch of Russian Academy of Sciences and Reshetnev Siberian State University for active participation in the Conference.

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SECTION 1. AEROSPACE TECHNOLOGIES

MIST_1001	Heat calculation unit in the mathematical model of air separation plant evaporator-condenser	V V Chernenko and D V Chernenko	Reshetnev Siberian State University of Science and Technology, Krasnoyarsk
MIST_1002	Most important factors affecting radio frequency characteristics of microwave cable assemblies	D A Bolshakov, I O Trifanov, N N Burdukovskaya and K V Shugurova	JSC "Information satellite system" academician M.F. Reshetnev", Zheleznogorsk, Krasnoyarsk region, Russia Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, 660037, Russia Siberian State University, Krasnoyarsk, Russia
MIST_1003	Modeling the thermal process using the temperature functional by electron beam welding	Yu N Seregin and S O Kurashkin	Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russia
MIST_1004	Protection of high frequency generators with unstable load	A G Samoylov, V S Samoylov, S A Samoylov and I A Al Tahar	Vladimir State University named after Alexander and Nikolay Stoletovs, Vladimir, Russia
MIST_1005	Design and monitoring of oil and gas industry facilities based on the use of ultra-light aviation and digital technologies	AG Topchiev	Department of APS of the I.M. Gubkin Russian State University of Oil and Gas, Moscow, Russia
MIST_1006	Transport and logistics hub for unmanned aircraft	N V Levshonkov and E S Golovina	Kazan National Research Technical University named after A.N. Tupolev – KAI, Kazan, Republic of Tatarstan
MIST_1007	To a question on the possibility of using mechanoluminescent sensor elements with area-distributed sensitivity in aerospace engineering	K V Tatmyshevskiy and D D Pavlov	Vladimir State University
MIST_1009	Economic efficiency of the application of additive technologies based on laser direct metal tooling in the production of aircraft parts	D G Levashkin , F V Vasilyev	Togliatti State University, Togliatti, Moscow Aviation Institute (National Research University), Moscow, Russian Federation
MIST_1010	Evaluation of storage and functioning characteristics of artificial neural networks on the basis of a neurocomputer device	V A Romanchuk	Ryazan State University named for S. Yesenin

MIST_1011	On the choice of in-process allowance for hardening	A S Bachurin and N V Kurlaev	Novosibirsk State Technical University; Energozapas, Novosibirsk, Russia
MIST_1012	Information and space technologies in the development of hunting and domestic reindeer husbandry	A L Salman, A P Savchenko, G Grebel, I M Okhlopkov, P A Savchenko, S A Dubintsov, V G Soukhovolsky and A N Muravyov	ES-PAS Ltd., Moscow; Institute of Ecology and Geography, Siberian Federal University, 79, Svobodnyi prospekt, Krasnoyarsk, Russia; CLS (Collecte Localisation Satellites), Ramonville Saint-Agne, France; Institute for Biological Problems of Cryolithozone of SB of BAS
MIST_1013	High-precision CubeSat sun sensor coupled with infrared Earth horizon detector	A V Pelemeshko, A Y Kolesnikova, A V Melkov, V Y Prokopyev and A M Zadorozhny	Novosibirsk State University, OKB Fifth Generation Ltd., Novosibirsk, Russia
MIST_1014	Sequential agglomerative procedure for sorting a production batch of electronic radio devices into homogeneous groups	S M Golovanov, V I Orlov, L A Kazakovtsev, V V Fedosov	Reshetnev University
MIST_1015	Probability prediction of the appearance of overload cycles of variable load case in parts of the aircraft chassis	G N Kravchenko, Yu I Popov and K G Kravchenko	Moscow Aviation Institute (National Research University)
MIST_1016	Experimental research of dynamic characteristics of electro-backup hydraulic actuator at the load test-rig of flight control systems	A S Alekseenkov, E V Erofeev and L V Khaletskiy	Moscow Aviation Institute (National Research University)
MIST_1017	Research of dynamic characteristics of the hybrid electrohydraulic aircraft actuator with combined speed control	A S Alekseenkov and E V Erofeev	Moscow Aviation Institute (National Research University), Moscow, Russian Federation
MIST_1018	Machine-learning based technique for reduction of false cardiac arrhythmia alarms in ICU	A P Zaretskiy, K S Mityagin, V S Tarasov and I B Prokhorov	Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Russia
MIST_1019	Planar multigraphene/SiC blade-shaped field emission nanostructures	I L Jityaev, A M Svetlichnyi and A S Kolomiytsev	Southern Federal University, Taganrog, Russia

MIST_1020	Assessment of Ontological Structures Semantic Similarity Based on a Modified Cuckoo Search Algorithm	Y Kravchenko and V Bova	Southern Federal University, Rostov-on-Don, Russian Federation
MIST_1021	Support for decision-making to combat natural fires in Taiga-Analyst system	G A Dorrer, S V Kobijzhakova, S V Jarovoj	FGBOU department of the academician M.F. Reshetnev's Siberian state university of science and technologies, Krasnoyarsk; FSBOU VO Siberian Fire and Rescue Academy of the Ministry of Emergency Situations of Russia, Zheleznogorsk, Russia
MIST_1022	Analysis of integral characteristics in the IoT system	Lvovich I Ya, Lvovich Ya I, Preobrazhenskiy A P, Preobrazhenskiy Yu P, Choporov O N	Voronezh institute of high technologies; Voronezh state technical university
MIST_1023	Model studies of systems with diagnostics based on fault simulation	D A Pankov, L A Denisova	Omsk State Technical University
MIST_1024	An experimental bench for testing the cracks detecting technology in the blades of working aircraft engines	M S Grinkrug, M Kara Balli, J I Tkacheva and N A Novgorodov	Komsomolsk-on-Amur State University, Komsomolsk-on-Amur, Russian Federation
MIST_1025	The comprehensive assessing marketing of the industrial enterprise using a balanced scorecard	V V Kukartsev, N V Fedorova, V S Tynchenko, E A Nozdrenko, E V Mylnikova and N V Sokolovskiy	Reshetnev Siberian State University of Science and Technology; Siberian Federal University, Krasnoyarsk, Russia
MIST_1026	The use of inhibited layers to improve mechanical properties of thermoset composite materials	A E Protsenko, V V Telesh and A K Potkalov	Komsomolsk-on-Amur State University, Komsomolsk-on-Amur, Russia
MIST_1028	Rhenium behavior in the KF-KBF4-B2O3-KReO4 melt	S P Arkhipov, A P Apisarov, A V Isakov, and Y P Zaykov	Institute of High Temperature Electrochemistry, Ural Branch of the Russian Academy of Sciences, Ekaterinburg; Ural Federal University, Ekaterinburg, Russia
MIST_1029	Method of the encoding and decoding schemes' synthesis in communication systems using orthogonal coding	A V Rabin	Saint-Petersburg State University of Aerospace Instrumentation

MIST_1030	Quartz optical cells with alkali-metal vapour for aerospace	S A Khripunov, S M Kobtsev, D A Radnatarov and V A Andryushkov	Novosibirsk National Research State University
MIST_1031	Orthogonal code symbols' synchronization in communication systems	A V Rabin	Saint-Petersburg State University of Aerospace Instrumentation
MIST_1032	The effect of the PCB solder mask type of the hull outer surface of the CubeSat 3U on its thermal regime	V N Gorev, A A Kozlov , V Yu Prokopyev , Yu M Prokopyev , A S Stuf and A A Sidorchuk	Novosibirsk State University, OKB Fifth Generation Ltd., Novosibirsk, Russia
MIST_1033	Adaptive vulnerability detection model for unmanned vehicles drugs based on artificial immune systems	A V Skatkov, A A Bryukhovetskiy and D V Moiseev	Sevastopol state university, Sevastopol, Russia
MIST_1034	Heat transfer coefficient of laminar rotational flow	A A Zuev, A A Arngold, V A Levko, I A Maksimov and A D Leonenkov	Reshetnev Siberian State University of Science and Technologies, JSC Academician M.F. Reshetnev «ISS» Zheleznogorsk
MIST_1035	Modelling race conditions in multithreading programs in terms of Petri nets	D I Kharitonov and D S Odyakova	Institute of Automation and Control Processes Far Eastern Branch of the Russian Academy of Sciences (IACP FEB RAS)
MIST_1036	Optimal control method for a large-sized mirror-shaped reflector of a spacecraft	E V Bikeev, M G Matylenko, D O Shendalev, Yu V Vilkov, F K Sin'kovsky, Y V Kolovskiy and A I Kuklina	JSC Academician M.F. Reshetnev «ISS» Zheleznogorsk, Siberian Federal University, Reshetnev Siberian University of Science and Technology, Krasnoyarsk, Russia
MIST_1037	Research results of planetary roller screw transmission for high-precision mechanisms	S O Boyko, E N Golovenkin, R P Silivanov, A V Lekanov and A A Melkomukov	JSC Academician M.F. Reshetnev «ISS» Zheleznogorsk, Krasnoyarsk region, Russia
MIST_1038	The development and reliability analysis environment of fault-tolerance multiversion software	I V Kovalev, D I Kovalev, V S Chefonov, N A Testoedvov, A A Koltyshev and A G Krivogornitsyn	Siberian Federal University, Reshetnev Siberian State University of Science and Technology, Krasnoyarsk State Agrarian University, JSC Academician M.F. Reshetnev «ISS» Zheleznogorsk, Krasnoyarsk region, Russia

MIST_1039	Mathematical analysis of spacecraft control cyclograms	N A Testoedov, V E Kosenko, E N Golovenkin, A V Kuzovnikov and I V Kovalev	JSC Academician M.F. Reshetnev «ISS» Zheleznogorsk, Reshetnev Siberian University of Science and Technology, Siberian Federal University, Krasnoyarsk State Agrarian University, Krasnoyarsk Science and Technology City Hall, Krasnoyarsk, Russia
MIST_1040	Implementation of multiversion software based on an object-oriented approach	I V Kovalev, D I Kovalev, N S Chefonov, N A Testoedov and E N Golovenkin	Siberian Federal University, Reshetnev Siberian State University of Science and Technology, Krasnoyarsk State Agrarian University, JSC Academician M.F. Reshetnev «ISS» Zheleznogorsk, Krasnoyarsk region, Russia
MIST_1041	Combined efficiency margin in the implementation of the DEA method	I V Kovalev, A S Kuznetsov, N V Zenutkin, E A Morozov and A V Zeitler	Reshetnev Siberian University of Science and Technology, Siberian Federal University, Krasnoyarsk State Agrarian University, Krasnoyarsk Science and Technology City Hall, JSC Academician M.F. Reshetnev «ISS» Zheleznogorsk, Krasnoyarsk region, Russia
MIST_1042	Analytical approach to the diversification effect evaluation of the innovative engineering projects portfolio for a machine-building enterprise	E N Golovenkin, V Yu Vilkov, D A Matronitsky, A S Bliznevsky, A A Voroshilova and E V Tuev	JSC Academician M.F. Reshetnev «ISS» Zheleznogorsk, Krasnoyarsk Science and Technology City Hall, Reshetnev Siberian University of Science and Technology, Krasnoyarsk, Russia
MIST_1043	GERT-network optimization model for technologies of hazardous industry management	V V Baranov, A S Bliznevsky, D A Kaftasyev, Ya A Tynchenko and A S Kuznetsov	JSC Academician M.F. Reshetnev «ISS» Zheleznogorsk, Reshetnev Siberian University of Science and Technology, Siberian Federal University, Krasnoyarsk, Russia
MIST_1044	Top down designing spacecraft in CAD applying knowledge-based parametric patterns	M V Lihachev, I V Poturemsky, Yu G Vygonsky, A D Leonenkov and V V Baranov	JSC Academician M.F. Reshetnev «ISS» Zheleznogorsk, Krasnoyarsk region, Russia

SECTION 2. MECHANICAL ENGINEERING AND INDUSTRY

MIST_2001	Flexural fluctuations of rotor knife refiners	S N Vikharev, A A Sannikov and M T Zinatov	Ural State Forest Engineering University, Ekaterinburg, Russia
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MIST_2002	Potential for development of innovative processes in the high-tech sector of the region's economy	Z A Vasilyeva, T P Lihacheva, A V Moskvina and V V Borodkina	Siberian Federal University
MIST_2003	Priorities of technological development of raw materials region	I V Filimonenko, A V Moskvina, O V Ryzhkova and M A Likhachev	Siberian Federal University
MIST_2004	Products of the Industry 4.0 competence centers	D A Zakoldaev, A V Gurjanov, A V Shukalov, I O Zharinov	Saint Petersburg National Research University of Information Technologies, Mechanics and Optics, Saint Petersburg; Saint Petersburg State University of Aerospace Instrumentation, Saint Petersburg, Russia
MIST_2005	Longitudinal fluctuations of rotors disk knife refiners	S N Vikharev	Faculty of technical mechanics and the equipment of pulp and paper manufactures, Ural State Forest Engineering University, Ekaterinburg, Russia
MIST_2006	Optimization parameters of the drilling technological process mathematical model	A A Shigina, A A Stupina, S M Antipina, V S Tynchenko and N N Dzhioeva	Siberian Federal University, Krasnoyarsk; Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russia
MIST_2007	Justification of well drilling modes using collapsible drilling tools with multi-row cutting structure	K. A. Bovin, A.O. Shigin, I. S. Plotnikov, R. Z. Nafikov and A. I. Miranov	
MIST_2008	Vibroacoustic processes of grinding fibrous semi-finished products in the knife refiners	S N Vikharev	Faculty of technical mechanics and the equipment of pulp-and-paper manufactures, Ural State Forest Engineering University, Ekaterinburg, Russia
MIST_2009	Engineering design of second distillation column of IPA	Ibragim M Bamatov and Dzhabrail M Bamatov	Chechen State University, Grozny, Russia
MIST_2010	Industry 4.0 vs Industry 3.0: the role of personnel in production	D A Zakoldaev, A G Korobeynikov, A V Shukalov, I O Zharinov, O O Zharinov	Saint Petersburg National Research University of Information Technologies, Mechanics and Optics, Saint Petersburg; Saint Petersburg State University of Aerospace Instrumentation, Saint Petersburg, Russia

MIST_2011	High-tech small digital manufacturing in mechanical engineering	E V Platonova, V V Platonov, V V Timchenko, E M Zheltobruhov	Siberian Federal University, Abakan, Russia
MIST_2012	A technique for monitoring content of undissolved gas in a hydraulic drive of a self-propelled vehicle	A S Lunev, V I Afanasov, A A Nikitin, D A Sokolov, V A Ionova and V Y Obvintseva	Siberian Federal University, Krasnoyarsk, Russia
MIST_2013	Determination of rational parameters of vibrating devices of excavator buckets in order to reduce soil adhesion	S A Zenkov	Bratsk State University, Bratsk, Russia
MIST_2014	Assessment of technological development and economic sustainability of domestic industry in modern conditions	M I Sadridinov, T V Mezina, D E Morkovkin, Ju A Romanova and A A Gibadullin	The Tajik state university of finance and economics, The Republic of Tajikistan, Dushanbe; Financial University under the Government of the Russian Federation; Institute of Market Problems at the Russian Academy of Sciences; State University of Management, Russian Federation, Moscow.
MIST_2015	Climatic effect on characteristics of a hydraulic drive of a self-propelled vehicle	A S Kaverzina, A S Lunev, V I Afanasov, A I Pilyugaev, I V Andreychikov and M V Zakovryazhin	Siberian Federal University, Krasnoyarsk, Russia
MIST_2016	Torsion of anisotropic and inhomogeneous prismatic rods with a rectangular cross section	E A Derevyannykh, A N Maksimov, T V Mitrofanova, T N Smirnova, T N Kopysheva	Chuvash State Agricultural Academy, Chuvash State University named after I.N. Ulyanov, Chuvash State Pedagogical University named after I.Ya.Yakovlev, Cheboksary, Russia
MIST_2017	Simulation of the process of conduction of thermal energy transfer through the multilayer wall of the apparatus	A I Tuishchev, T P Tretyakova, T S Ozerova and Yu P Kulakova	Togliatti State University, Togliatti
MIST_2018	Kinetics of fatigue cracking of fixed offshore platforms for oil and gas production	I V Starokon	Gubkin Russian State University of Oil and Gas (National Research University)
MIST_2019	Analysis of static loading of meshing in planetary cycloid gear	I I Artyomov, E A Tchufistov and O E Tchufistov	Penza State University; Penza State Technological University, Penza, Russia

MIST_2020	Object model of technical solutions for designing a locomotive train drive	D Ya Antipin, V I Vorobiev and D A Bondarenko	Bryansk State Technical University, Bryansk, Russia
MIST_2021	Calculation of the efficiency of the planetary gear K-V-V without a carrier	G Yu Volkov, D V Fadyushin and M A Mirchuk	I Federal State Budgetary Educational Institution of Higher Education "Kurgan State University", Kurgan, Russia
MIST_2022	Features of the thermal imaging method for quality control of profile heat pipes	D.A.Petrov, V.A.Karachinov, A.V.Petrov, A.S.Ionov, D.A. Evstigneev	JSC OKB planet
MIST_2023	Consulting in international specialization and cooperation of high-tech industries	Svetlana Yu Piskorskaya, Yulia N Malanina	Reshetnev Siberian State University of Science and Technology, Krasnoyarsk; Irkutsk State Transport University, Irkutsk, Russia
MIST_2024	Mathematical model of the tool for reverse trimming of non-rigid products	S N Brichenkov , I D Sokolova and L S Beckel	KB of BMSTU, Kaluga, Russia
MIST_2025	The impact of the shunting processes in a plasma arc on the melting performance of the filler wire	S I Ivanov, A A Petrenko, I A Dmitrieva and O N Sakharova	Department Equipment and technologies for welding production, Department of Automotive and Vehicle Service Polytechnic Institute (branch) of Don State Technical University in Taganrog, Russia
MIST_2026	Creation of a methodology for predicting the appearance of knocks of shock absorber at the first stages of vehicle design	L A Cherepanov, V E Epishkin and D A Gordeev	Togliatti State University, Togliatti; SAAZ Complect LLC, s. Chulkovo, Skopinskiy r-n, Ryazanskaya oblast, Russia
MIST_2027	Results of formation of knife blade	N F Urinov, M H Saidova, R S Odinaev and R N Isamov	Bukhara Engineering-Technological Institute, Uzbekistan
MIST_2028	Identification of the relationship of the magnitude of the rise tool tooth and the physical and mechanical properties of the material and the tool broaching	V V Kuts, V S Kochergin, and M S Razumov	South-Western State University, Kursk, Russia
MIST_2029	Mechanical engineering design of IPA distillation column	I M Bamatov, R S-Kh Edelgeriev and D M Bamatov.	Chechen State University, Grozny, Russia. Advisor to the President of the Russian Federation, Moscow, Russia

MIST_2030	Creating molecular weight distribution of butadiene rubber on neodymium-based catalytic system	G V Manuyko, D V Bashkirov, V V Bronskaya, T V Ignashina, O S Kharitonova and G A Aminova	Kazan National Research Technological University, Kazan, Russian Federation
MIST_2031	Prediction of cutting force during hard turning of 105WCr6 steel using artificial neural network and neuro-fuzzy modeling	D A Rastorguev and A A Sevastyanov	Togliatti State University, Togliatti City, Russian Federation
MIST_2032	Study of the working face of a flexible grinding tool	V S Lyukshin, D B Shatko and P A Strelnikov	T.F. Gorbachev Kuzbass State Technical University
MIST_2033	On the design of deep-sea optical elements from PMMA	N A Gasratova and V S Zuev	St. Petersburg State University, St. Petersburg, Russia
MIST_2034	Thin sheet metal forming with composite material	D A Ikonnikov and I E Semenov	Bauman Moscow State Technical University, Moscow, Russia
MIST_2035	Evaluation of the uniformity of plastic deformation under tension	D A Rastorguev	Togliatti State University, Togliatti, Russian Federation
MIST_2036	Testing models of organizational and technological processes for machining based on the method of ant colonies	O V Chengar, V I Shevchenko, T A Kokodey	Sevastopol State University, Sevastopol; Russia
MIST_2037	Technology of ionic- plasmic nitriding of teeth of disc saw of the knot of saw cylinder	Nasullo Urinov, Muhabbat Saidova, Akbar Abrorov, Navruz Kalandarov	Bukhara Engineering-Technological Institute (Uzbekistan)
MIST_2038	Technology support for the supply of an element of the coating material during cladding with a flexible tool	A V Zotov, N V Semenchenko, R R Dema and O R Latypov	Togliatti State University, Togliatti City; LLC SIBUR-Togliatti, Togliatti City; Nosov Magnitogorsk State Technical University, Magnitogorsk City, Russian Federation
MIST_2039	Investigation of the effect of thin films of aluminum nitride on the stone-like destruction of cast steel	M L Skryabin and V A Likhanov	Vyatka State Agricultural Academy, Kirov, Russia

MIST_2040	Calculations of some thermo-physical properties of aluminum alloys using data of thermal analysis	V B Deev, O G Prihodko, E S Prusov, A I Kutsenko, Mei Shunqi, A A Aksenov and T A Bazlova	Wuhan Textile University, Wuhan, China; National University of Science and Technology "MISIS", Moscow, Russia; Siberian State Industrial University, Novokuznetsk, Russia; Vladimir State University named after Alexander and Nikolay Stoletovs, Vladimir, Russia
MIST_2041	Development of an improved coaxial cell for measuring the shielding effectiveness of materials	A V Demakov and M E Komnatnov	Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia
MIST_2042	Model for estimating the shielding effectiveness of an enclosure with a perforated wall	A A Ivanov and M E Komnatnov	Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia
MIST_2043	Modeling and simulation of chemical processes using the hybrid methodology	Yury V Shornikov and Evgeny A Popov	Novosibirsk State Technical University, Novosibirsk, Russia
MIST_2044	Design features of hybrid bearings with adjustable stiffness	R N Polyakov, KornaeV A V, Bondarenko M E, Shutin D V	Orel State University named after I.S. Turgenev
MIST_2045	Features of evaluating the effectiveness of industrial enterprise marketing activities	V V Kukartsev, V V Khramkov, N V Fedorova, A V Rozhkova, V S Tynchenko and K A Bashmur	Reshetnev Siberian State University of Science and Technology; Siberian Federal University; Krasnoyarsk State Agrarian University, Krasnoyarsk, Russia
MIST_2046	Application of artificial neural networks digital filtering in measurements.	O A Galkovskii	Department of BEMT, Vladimir State University, Vladimir
MIST_2047	Methods of assessing the efficiency of the foundry industrial marketing	N V Fedorova, N N Dzhioeva, V V Kukartsev, N A Dalisova, A R Ogol and V S Tynchenko	Reshetnev Siberian State University of Science and Technology; Siberian Federal University; Krasnoyarsk State Agrarian University, Krasnoyarsk, Russia
MIST_2048	Methodology for the formation of indicators balanced system for marketing activities of an industrial enterprise	N V Fedorova, V V Kukartsev, V S Tynchenko, Yu V Danilchenko, S N Ezhemanskaya and N V Sokolovskiy	Reshetnev Siberian State University of Science and Technology; Siberian Federal University, Krasnoyarsk, Russia

MIST_2049	Design features of skid plate kinematics of the machine	D V Chernik, A A Karelina, M M Litvinova and R V Kazancev	Reshetnev Siberian State University of Science and Technology
MIST_2050	Methodology for determining achievement's key indicators for the marketing service of industrial enterprise	V S Tynchenko, N V Fedorova, O I Kukartseva, L N Korpacheva, V V Kukartsev and S V Aponasenko	Reshetnev Siberian State University of Science and Technology; Siberian Federal University, Krasnoyarsk, Russia
MIST_2051	Intelligent decision - making support on the level of encryption of information transmitted in the UMV information exchange channels	D V Moiseev, A A Bryukhovetskiy and A V Skatkov	Sevastopol State University
MIST_2052	Model of vulnerability detection of UMV interfaces based on the assessment of the information state of objects	A V Skatkov, A A Bryukhovetskiy and D V Moiseev	Sevastopol State University

SECTION 3. MATHEMATICAL MODELS AND THEIR APPLICATIONS (IWMMA-2019)

MIST_3007	Confidence-based Voting Procedure for Combining Fuzzy Systems and Neural Networks	V Stanovov, Sh Akhmedova and Y Kamiya	Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russian Federation, Aichi Prefectural University, Nakagute, Japan
MIST_3008	“Economic” forest growth models: the impact of phytomass removal	V Soukhovolsky and Y Ivanova	Sukachev Institute of Forest FRC KSC SB RAS, Institute of Biophysics FRC KSC SB RAS, Russia
MIST_3009	Ensemble of the nature-inspired algorithms with success-history based position adaptation	Sh Akhmedova, V Stanovov, D Erokhin and O Semenkina	Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russian Federation
MIST_3010	The Research and Development of the Hybrid Algorithm Based on the Collective Behavior of Fish Schools and the Classical Optimization Methods	L Demidova and A Gorchakov	MIREA – Russian Technological University, Moscow
MIST_3011	Mathematical models for determining the boundaries of forest areas unstable to the appearance of insects using satellite data (MODIS)	A A Kovalev, Yu D Ivanova, A A Sukhovolskiy, V E Volkov and V G Sukhovolskiy	Krasnoyarsk Scientific Center SB RAS, Institute of Biophysics SB RAS, Krasnoyarsk, Siberian Federal University, Krasnoyarsk, Institute of Forest SB RAS, Krasnoyarsk, Russia

MIST_3012	Computational technology for the study of atomic-molecular Morse clusters of extremely large dimensions	P Sorokovikov, A Gornov and A Anikin	Matrosov Institute for System Dynamics and Control Theory of SB RAS, Irkutsk,
MIST_3013	Automatic differential equations identification by self-configuring genetic programming algorithm	T S Karaseva	Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russian Federation
MIST_3014	The main aspects of conformity assessment of DLP-systems used to ensure the security of significant objects of critical information infrastructure of the Russian Federation	V V Selifanov, P A Zvyagintseva, J A Isaeva and A S Goldobina	Siberian state University of Geosystems and Technologies, Novosibirsk, Russian Federation
MIST_3015	Method Development for Analysis of Information Components of the Monitoring System with a Limited Delay	O J Kravets and I A Panfilov	Sustainable Developments in Civil Engineering Research Group, Faculty of Civil Engineering, Ton Duc Thang University, Ho Chi Minh City, Vietnam, Reshetnev Siberian State University of Science and Technology, Krasnoyarsk Russian Federation
MIST_3016	Point-dependent Lipschitz constants in univariate Lipschitz multiplicative programming	O Khamisov	Melentiev Energy System Institute, Irkutsk,
MIST_3017	Usage of different neural networks in identification of plant types	S Bartsev, Y Ivanova and M Saltykov	Institute of Biophysics FRC KSC SB RAS, Krasnoyarsk
MIST_3018	Application of genetic programming algorithm for designing decision trees and their ensembles	S A Mitrofanov	Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russian Federation
MIST_3019	Improving DE-based cooperative coevolution for constrained large-scale global optimization problems using an increasing grouping strategy	A Vakhnin and E Sopov	Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russian Federation
MIST_3020	Nonlinear dynamic system identification with a cooperative population-based algorithm featuring a restart metaheuristic	C Brester, I Ryzhikov, V Stanovov, E Semenkina and M Kolehmainen	Department of Environmental and Biological Sciences, University of Eastern Finland, Kuopio, Finland, Institute of Computer Science and Telecommunications, Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russia

MIST_3021	Modeling of algebraic analysis of PRESENT cipher by SAT solvers	Maro Ekaterina	Southern Federal University, Taganrog
MIST_3022	Multi-population evolutionary algorithm SPEA2 for crystal structure determination from X-ray powder diffraction data	A N Zaloga, S V Burakov, I S Yakimov, K A Gusev and P S Dubinin	Siberian Federal University, Krasnoyarsk, Institute of Computer Science of Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russia
MIST_3023	A performance model of a multiprocessor computer appliance of a real-time control system	P V Galushin, O Yu Serikova, V A Terskov and K V Yarkov	Siberian Law Institute of Ministry of Internal Affairs of the Russian Federation, Krasnoyarsk, Krasnoyarsk Institute of Railway Transport, branch of the Irkutsk State University of Communications, Krasnoyarsk, Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russia
MIST_3024	Detection of Homogeneous Production Batches of Semiconductor Devices by Greedy Heuristic Clustering Algorithms with Special Distance Metrics	G Sh Shkaberina, I P Rozhnov, V P Popov, L A Kazakovtsev and E V Lapunova	Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russian Federation
MIST_3025	Development of control systems kit for study of PID controller in the framework of cyber-physical systems	Andrej Škraba, Vladimir Stanovov and Eugene Semenkin	University of Maribor, Cybernetics & Decision Support Systems Laboratory Faculty of Organizational Sciences, Kranj, Slovenia, Reshetnev Siberian State University of Science and Technology Institute of Computer Science and Telecommunications, Krasnoyarsk, Russia
MIST_3026	Cooperative ant colony optimization for a hierarchical scheduling problem	D Dresvyanskiy, O Semenkina and E A Popov	System Analysis and Control Department, Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russia, Research Department, Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russia, System Analysis and Control Department, Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russia
MIST_3027	Nature-inspired algorithms for a scheduling problem in operational planning	O E Semenkina and E A Popov	Research Department, Reshetnev Siberian State University of Science and Technologies, Krasnoyarsk, Russia, System Analysis and Control Department,

Reshetnev Siberian State
University of Science and
Technologies, Krasnoyarsk,
Russia

MIST_3028	Models Set Pre-processing for Genetic Programming based Evolvement of Models of Models	Semenkina Mariia, Burlacu Bogdan, Affenzeller Michael and Pitzer Erik	Heuristic and Evolutionary Algorithms Laboratory (HEAL), University of Applied Sciences Upper Austria, Hagenberg, Austria, Johannes Kepler University, Linz, Austria
MIST_3029	Recurrent and multi-layer neural networks playing "Even-Odd": reflection against regression	S Bartsev and G Markova	Institute of Biophysics SB RAS, Federal Research Center, Krasnoyarsk Scientific Center SB RAS, 50, Krasnoyarsk, Siberian Federal University, Krasnoyarsk, Russian Federation

SECTION 4. CYBERNETICS, AUTOMATION AND INFORMATION TECHNOLOGIES

MIST_4001	Functional safety of cyber-physical production of the Industry 4.0	D A Zakoldaev, A V Gurjanov, A V Shukalov, I O Zharinov	Saint Petersburg National Research University of Information Technologies, Mechanics and Optics, Saint Petersburg; Saint Petersburg State University of Aerospace Instrumentation, Saint Petersburg, Russia
MIST_4002	Analysis of noise immunity of GLONASS and GPS positioning receivers	A G Dubrovin, Yu N Baranov, A A Katunin and N I Markin	The Academy of the Federal Guard Service of the Russian Federation, Russia ; Orel State University, Orel, Russia
MIST_4003	Maximum photovoltaic array power point tracking algorithm based on modified particle swarm optimization under non-uniform irradiances	E A Engel and N E Engel	Katanov State University of Khakassia, 90 Lenina Prospekt, Abakan, 655000, Russia
MIST_4004	Fuzzy multiple regression technical and economic model of airport terminal passenger handling system	E D Guzha, T V Khvostova, V A Romanenko and M A Skorokhod	Samara National Research University
MIST_4005	The task of determining the optimal structure of the rolling stock fleet of urban passenger transport	AI Fadeev	Siberian Federal University, 79 Svobodny pr., 660041 Krasnoyarsk, Russia

MIST_4006	Determining the consumption coefficient for modeling the coating system for inner surface of rotating pipe	M I Zaretskaya, B V Skvortsov and I S Zaretskii	Samara University
MIST_4007	Modeling and visualization of the Industry 4.0 cyber and physical productions	D A Zakoldaev, A V Shukalov, I O Zharinov, O O Zharinov	Saint Petersburg National Research University of Information Technologies, Mechanics and Optics, Saint Petersburg; Saint Petersburg State University of Aerospace Instrumentation, Saint Petersburg, Russia
MIST_4008	Analysis of modern approaches for maintaining a comfortable microclimate in the buildings	L Zh Sansyzbay	L.N.Gumilyov Eurasian National University, Nur-Sultan, Kazakhstan
MIST_4010	Automatization and information technologies development for monitoring and evaluation of penitentiary healthcare facilities efficiency	Dyuzheva E.V., Blagodatsky G.A., Ponomarev D.S., Polishchuk V.E. and Sandalov I.Yu.	Research Scientist of Research Center No.1 of the Research Institute of the Federal Penitentiary Service of Russia, Moscow, Kalashnikov Izhevsk State Technical University, Izhevsk, Research Institute of the Federal Penitentiary Service of Russia, Moscow, Russia
MIST_4011	Reduce computational load of fuzzy duplicate detection in large amounts of information	E.V. Sharapova	Vladimir State University
MIST_4012	Computational modeling of a charge transport problem in MOSFET transistor	A S Shevchenko, E A Anisimova, K G Anisimov and O V Ryazanova	Rubtsovsk Institute (branch) Altai state university, Rubtsovsk, Russia
MIST_4013	Methodology of short-term planning of work indices in the university department on basis of the reference model using web – portal	P N Charikov, A G Afanasenko	Ufa State Petroleum Technological University, Branch in Sterlitamak, Sterlitamak, Russian Federation
MIST_4014	Multi-criteria optimization of the process of electrolytic alkali's evaporation in order to develop a resource-saving chemical-technological system	E A Shulaeva and V B Pavlov	Branch of the Ufa State Petroleum Technological University in Sterlitamak. Oktyabrya Av., 2. Sterlitamak, 453118 Bashkortostan Republic. Russia.
MIST_4015	Methodology of creation and application of business process management model based on organization information space in an organization	P N Charikov	Ufa State Petroleum Technological University, Branch in Sterlitamak, Sterlitamak, Russian Federation

MIST_4016	Hardware reservation of cyber-physical production of the Industry 4.0	D A Zakoldaev, A V Shukalov, I O Zharinov, O O Zharinov	Saint Petersburg National Research University of Information Technologies, Mechanics and Optics, Saint Petersburg; Saint Petersburg State University of Aerospace Instrumentation, Saint Petersburg, Russia
MIST_4017	Development of the Control System for Electrical Heating Reactor Using Neural Network and the Fuzzy Controller	E A Muravyova and Y Stolpovskaya	Ufa State Petroleum Technological University Branch in Sterlitamak, Sterlitamak, Russian Federation
MIST_4018	The intelligent analysis system and remote sensing images segmentation engineering by using methods of advanced deep machine learning and neural network modeling	K E Tokarev, Yu A Orlova, A F Rogachev, A N Chernyavsky and Yu M Tokareva	Volgograd State Agricultural University, Volgograd State Technical University, Volgograd State Medical University, Volgograd, Russia
MIST_4019	Application of first-order plans to determine the degree of influence of external factors on the course of a chemical reaction	M O Fabrichkina, A K Shatrov, V V Baranov and V I Litovchenko	Siberian Federal University, JSC Academician M.F. Reshetnev «ISS» Zheleznogorsk, Reshetnev Siberian University of Science and Technology, Krasnoyarsk, Russia
MIST_4020	Bricklaying robot moving algorithms at a construction site	A V Malakhov, D V Shutin and S G Popov	Southwest State University, Kursk; Orel State University named after I.S. Turgenev, Orel
MIST_4021	Synthesis of new 2,7-dibromo 9-benzocyclobuten-3-yl-9H-fluorene derivatives - perspective dielectric materials for electronics	K S Levchenko, K A Chudov, E G Adamov, E Yu Levchenko and P S Shmelin	RTU MIREA – Russian Technological University, JSC «Technomash», N.F. Gamaleya Scientific Research Institute of Epidemiology and Microbiology, Moscow, Russian Federation
MIST_4022	Mechatronic system for fruit and vegetables sorting	P V Balabanov, A G Divin, A S Egorov and V A Yudaev	Tambov State Technical University, Tambov, Russia
MIST_4023	The method of structural schemes transformation	S Bronov, N Nikulin, P Avlasko, E Stepanova and D Krivova	Siberian Federal University; Krasnoyarsk State Agrarian University, Krasnoyarsk, Russia
MIST_4024	Justification for choosing a single-board hardware computing platform for a neural network performing image processing	A E Tolmacheva, D A Ogurtsov and M G Dorrer	Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russian Federation

MIST_4025	Information Technology for the Deployment of the OpenStack Cloud Environment	V I Shevchenko, O V Chengar, T A Kokodey	Sevastopol State University, Sevastopol; Russia
MIST_4026	Automated verification of expression transformation chains based on computational experiments	F A Novikov, V I Katsman, V D Mosin	SPBPU, HSE, Sankt-Petersburg, Russia
MIST_4027	Application of neural network modeling and fuzzy inference methods in cladding operation design	D A Rastorguev, A V Zotov and R R Dema	Togliatti State University, Togliatti City; Nosov Magnitogorsk State Technical University, Magnitogorsk City, Russian Federation
MIST_4028	Remote monitoring software for induction soldering installation	R S Dremmin, Yu S Bets, V S Tynchenko, V V Bukhtoyarov, A V Milov, D V Egorova and V V Kukartsev	Reshetnev Siberian State University of Science and Technology; Siberian Federal University, Krasnoyarsk, Russia
MIST_4029	Combined brillouin sensor system for simultaneous local and distributed temperature and strain measurements for downhole telemetry	I I Nureev, T A Agliullin, V V Kadushkin, I Y Kurbiev and A D Proskuriakov	Kazan National Research Technical University named after A.N. Tupolev-KAI, Kazan; SPC "Sensorika", Ltd., Skolkovo, Russia
MIST_4030	Efficiency of distance measures in the automatic grouping of electronic radio devices by k-means algorithm	G Sh Shkaberina, E M Tovbis, L A Kazakovtsev, A O Shemyakov, A P Romanov and N V Lukonin	Reshetnev Siberian State University of Science and Technology, Siberian Federal University, Moscow Aviation Institute (National Research University), Moscow, JSC Academician M.F. Reshetnev «ISS» Zheleznogorsk, Krasnoyarsk region, Russia
MIST_4031	Automated system design for experimental research of the technological process parameters of spacecraft waveguide paths induction soldering	T V Radionov, E B Molodan, A S Mikhalev, V S Tynchenko, N A Testoedov, N V Lukonin and A I Kuklina	Siberian Federal University, Siberian State University of Science and Technology named after academician M. F. Reshetnev, JSC Academician M.F. Reshetnev «ISS» Zheleznogorsk, Krasnoyarsk region, Russia
MIST_4032	System-integrated assessment of IT-specialist activity as an element of multilevel management	O G Dontsov, S L Goldstein, E M Gritsyuk and E A Dugina	GAUZ SO MKMTS "Bonum", Ekaterinburg, Russia; Ural Federal University, Ekaterinburg, Russia

MIST_4033	The environment of cognitive-contextual software design: from concept to implementation	A I Razumovsky	Trapeznikov Institute of Control Sciences RAS, Moscow, Russia
MIST_4034	Information system to support the achievements assessment of future engineers in the learning process	Yu S Bets, V S Tynchenko, V V Kukartsev, V V Bukhtoyarov, R S Dremmin and I S Filimonov	Reshetnev Siberian State University of Science and Technology; Siberian Federal University, Krasnoyarsk, Russia
MIST_4035	Development of a steam boiler control system based on a neural network	E A Muravyova	Ufa State Petroleum Technological University Branch in Sterlitamak, Sterlitamak, Russian Federation
MIST_4036	The algorithm of overall optimization based on the principles of intraspecific competition of orb-web spiders	V A Baranov, N M Lugovaya, A S Mikhalev, V I Kudymov and T V Strekaleva	LCC "Techvision", Krasnoyarsk, LCC "Siberian Integration systems", Siberian Federal University, JSC Academician M.F. Reshetnev «ISS» Zheleznogorsk, Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russia
MIST_4037	Distributed raman sensor system with point spots for downhole telemetry	I I Nureev, R R Gubaidullin, V V Kadushkin, I Y Kurbiev and A D Proskuriakov	Kazan National Research Technical University named after A.N. Tupolev-KAI, Kazan; SPC "Sensorika", Ltd., Skolkovo, Russia
MIST_4038	On the embedding parameters in kernel identification problem of nonlinear dynamical systems	N R Antropov and E D Agafonov	Reshetnev Siberian State University of Science and Technology, 31 Krasnoyarsky Rabochy Av., Krasnoyarsk, 660037, Russia
MIST_4039	The issue of dynamic optimization of a group of continuous production plants	R A Khakimov, A A Novikov	Omsk state technical university
MIST_4041	Distributed approach for optimization problems	D Zaporozhets and D Zaruba	Southern Federal University, Rostov-on-Don, Russian Federation
MIST_4042	Integrated Algorithm for Elements Placement on the Printed Circuit Board	V Kureichik, E Kuliev and V Kureichik Jr	Southern Federal University, Rostov-on-Don, Russian Federation

MIST_4043	Earliest arrival dynamic flow model for emergency evacuation in fuzzy conditions	E Gerasimenko and I Rozenberg	Southern Federal University, Taganrog, Russia; Research and Design Institute of Informatization, Automation and Communication in the Railway Transport Moscow, Russia
MIST_4044	Determining the public transport demand by validation data of the electronic tickets	A. Fadeev and S. Alhusseini	Siberian Federal University (SibFU)
MIST_4045	On acceleration of the k-ary GCD Algorithm	Ismail Amer and Shamil Ishmukhametov	
MIST_4046	Determination of a literary work style on the base of the vector of morphological parameters of the text analysis	V Meshkov, N Kochkovaya and I Usova	Institute of Technology (branch) of Don State Technical University in Volgodonsk, Russia
MIST_4047	Development of a model in the iThink program for late-stage oil wells control	M Sharipov	Ufa State Petroleum Technological University Branch in Sterlitamak, Sterlitamak, Russian Federation
MIST_4048	Fuzzy model for evaluating the results of online learning	Veronika Zaporozhko, Vladimir Shardakov, Denis Parfenov	Orenburg State University
MIST_4049	Capacitorless model of a VO₂ oscillator	M A Belyaev and A A Velichko	Petrozavodsk State University, Petrozavodsk, Russia
MIST_4050	Evaluation of the industrial enterprise marketing activities effectiveness with using the concept of a balanced scorecard	V V Kukartsev, E I Semenova, V S Tynchenko, N V Fedorova, N M Lugovaya and A R Ogol	Reshetnev Siberian State University of Science and Technology; Siberian Federal University, Krasnoyarsk, Russia
MIST_4051	Statistical model checking for blockchain-based applications	D B Maksimov, I A Yakimov and A S Kuznetsov	Siberian Federal University, Krasnoyarsk, Russian Federation
MIST_4052	Formation of initial data when planning for custom manufacturing	E E Noskova, D V Kapulin, M V Vinnichenko and P A Russkikh	Siberian Federal University, 79, Svobodny Ave., Krasnoyarsk, 660041, Russia

MIST_4053	Application of artificial neural networks to diagnostics of fluid-film bearing lubrication	E P Kornaeva, A V Kornaev, Yu N Kazakov, R N Polyakov	Orel State University named after I.S. Turgenev, Orel, Russian Federation
MIST_4054	Comparative study of smartphone screens using numerical analysis	Magomedov Islam Arbievich	Chechen State University
MIST_4055	Video traffic estimation algorithm	E O Soroka, A V Obedin, M V Karaseva, V A Bartenev and A V Zeitler	Siberian State University, Reshetnev Siberian State Aerospace University, JSC "Information Satellite Systems" Academician M.F. Reshetnev " Zheleznogorsk, Krasnoyarsk Krai, Russian Federation
MIST_4056	Ontological model of a production shop	E I Antonova, Y S Atamanov, G M Rudakova and O V Korchevskaya	Vladivostok Branch of the Russian Customs Academy, Vladivostok; Far Eastern Federal University, Vladivostok; Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russian Federation
MIST_4057	Methodology for assessing the competitiveness of space services	A V Yudin and P Yu Grosheva	RUDN University, Moscow, Russia
MIST_4058	Synthesis and characterization of a new crosslinking monomer based on benzocyclobutene for microelectronics	K S Levchenko, G E Adamov, K A Chudov, P S Shmelin, A Yu Kalashnikov	RTU MIREA – Russian Technological University, JSC «Technomash», JSC "Russian space systems", Moscow, Russian Federation
MIST_4059	Methods and formal models of intelligent analysis of weakly structured data	A V Rabin, A A Petrushevskaya and O V Sinitsin	Saint-Petersburg State University of Aerospace Instrumentation (SUAI), RBS Consulting LLC
MIST_3001	Determination of features of cyber attack goals based on analysis of data in open security data sources	E V Doynikova, A V Fedorchenko and R O Kryukov	St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences, A.F. Mozhaysky's Military-Space Academy, St.Petersburg, Russia
MIST_3002	An implementation of artificial neural networks into behavioral analysis system	E V Anashkin and M N Zhukova	Siberian State University of Science and Technology (former Siberian State Aerospace University), Krasnoyarsk, Russia

MIST_3003	DNA-based image encryption algorithm	Vagif A Gasimov and Jabir I Mammadov	Computer systems and networks department, Azerbaijan Technical University
MIST_3004	Cognitive decoding of redundant block codes in the system of processing and protection of biometric data of air passengers	A A Gladkikh, Al K Volkov, An K Volkov, V M Il'in and D A Kozlov	Ulyanovsk State Technical University, Ulyanovsk Civil Aviation Institute, Ulyanovsk, Russia
MIST_3005	A combined method for designing operations using soft computing	D A Rastorguev, A V Zotov, R R Dema, N S Solomatina	Togliatti State University, Togliatti City; Nosov Magnitogorsk State Technical University, Magnitogorsk City, Russian Federation
MIST_3006	Assessing the impact of a number of regional securities markets on Vietnam's stock market	T N Pham	People's Friendship University of Russia, Moscow, Russia, Tan Trao University, Tuyen Quang, Vietnam

SECTION 5. ECOLOGY, ECOLOGICAL AND POWER ENGINEERING

MIST_5001	The effect of electrization on the properties of flowing water-oil emulsion	A S Tyusenkov and A V Rubtsov	Ufa State Petroleum Technological University, Ufa, Russia
MIST_5002	Formation of a policy to ensure environmental safety in modern economic conditions	Ir N Romanova, D E Morkovkin, V N Nezamaikin, A A Gibadullin and M A Ivanova	Smolensk State Agricultural Academy, Smolensk; Financial University under the Government of the Russian Federation; Russian State University of the Humanities; State University of Management, Moscow.
MIST_5003	Control system for a process of fermentation unit based on a fuzzy controller	E A Muravyova and F F Abdrafikova	Ufa State Petroleum Technological University, Branch in Sterlitamak, Sterlitamak, Russian Federation
MIST_5004	Method and results of laboratory tests of the device for application of mineral fertilizers	A E Shamin, A R Gerasimov and D N Igoshin	Nizhny Novgorod State Engineering and Economic University, Knyaginino, Russia

MIST_5005	Assessment of individual risk criteria for the disposal of radioactive waste	M S Yessenamanova	Kh.Dosmukhamedov Atyrau State University
MIST_5006	Management of mechanisms ensuring sustainable functioning and economic development of the electric power complex	A A Gibadullin, Ch V Kerimova, S R Chorshanbiev, S V Shmanev, Ju A Romanova and A A Sozontov	State University of Management, Financial University under the Government of the Russian Federation, Institute of Market Problems at the Russian Academy of Sciences, Russia, Moscow ; Tajik National University, Republic of Tajikistan, Dushanbe
MIST_5007	Features of fatigue processes occurring in restored welded joints of offshore fixed platforms	I V Starokon	Gubkin Russian State University of Oil and Gas (National Research University)
MIST_5008	Study of technological modes of formaldehyde-containing solid waste pyrolysis	A N Rasstegaev, K R Tarantseva, V V Golubovskiy and O E Tchufistov	Penza State Technological University, Penza, Russia
MIST_5009	The analysis of work of presses continuous action when processing wood	Alexander Sergeevichev, Vladimir Sergeevichev, Viktoriia Sokolova, Viktor Markov and Viktor Kretinin	Saint-Petersburg State Forest Technical University
MIST_5010	In Arctic - New Technical Means and Technologies for the Development of Oil and Gas Fields in Long-Term Freezing Deepwater Areas	Ch S Guseynov	Gubkin Russian State University of Oil and Gas (National Research University)
MIST_5011	Automated systems of ecological control in Norilsk	N V Karmanovskaya, A T Smirnova, V I Litovchenko, S G Efa	Norilsk State Industrial Institute, Norilsk; Siberian State University of Science and Technologies, Krasnoyarsk, Russia
MIST_5012	Modeling the dynamic characteristics of a high voltage asynchronous electric motor	Evgeny V Ryumin and Elza R Enikeeva	Almetyevsk State Oil Institute, Tatarstan
MIST_5013	Polychronic model of the cellulose grinding	V R Pen, S I Levchenko, O V Pen, I A Panfilov and T V Pen	Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russia, Washington University in St Louis, USA

MIST_5014	Influence of cutting edge of lamellar knives on the efficiency of work when cutting food semi-finished products	Nasullo Urinov, Akbar Abrorov, Dilnavoz Abdullayva, Mahmud Amonov	Bukhara Engineering- Technological Institute (Uzbekistan)
MIST_5015	Some features of the physicochemical properties of structural materials used in the clinic of orthopedic dentistry	N N Medvedeva, D V Kiprin, PA Samotesov, V V Salmin and T L Marugina	Federal State Budgetary Educational Institution of Higher Education "Krasnoyarsk State Medical University named after Professor V.F. Voyno- Yasenetsky", Ministry of Health of the Russian Federation, Krasnoyarsk
MIST_5016	CFD modeling of aerosol flow through a granular filter with porous granules	O V Soloveva, R R Khusainov, R R Yafizov	Kazan State Power Engineering University, Kazan, Russia
MIST_5017	Improving the efficiency of particle deposition on the filter fiber through its modification	R R Yafizov, S A Solovev, D O Panenko, G R Badretdinova	Kazan State Power Engineering University, Kazan, Russia
MIST_5018	Features of physical and mechanical properties of materials used in orthopedic rehabilitation of patients	N N Medvedeva, D V Kiprin, A A Levenets, V V Salmin, N S Gorbunov	Krasnoyarsk State Medical University named after Professor V.F. Vojno- Yasenetskiy
MIST_5019	Investigation of the efficient thickness of the porous filter based on the quality parameter	O V Soloveva	Kazan State Power Engineering University, Kazan, Russia
MIST_5020	Influence of alcohol-fuel emulsions on effective indicators of the diesel depending on change of a corner of injection of fuel.	A N Chuvashhev, A I Chuprakov and A A Anfilatov	Department of thermal engines, automobiles and tractors, Vyatka State Agricultural Academy, 610017, Kirov, October prospect, 133, Russian Federation
MIST_5021	Recycling of glass fibers sheets from thermoset reinforced plastic using thermolysis method	A E Protsenko, E D Pimenova and V V Petrov	Komsomolsk-on-Amur State University, Komsomolsk-on- Amur, Russia 2Saint- Petersburg State Institute of Technology; Saint-Petersburg, Russia
MIST_5022	Methods for assessing the impact of the energy fields of implantable wireless charging device and biotelemetric system on experimental animals	A V Rabin and A A Petrushevskaya	Saint-Petersburg State University of Aerospace Instrumentation

MIST_5023	The trend for environmental engineering in agribusiness: leaders and prospects	Y Y Savchenko, O G Goleva, I A Korchagina and A V Ovsyannikova	Altai state University, Barnaul, Russia
MIST_6001	Influence flame speed and flame thickness on completeness of combustion hythane	A.P. Shaikin , I.R. Galiev , V.E. Epishkin	Togliatti State University, Togliatti , Russia
MIST_6002	Thermal explosion of aluminum particles suspended in airflow	A G Egorov	Togliatti State University, Togliatti, Russia
MIST_6003	Relationship between flame speed and maximum pressure and pulsation velocity in a variable volume combustion chamber	A P Shaikin , I R Galiev , V E Epishkin	Togliatti State University, Togliatti , Russia
MIST_6004	The technical condition assessment and the resource of safe operation of technological pipelines using electromagnetic-acoustic effect	M G Bashirov, E M Bashirova, I G Khusnutdinova and N.N. Luneva	Ufa State Petroleum Technological University, Branch of the University in the City of Salavat, Russian Federation
MIST_6005	Verification of the results of numerical modeling of the developed cavitation in a cramped flow by experimental data	A Yu Radzyuk, E B Istyagina, T A Pyanykh, M P Baranova and I I Grishina	Siberian Federal University, Krasnoyarsk State Agrarian University, Krasnoyarsk, Russia
MIST_6006	Resource of repaired welded compounds of marine oil and gas structures	I V Starokon	Gubkin Russian State University of Oil and Gas (National Research University)
MIST_6007	Modernization of the scheme for the delivery of thermal power from the state district power station	E Yu Balzamova, D S Balzamov , V V Bronskaya and O S Kharitonova	Kazan State Power Engineering University, Kazan National Research Technological University, Kazan, Russian Federation
MIST_6008	The transfer function of a traction asynchronous motor controlled by a four-square converter	J S Fayzullayev, K K Jurayeva	Tashkent institute of railway engineering, Tashkent
MIST_6009	Device for detection of the phase current asymmetry in the three-phase lines of non-traction consumers	A M Safarov, S Kh Jumaboyev, Kh A Sattarov	Tashkent institute of railway engineering, Tashkent, Tashkent university of information technologies, Tashkent

MIST_6010	Definition and approximation of the light flux degradation of a LED lamp	S V Solyonyj, A V Rabin, O Ya Solenaya, V P Kuzmenko and A V Rysin	SUAI
MIST_6011	Application of hydrogen and hydrogen-containing gases in internal combustion engines	A N Afanasiev, D A Pavlov, V E Epishkin and U A Gapchenko	Togliatti State University, Togliatti, Russia
MIST_6012	Integrated diesel engine toxicity reduction system	O P Lopatin	Vyatka State Agricultural Academy, Kirov, Russia
MIST_6013	Robotic power line maintenance systems	S V Solyonyj, V F Shishlakov, O Ya Solenaya, V P Kuzmenko, E S Kvas and A V Rysin	SUAI
MIST_6014	Power supply with increased specific energy intensity based on hydrogen fuel cells for unmanned aerial vehicle	I V Vasyukov, A V Pavlenko, A A Gummel, V S Puzin and N A Faddeev	Platov South-Russian State Polytechnic University (NPI)
MIST_6015	Research of load modes of diesel engine at work on biofuel	V A Likhanov and O P Lopatin	Vyatka State Agricultural Academy, Kirov, Russia
MIST_6016	Calculation of permissible monomer conversion in cascade polymerizers during the synthesis of general-purpose rubbers	T V Ignashina, G V Manuyko, V V Bronskaya, O S Kharitonova and D S Balzamor	Kazan National Research Technological University, Kazan State Power Engineering University, Kazan, Russian Federation
MIST_6017	Investigation of the gas feeder design for a fluidized bed chemical reactor or combustor	Solovev S A	Kazan State Power Engineering University
MIST_6018	Numerical simulation and experimental study of the acetylene hydrogenation reaction	R R Khusainov, S A Solovev, O V Soloveva, I R Ilyasov	Kazan State Power Engineering University, Kazan, Russia; Kazan Federal University, Kazan, Russia
MIST_6019	Energy consumption structure and economic growth in the Russian Federation	Kuznetsova Alfiya Rashitovna	Bashkir State Agrarian University

MIST_6020	The impact of the use of compressed natural gas in a car diesel engine on the formation and oxidation of soot particles	V A Likhonov and A V Rossokhin	FSBEI HE Vyatka State Agricultural Academy
MIST_6021	Biofuel based on methanol and methyl ester of rapeseed oil for diesel engine	V A Likhonov, O P Lopatin and A S Yurlov	Vyatka State Agricultural Academy, Kirov, Russia
MIST_6022	Method for evaluating the parameters of the flame front propagation process according to the indicator diagram in spark ignition engines	Natalya Smolenskaya, Victor Smolenskii, Nikolay Korneev, Yuri Prus	Togliatti State University, Togliatti; Gubkin University, Moscow, Russian Federation
MIST_6023	The use of ionization sensors to study the combustion process in spark ignition engines	Victor Smolenskii, Natalya Smolenskaya, Nikolay Korneev, Yuri Prus	Togliatti State University, Togliatti; Gubkin University, Moscow, Russian Federation
MIST_6024	Analysis of the combustion process of diesel fuel in the cylinder 2F 10.5 / 12.0 depending on the frequency of rotation of the crankshaft	V A Likhonov, A N Kozlov and M I Araslanov	Department of thermal engines, automobiles and tractors, Vyatka State Agricultural Academy, 610017, Kirov, October prospect, 133, Russian Federation
MIST_6025	Automation and control of thermal processes in the furnace	A U Mentsiev	Chechen State University
MIST_6026	DEA method application to evaluating the efficiency of heat and wind generating complexes	N V Zenyutkin, I V Kovalev, M V Karaseva, V V Dvirny, A A Melkomukov and N V Lukonin	Siberian State University, Reshetnev Siberian State Aerospace University, Krasnoyarsk State Agrarian University, JSC "Information Satellite Systems" Academician M.F. Reshetnev" Zheleznogorsk, Krasnoyarsk Krai, Russian Federation
MIST_6027	Programmed research techniques for alternative-fuel diesel engine performance	Sergey Plotnikov, Yury Lansikh, Anatoly Pljago, Anatoly Kartashevich	FSBEI of HE «Vyatka State University»
MIST_6028	The assessment of the individual resource of the welded joint during repairs of the technological pipeline	E A Naumkin, A V Rubtsov, P A Kulakov and A R Berdin	Ufa State Petroleum Technological University, Ufa, Russia
MIST_6029	Matching orthogonal code symbols and modulation methods	A V Rabin	Saint-Petersburg State University of Aerospace Instrumentation

MIST_6030

Mathematical model of solid impurity coagulation processes in liquid suspensions based on random function convolution operation

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