



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



**Science & Technology
City Hall**

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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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