

TECHNICAL SESSION 1 (DSE)

Place: Hall Mercury

Day: Tuesday, December 2 · Time: 16:00 to 18:15 Moscow Time (GMT+3)

DEEP SPACE EXPLORATION

Co-Chair:

Elena Fomina

Institute of Biomedical Problems of RAS, Russia

Co-Chair:

Aleksander Inyushin

RUDN University, Russia

- | | |
|---------------|--|
| 16:00 – 16:15 | 1. SciTech2025-010
<i>Adaptation of Medical Architecture Principles to Ensure Crew Health and Well-Being in Space Environments</i>
Gutierrez Madrid Anthony Jesus, RUDN University, Venezuela |
| 16:15 – 16:30 | 2. SciTech2025-029
<i>The Psychology of Confinement: How Architectural Design Can Mitigate Stress in Isolated Space Habitats</i>
Hijazi Adli, RUDN University, Jordan |
| 16:30 – 16:45 | 3. SciTech2025-037
<i>The Interplanetary Transport Hub: Architectural Design for the First Spaceports</i>
Gutierrez Madrid Anthony Jesus, RUDN University, Venezuela |
| 16:45 – 17:00 | 4. SciTech2025-191
<i>Guidance and Control for Descent and Final Approach to Asteroid Bennu</i>
Souza Shyenne, Negri Rodolfo, Prado Antonio, INPE, Brazil |
| 17:00 – 17:15 | 5. SciTech2025-192
<i>Functional Adjustments of the Motion Control System During Adaptation to the Conditions of Space Flight and Readaptation to the Conditions of the Earth</i>
Burakova Anna, Kislitsyn Alexey, Fomina Elena, Institute of Biomedical problems of RAS, Russia |
| 17:15 – 17:30 | 6. SciTech2025-194
<i>A Modern Set of Countermeasures to Negative Effects of Microgravity for Deep Space Exploration</i>
Lemeshko Yegor, Institute of Physiology, National Academy of Sciences of Belarus, Belarus
Fomina Elena, Romanov Pavel, Senatorova Natalia, Burakova Anna, Kokueva Maria, Ganicheva Anna, Bakhtereva Vera, Institute of Biomedical problems of RAS, Russia |
| 17:30 – 17:45 | 7. SciTech2025-195
<i>Changes in the brain bioelectric activity before and after physical and cognitive load and the success of cognitive tasks performance in the «SIRIUS-23» long-term isolation experiment</i>
Cotuk Hasan Birol, Marmara University, Istanbul, Turkey
Ganicheva Anna, Fomina Elena, Institute of Biomedical Problems RAS, Russia |

17:45 – 18:00

8. SciTech2025-200

The Leading Factor in The Development of Chronic Processes of Adaptation to Supportlessness (During Two-Week Dry Immersion) in the System of Spinal Reflexes
Shigueva Tatiana, Tomilovskaya Elena, Artamonova Nelly, Institute of Biomedical Problems of the Russian Academy of Sciences, Russia

18:00 – 18:15

9. SciTech2025-201

The MSU-RAS-RUDN team's plan for solving the problem of settling the galaxy
Samokhina Marina, ICS RAS, Russia
Samokhin Alexander, ICS RAS, MSU, RUDN University, Russia

TECHNICAL SESSION 2 (SMS)

Place: Hall Mars

Day: Tuesday, December 2 · Time: 15:00 to 18:30 Moscow Time (GMT+3)

SPACE MATERIALS & STRUCTURES 1

Co-Chair:

Meena Laad

Symbiosis Institute of Technology, India

Co-Chair:

Kazem Reza Kashy Zadeh

RUDN University, Russia

15:00 – 15:15

10. SciTech2025-005

Bioluminescent Materials as Sustainable Resources for Lunar Habitats: Innovations in Lighting, Energy, Structural Integration, and Adaptive Biotechnology

Gomez Lopez Angie Vanesa, Fazlollahi Seyed Hamidreza, RUDN University, Russia
Gomez Cubillos Luis Alberto, Catolica University of Colombia, Colombia

15:15 – 15:30

11. SciTech2025-007

Pattern Integration and Aesthetic Expression in Space Material and Structural Design

Guo Xue, RUDN University, China

15:30 – 15:45

12. SciTech2025-019

The Legacy of Buckminster Fuller: Geodesic Domes from Earth to Mars

Kadi Sidi Mohammed, RUDN University, Algeria

15:45 – 16:00

13. SciTech2025-058

Improvement of The Methodology for Calculating Structures Using Composite Reinforcement for Spaceport Facilities

Okolnikova Galina E., RUDN University, National Research University MGSU, Russia

Uwais Mohannad Mousa Aqel, RUDN University, Jordan

16:00 – 16:15

14. SciTech2025-061

Modeling of Multilayer Structures Based on Wide-gap Oxides for space industry

Smetanin Egor, Belyaev Victor, Otenov Adilet, RUDN University, Russia

Abduev Aslan, Associate Professor Principal Scientist State University of Education, Russia

16:15 – 16:30

15. SciTech2025-064

Enhancing the Freeze–Thaw Resistance of High-Performance Concrete for Spaceport Construction Using Industrial and Agricultural Wastes

Okolnikova Galina E., RUDN University, National Research University MGSU, Russia

Alipour Mohammad, RUDN University, Iran
Saad Lina Abass, RUDN University, Djibouti

16:30 – 16:45

16. SciTech2025-076

Influence of Silicon Carbide Aggregate and Cenospheres on the Compressive Strength Improvement of Refractory Concrete in the Application of Hybrid Rocket Nozzles

Reza Kashyzadeh Kazem, Ghorbani Siamak, Khlopkov Sergey, Asoyan Artur, RUDN University, Russia

16:45 – 17:00

17. SciTech2025-079

Finite Element Simulation of 3D Printing Process to Fatigue Specimen Fabrication from the Perspective of Residual Stress

Reza Kashyzadeh Kazem, Ghorbani Siamak, Said Abdesselem, RUDN University, Russia

17:00 – 17:15

18. SciTech2025-085

Patterned Alignment of Liquid Crystal Molecules in Silica Micro-Capillaries: New Special Fibers for Aerospace Applications

Chigrinov Vladimir, RUDN University, Russia

Ertman Slawomir, Warsaw University of Technology, Poland

17:15 – 17:30

19. SciTech2025-086

Fast Ferroelectric Liquid Crystal Modulators for Space Applications

Chigrinov Vladimir, RUDN University, Russia

Guo Qi, Beihang University, China

17:30 – 17:45

20. SciTech2025-087

Optically Rewritable E-Paper Displays for Space Applications

Chigrinov Vladimir, RUDN University, Russia

Murauski Anatoli, Belarus Academy of Science, Belarus

17:45 – 18:00

21. SciTech2025-093

Smart Windows for Aerospace Applications

Chigrinov Vladimir, HKUST, Russia

Sun Jiatong, College of Information Science and Technology, Donghua University, Shanghai, China

18:00 – 18:15

22. SciTech2025-095

Switchable Liquid Crystal Lenses for Space Applications

Chigrinov Vladimir, RUDN University, Russia

Wang Xiao-Qian, School of Science, East China University of Science and Technology, Shanghai 200237, China

18:15 – 18:30

23. SciTech2025-108

Self-Cleaning APTES-Modified Silica-Polymer Coatings: A Study of Compositional and Optical Properties and Exploring Potential in Space Applications

Shalu Akhila, Laad Meena, Symbiosis Institute of Technology, Symbiosis International University, India

TECHNICAL SESSION 3 (EO)

Place: Hall Neptune

Day: Tuesday, December 2 · Time: 15:00 to 18:00 Moscow Time (GMT+3)

EARTH OBSERVATIONS 1

Co-Chair:

Aleksander Kotelnikov

RUDN University, Russia

Co-Chair:

Ekaterina Esina

RUDN University, Russia

15:00 – 15:15

24. SciTech2025-054

Instrumental Processing of Spectral Satellite Images and Gravity Survey Data for Oil Exploration in the Tawke Oilfield, Duhok Area, Iraqi Kurdistan Region

Abramov Vladimir, Qadir Danyar, RUDN University, Iraq

Mzuri Rebar, College of Science, Salahaddin University, Erbil, Iraq

15:15 – 15:30

25. SciTech2025-214

Determining the Optimal Transmission Pipeline Route Using MCDM and the Cost Path Algorithm (Case Study: Water Transmission Line from the Persian Gulf to Yazd)

Hatamiafkoueieh Javad, Shirali Masoud, RUDN University, Russia

15:30 – 15:45

26. SciTech2025-056

Peculiarities of Using Limnological Methods in Planetary Studies

Khassan Musab, RUDN University, Sudan

Rasskazov Andrey, Kotelnikov Alexander, RUDN University, Russia

15:45 – 16:00

27. SciTech2025-57

Detection of Sedimentary Bauxite Deposits in Shaanxi Province Using Gravity and Electromagnetic Techniques

Sissoko Billy, Kotelnikov Alexander, RUDN University, Guinea

16:00 – 16:15

28. SciTech2025-215

Evaluating Urban Development Processes Using Advanced Spatial Analysis Methods and Cellular Automata Techniques, and Comparing Them with the Logistic Regression Method (Case Study: Isfahan County)

Hatamiafkoueieh Javad, Shirali Masoud, Amini Faramarz, RUDN University, Russia

16:15 – 16:30

29. SciTech2025-062

Climate Change Perception among Fishermen and Residents of Flood Prone Areas of The Gambia. Are their perceptions Accurate?

Jobe Lamin B., Department of Water Resources in The Gambia, Gambia

16:30 – 16:45

30. SciTech2025-063

Use of Remote Sensing in Mineral Resource Exploration: Towards a Geospatial Revolution in Mineral Prospecting

Zakiou N'diaye Abdoulaye, Coulibaly Abdoulaye, RUDN University, Mali

Ibrahim Mohammed, RUDN University, Sudan

16:45 – 17:00

31. SciTech2025-065

A New Paradigm for Lithium Exploration: the Role of Remote Sensing
Coulibaly Aboulaye, Zakiou N'Diaye Aboulaye, RUDN University, Mali
Ibrahim Mohammed, RUDN University, Sudan

17:00 – 17:15

32. SciTech2025-216

Reverse Displacement Map of a Salt Dome Using Radar Interferometry Optimization Technique
Hatamiafkoueieh Javad, Shirali Masoud, RUDN University, Russia

17:15 – 17:30

33. SciTech2025-066

The Possibility of Localizing Zones of Carbonate Deposits with the Best Reservoir Properties of Oil and Gas Fields Based on Space Research
Pavel Strakhov, RUDN University, Russia
Buzibat Suheib, RUDN University, Algeria

17:30 – 17:45

34. SciTech2025-067

Prospects for Mineral Resources on the Moon
Nikolaeva D.V., RUDN University, Russia
Ibrahim Mohammed, RUDN University, Sudan
Zakariash Hamilton, RUDN University, Mozambique

17:45 – 18:00

35. SciTech2025-071

Prediction of Gold Mineralization Based on Landsat 8 Metasomatic Alteration Mapping in the Ahaggar Shield, Southern Algeria
Ghougali Fouaze, RUDN University, Algeria
Ivanova Julia, RUDN University, Russia

TECHNICAL SESSION 4 (SSA)

Place: Hall Pluton

Day: Tuesday, December 2 · Time: 15:00 to 19:00 Moscow Time (GMT+3)

SPACE SENSORS & ACTUATORS

Co-Chair:

Svetlana Agasieva
RUDN University, Russia

Co-Chair:

Siamak Ghorbani
RUDN University, Russia

15:00 – 15:15

36. SciTech2025- 015

Application of Self-Propagating High-Temperature Synthesis Technology in the Production of Ti-Al Intermetallic Compounds for Aerospace Engineering

Bazhina Arina, Ivanov Artem, ISMAN, Russia
Bazhin Pavel, ISMAN, RUDN University, Russia
Luati Olfa, RUDN University, Russia

15:15 – 15:30

37. SciTech2025- 028

Production of Composite Materials by Free Self-Propagating High-Temperature Synthesis Compression Based on TNM for the Aviation and Space Industries

Antipov Mikhail, ISMAN, Russia
Bazhin Pavel, ISMAN, RUDN University, Russia
Zeraat Peyma, RUDN University, Russia

15:30 – 15:45

38. SciTech2025- 030

Hydrophone for Studying Subglacial Oceans on the Moons of Giant Planets
Baranova Margarita, Osipkov Alexey, BMSTU, Russia

15:45 – 16:00

39. SciTech2025- 034

Photoinduced Optical Switch Based on Colored Organic Glasses for space industry
Belyaev Viktor, Avdeenkov Vladimir, RUDN University, Russia
Aubakirova Kamilla, RUDN University, Kazakhstan

16:00 – 16:15

40. SciTech2025-041

Biophilic Design in Space: the Critical Role of Greenhouses and Simulated Nature for Crew Well-Being
Zhang Jiachuan, RUDN University, China

16:15 – 16:30

41. SciTech2025-092

Polarization Imaging Sensors for Space Applications
Chigrinov Vladimir, RUDN University, Russia
Bermak amine, Hamad Bin Khalifa University, Qatar

16:30 – 16:45

42. SciTech2025-094

Multipoint Fibre Optic Voltage Spacecraft Sensor
Chigrinov Vladimir, RUDN University, Russia
Brodzeli Zourab, School of Electrical Engineering and Telecommunications, UNSW, Sydney, Australia

- 16:45 – 17:00 **43. SciTech2025-105**
Control of Movement on Space Objects when Using Exoskeletons
Khlopkov Sergey, RUDN University, Russia
Abdul Karim Issoufa Maman, RUDN University, Niger
Tretyakov Nikita, RUDN University, Turkmenistan
- 17:00 – 17:15 **44. SciTech2025-110**
Development and Study of Metal-Ceramic Coatings Based on Tic-Nicr for Space Industry
Nazarko Ivan, Bazhin Pavel, RUDN University, Russia
- 17:15 – 18:30 **45. SciTech2025-115**
Evaluation of Flexible Sensor Sensitivity for Space Applications Using t-Test and ANOVA
Jagtap Priyanka, Laad Meena, Symbiosis Institute of Technology, SIU, Pune, India
- 17:30 – 17:45 **46. SciTech2025-119**
First-Principles Study of the Effect of Lattice Compression and Stretching on the Properties of the Tetragonal Phase of a Manganese Nitride Monolayer
Kushchuk Leonid, Tissen Maria, BMSTU, Russia
Kasrtev Alexey, RUDN University, Russia
Tiwary Chandra, Indian Institute of Technology (India), Russia
- 17:45 – 18:00 **47. SciTech2025-120**
Fe₂I₂Br₃: A Novel 2D Janus Alloy for Spintronic-Based Sensors
Medintseva Tatiana, Kartsev Alexey, RUDN University, Russia
Tiwary Chandra, Indian Institute of Technology Kharagpur, India
- 18:00 – 18:15 **48. SciTech2025-127**
Filtering of the Output Signal Of The Laser Gyroscope for High-Precision Aerospace Navigation and Stabilization
Smetanin Ilya, Sinelnikov Anton, RUDN University, Russia
Hangeldiyev Meylis, RUDN University, Turkmenistan
- 18:15 – 18:30 **49. SciTech2025-141**
Potential Application Transparent In₂O₃/Ag/In₂O₃ Conductive Films in Space of Communication Systems
Shuvalova Alena, BMSTU, Russia
Makeev Mstislav, Tymkovan Alexander, RUDN University, Russia
- 18:30 – 18:45 **50. SciTech2025-143**
Effect of Organic Solvents on the Quality of Transferred Graphene Using Polybutyl Methacrylate in Space Industry
Gosteva Ekaterina, RUDN University, Russia
- 18:45 – 19:00 **51. SciTech2025-154**
Advances in Small Satellite Missions Enabled by Miniaturized Propulsion, Power Systems, and Smart Sensors & Actuators
Bhavankar Dhwani, Laad Meena, Symbiosis Institute of Technology, Symbiosis International University, India

TECHNICAL SESSION 5 (SA)

Place: Hall Saturn

Day: Tuesday, December 2 · Time: 15:00 to 17:00 Moscow Time (GMT+3)

SPACE ARCHITECHTURE

Co-Chair:

Ivan Khalil

RUDN University, Russia

Co-Chair:

Elizaveta Shemyakina

RUDN University, Russia

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|---------------|--|
| 15:00 – 15:15 | 52. SciTech2025-013
<i>Inflatable Architecture in Space: From the BEAM Module to Future Orbital Hotels</i>
Alsaleh Maria, RUDN University, Russia |
| 15:15 – 15:30 | 53. SciTech2025-023
<i>Shielding from the Void: Architectural Solutions for Radiation Protection on Mars</i>
Alhasan Ammar, RUDN University, Syrian Arab Republic |
| 15:30 – 15:45 | 54. SciTech2025-031
<i>Architectural Prototypes in Extreme Environments: A Study on the Spatial Form and Structural Adaptability of Lunar Bases</i>
Wang Yajing, RUDN University, China |
| 15:45 – 16:00 | 55. SciTech2025-032
<i>Blueprint for a Martian City: A Comparative Analysis of Global Concepts</i>
Guo Xue, RUDN University, China |
| 16:00 – 16:15 | 56. SciTech2025-033
<i>O'Neill Cylinders: The Architectural and Engineering Challenges of Building Orbital Megastuctures</i>
Alpire Guerrero Marcelo, RUDN University, Bolivia |
| 16:15 – 16:30 | 57. SciTech2025-036
<i>The Hospitality Industry in Orbit: Architectural Design for Space Hotels and Tourism</i>
Al-Rabadi Rana, RUDN University, Jordan |
| 16:30 – 16:45 | 58. SciTech2025-042
<i>The Psychology of Confinement: How Architectural Design Can Mitigate Stress in Isolated Space Habitats</i>
Kazour Marah, RUDN University, Syrian Arab Republic |
| 16:45 – 17:00 | 59. SciTech2025-043
<i>Architecture for Low-Gravity Worlds: Novel Structural Designs for Asteroids and Small Moons</i>
Al-Badwi Najib, RUDN University, Yemen |

TECHNICAL SESSION 6 (SFM)

Place: Hall Mercury

Day: Wednesday, December 3 · Time: 10:00 to 12:45 Moscow Time (GMT+3)

SPACE FLIGHT MECHANICS

Co-Chair:

Antonio Prado

National Institute for Space Research (INPE), Brazil

Co-Chair:

Vladimir Razoumny

RUDN University, Russia

10:00 – 10:15

60. SciTech2025-004

The Effects of Different Sized Solar Sails when Station-Keeping an Irregularly Shaped Asteroid

Meireles Lucas, Winter Othon, São Paulo State University, Brazil

Prado Antônio, National Institute for Space Research, Brazil

10:15 – 10:30

61. SciTech2025-011

Influence of Shape and Altitude Dependent Drag Coefficient and Orbital Decay Prediction of LEO Satellites in Rarefied Flow

S Vigneshvara, Arshi Reem, Indian Institute of Space Science and Technology, India

10:30 – 10:45

62. SciTech2025-133

Review of Space Flight Mechanics: Principles, Challenges, and Future Directions

Onyekachukwu Nwosu, Austine Michael, Austine Maximus, Gregory University Uturu, Nigeria

10:45 – 11:00

63. SciTech2025-161

Adaptive Control Strategies for Baseline Maintenance in Multi-Satellite SAR Formations

Borges Mateus, Santos Willer, Instituto Tecnológico de Aeronáutica, Brazil

Scala Francesca, European Space Agency, Italy

11:00 – 11:15

64. SciTech2025-166

System of Observation of Daytime Asteroids (SODA)

Shugarov Andrey, Shustov Boris, Institute of Astronomy of the Russian Academy of Sciences (INASAN), Russia

11:15 – 11:30

65. SciTech2025-171

On the Problem of "Humanity's First Robotic Exploration of a Hypothetical Exoplanetary System" at GTOC13

Galyaev Andrey, Samokhina Marina, Samokhin Alexander, ICS of RAS, Russia
Samokhina Ludmila, Central University, Russia

11:30 – 11:45	66. SciTech2025-173 <i>Study of the Orbital Trajectories of the Brazilian Probe GARATEA-L Around the Moon</i> Vilhena de Moraes Rodolpho, de Oliveira Paes Guilherme, Institute of Science and Technology, Federal University of Sao Paulo - UNIFESP, Brazil Galhego Thibes Xavier da Costa Maria Livia, Sao Paulo State University - UNESP, Brazil dos Santos Carvalho Jean Paulo, Center for Science and Technology in Energy and Sustainability, Federal University of Reconcavo da Bahia (UFRB), Brazil Casanova Daniel, University Center for Defense Studies of Zaragoza, General Military Academy, Spain
11:45 – 12:00	67. SciTech2025-175 <i>Analytical Modeling of the Gravitational Potential of Irregularly Shaped Celestial Bodies: Application To (8567) 1996 HW1</i> Prado Antonio, Aljbaae Safwan, INPE, Brazil Mota Marcelo, IFSP, Brazil
12:00 – 12:15	68. SciTech2025-196 <i>Optical Space Situational Awareness as the Basis of Sustainable LEO Operations</i> Klimov Andrey, Savin Nikolay, ANC JSC, Russia Benkhaldoun Zouhair, Cadi Ayyad University Observatory (OUCA), Morocco
12:15 – 12:30	69. SciTech2025-197 <i>Modeling of LEO to EL2 Transfers Using Sun-Earth and Earth-Moon Interactions</i> Peres Victor, Federal University of ABC, Brazil Prado Antonio, National Institute of Space Research (INPE), Brazil de Brum Antonio, Federal University of ABC, Brazil
12:30 – 12:45	70. SciTech2025-198 <i>Designing Small Satellite Constellations Around Io in Frozen Low Altitudes</i> Ferreira Thamis, UNESP, Brazil Prado Antonio, National Institute for Space Research - INPE, Brazil Giuliatti Winter Silvia, Ferreira Lucas, São Paulo State University- UNESP, Brazil Casanova Daniel, Tresaco Eva, IUMA - Universidad de Zaragoza, Spain

TECHNICAL SESSION 7 (SMS)

Place: Hall Mars

Day: Wednesday, December 3 · Time: 10:00 to 14:00 Moscow Time (GMT+3)

SPACE MATERIALS & STRUCTURES 2

Co-Chair:

Vera Galishnikova
RUDN University, Russia

Co-Chair:

Gebre Tesfaldet Hadgembes
RUDN University, Russia

10:00 – 10:15

71. SciTech2025-009

Parametric System for Modular Lunar Habitats: Comparative Analysis of Configurations Based on Site Conditions
Vargas Rafael, RUDN University, Colombia

10:15 – 10:30

72. SciTech2025-052

Application of Rubber-Based Concretes for A "Space Monolith"
Okolnikova Galina E., RUDN University, National Research University MGSU, Russia
Anisimov Andrei A., RUDN University, Russia
Al-athwari Sakhr Faroq Yaseen Hamood, RUDN University, Yemen

10:30 – 10:45

73. SciTech2025-053

Materials and Structural Design for Extraterrestrial Habitats
Obeid Mahmoud, Abu-Mahadi Mohammed, RUDN University, Jordan

10:45 – 11:00

74. SciTech2025-055

Enhancing Crack Resistance of Spaceport Structures with Basalt Fiber Concrete
Okolnikova Galina E., RUDN University, National Research University MGSU, Russia
Xu Pai, RUDN University, China

11:00 – 11:15

75. SciTech2025-068

The Use of Heat-Resistant Concrete in Building Structures of Spaceports
Okolnikova Galina E., RUDN University, National Research University MGSU, Russia
Malafeev Alexei S., RUDN University, Russia
Prophete Gardy, RUDN University, Haiti

11:15 – 11:30

76. SciTech2025-069

A Study of the Performance of Reinforced Concrete Structures Exposed to Low Temperatures in Cosmodrome Facilities
Okolnikova Galina E., RUDN University, National Research University MGSU, Russia
Akoev Furkat, RUDN University, Tajikistan

11:30 – 11:45

77. SciTech2025-083

Hybrid Polymer Composites for Aerospace and Space Applications: Challenges, Environmental Stability and Future Research Roadmap
Pathan Fiza, Laad Meena, Symbiosis Institute of Technology, SIU, Pune, India

- 11:45 – 12:00 **78. SciTech2025-084**
Frost-Resistant High-Strength Fiber Concrete for Spaceport Structures
Okolnikova Galina E., RUDN University, National Research University MGSU,
Russia
Soltanizadeh Hossein, RUDN University, Iran
- 12:00 – 12:15 **79. SciTech2025-089**
Liquid Crystal Reconfigurable Spacecraft Antennas
Chigrinov Vladimir, RUDN University, Russia
Jackson John, J&R Magnetics, United States of America
- 12:15 – 12:30 **80. SciTech2025-091**
Liquid Crystal Photoalignment Technology for Spacecraft Photonics Devices
Chigrinov Vladimir, RUDN University, Russia
Srivastava Abhishek, HKUST, Hong Kong
- 12:30 – 12:45 **81. SciTech2025-101**
The Use of Fiberglass Fabrics in Space Station Construction and Launch Facilities
Okolnikova Galina E., RUDN University, National Research University MGSU,
Russia
Alwaz Khayriyeh, RUDN University, Syrian Arab Republic
- 12:45 – 13:00 **82. SciTech2025-102**
Calculation Methods for Lining the Cosmodrome's Communication Tunnels
Okolnikova Galina E., RUDN University, National Research University MGSU,
Russia
Aproilov Abdal R., Diab Wael, RUDN University, Syrian Arab Republic
- 13:00 – 13:15 **83. SciTech2025-103**
Intelligent Self-Healing Materials for Next-Generation Space Systems: A Review
Jain Avani, Laad Meena, Symbiosis Institute of Technology, Symbiosis International
University, India
- 13:15 – 13:30 **84. SciTech2025-109**
*Performance of Synthetic Rubber-Based Concrete in Aggressive Environments at
Cosmodrome Launch Pads*
Okolnikova Galina E., RUDN University, National Research University MGSU,
Russia
Morozova Yulianna A., Soudan Ruslan, RUDN University, Syrian Arab Republic
- 13:30 – 13:45 **85. SciTech2025-118**
*Exploring Composites of High Entropy Alloy (HEAs) with Metal Oxide Nanoparticles
for Self-Healing in Spacecraft Applications*
Dhabarde Sapana, Laad Meena, Symbiosis Institute of Technology, Symbiosis
International University, India

13:45 – 14:00

86. SciTech2025-188

Conditions of Construction on the Surface of Mars from the Perspective of Ionizing Radiation

Florenskii Vladislav, NIISF, Russia
Belov Vyacheslav, MSUCE, Russia

TECHNICAL SESSION 8 (SPP)

Place: Hall Neptune

Day: Wednesday, December 3. Time: 10:00 to 14:00 Moscow Time (GMT+3)

SPACE POWER & PROPULSION

Co-Chair:

Felix Mora-Camino

Universidade Federal Fluminense, Brazil

Co-Chair:

Kazem Reza Kashy Zadeh

RUDN University, Russia

10:00 – 10:15

87. SciTech2025-047

Energy Architecture: Integrating Solar, Nuclear, and Other Power Sources into Habitat Structures

Abdul Ahmad Sahil, RUDN University, Afghanistan

10:15 – 10:30

88. SciTech2025-077

Modern Inlet Cooling Techniques for Gas Turbine Compressors: A Short Review
Gharehsheikh Bayat Abdolhossein, Reza Kashyzadeh Kazem, RUDN University, Russia

10:30 – 10:45

89. SciTech2025-106

Ensuring the Functioning of the Vostochny Aerospace Complex During Low Temperatures

Konoplev Vladimir, RUDN University, Russia

Abdul Karim Issoufa Maman, RUDN University, Niger

Nzang Florentino, RUDN University, Equatorial Guinea

10:45 – 11:00

90. SciTech2025-117 (Online On-Sight)

Development of a Compositions of Aromatic Additive for Synthetic Jet Fuel

Ilin Andrei, Ershov Mikhail, National University of Oil and Gas Gubkin University, Russia

Makhova Uliana, Savelenko Vsevolod, National University of Oil and Gas (Gubkin University), Russia

Abdellatif Tamer, RUDN University, Egypt

11:00 – 11:15

91. SciTech2025-124

Energy Storage Systems: The Cornerstone of Near-Space Exploration

Mityagin Daniil, RUDN University, Russia

11:15 – 11:30

92. SciTech2025-126

Protecting Oil Pipelines from Meteorites

Chueva Evgeniya, RUDN University, Russia

Sissoko Belli, RUDN University, Guinea

11:30 – 11:45

93. SciTech2025-138

General Nodes for Resource- and Energy Managed City Information Model

Suvorova Maria, RUDN University, Russia

Naumov Andrey, Belgorod State Technological University n.a. V.G. Shukhov, Russia

Obaidi Adham Abdulsattar Hameed, University of Diyala, Iraq

- 11:45 – 12:00 **94. SciTech2025-148**
Reducing the Mass of The Spacecraft by Using a Multi-Stage Heat Pump
Minaev Danil, RUDN University, Russia
Al-Aabidy Wissam, RUDN University, Iraq
- 12:00 – 12:15 **95. SciTech2025-162**
Study of the Adhesion and Dimensional Stability of Paraffin Grains and Their Manufacturing Using Rotational Molding for Hybrid Rockets
Macena Joao Vitor, Souza Jessica, Martins Jean Dereck, Cecilio Daniel, Castro Lucas, Ziglio Beatriz, Domingos Keven, Gudin Daniel, Sousa Tiago, Muzzi Igor, Krykhtine Fabio, Castro Pinto Fernando, Universidade Federal do Rio de Janeiro, Brazil
- 12:15 – 12:30 **96. SciTech2025-167**
Mathematical Modeling of Orbital Ferry Motion
Kupreev Sergei, RUDN University, Russia
Ibrahim Fadi, RUDN University, Russia
- 12:30 – 12:45 **97. SciTech2025-168**
Harnessing Quantum Spin for Thrust: Towards a Non-Reactive Propulsion Paradigm
Kupreev Sergei, Razoumny Yury, RUDN University, Russia
- 12:45 – 13:00 **98. SciTech2025-178**
Evaluation of High-Frequency Harmonic Effects on Reactive Power in Induction Motors
Boihanov Zailobiddin, Andijon state technical institute, Uzbekistan
- 13:00 – 13:15 **99. SciTech2025-179**
Mathematical Model and Calculation Algorithm of External Magnetic Field of Asynchronous Motor
Nizamov Jasurbek, Boihanov Zailobiddin, Andijan state technical institute, Uzbekistan
- 13:15 – 13:30 **100.SciTech2025-184**
Analysis of Types of Compressor Rotor Defects
Muze Gao, RUDN University, China
- 13:30 – 13:45 **101.SciTech2025-185**
Structural Monitoring of the Technical Condition of Structures Using the Laser Scanning Method
Takhirov Muzaffar, Laboratory of Structures and Center for Intelligent Infrastructure, University of California at Berkeley, Berkeley, USA, United States of America
Rakhmonov Bakhtovar, Urgench State University, Urgench, Uzbekistan, Uzbekistan
Boronina Liudmila, RUDN University, Russia
- 13:45 – 14:00 **102.SciTech2025-186**
Study of the Joint Vibration of an Underground Thin-Walled Cylindrical Structure with Soil under Seismic Explosion Impacts
Sagdiev Khabibovich, Leading Research Fellow, Institute of Mechanics and Seismic Stability of Structures, Academy of Sciences of the Republic of Uzbekistan, Uzbekistan
Safarov Ismoil, Tashkent Institute of Chemical Technology (Uzbekistan), Uzbekistan
Rakhmonov Sobirovich, Prof., Urgench State University (Uzbekistan), Uzbekistan
Boronina Liudmila, RUDN University, Russia

TECHNICAL SESSION 9 (EO)

Place: Hall Pluton

Day: Wednesday, December 3 · Time: 10:00 to 13:00 Moscow Time (GMT+3)

EARTH OBSERVATIONS 2

Co-Chair:

Shufan Wu

Shanghai Jiao Tong University, China

Co-Chair:

Maria Suvorova

RUDN University, Russia

10:00 – 10:15

103.SciTech2025-070

Gold Mineralization Prediction in the Ahaggar Shield (Southern Algeria) Using Landsat 8 Satellite Images

Ghougali Fouaze, RUDN University, Algeria

Ivanova Julia, RUDN University, Russia

10:15 – 10:30

104.SciTech2025-207

Monitoring flood with LANDSAT imagery in DMDP Bangladesh

Hatamiafkoueieh Javad, Amini Faramarz, RUDN University, Russia

10:30 – 10:45

105.SciTech2025-073

Application of Satellite Technologies to Monitor Greenhouse Gas Emissions in the Oil and Gas Industry

Tcharo Honore, Tcharo Yana, RUDN University, Benin

10:45 – 11:00

106.SciTech2025-074

The Remote Sensing Data to Solve Pressing Problems in the Oil and Gas Industry

Kharchikov Egor, Shagiziganova Polina, Berdnik Maria, RUDN University, Russia

11:00 – 11:15

107.SciTech2025-081

The Impact of Space Technologies on the Development Of Geology

Gorbunova Natalia Nikolaevna, Mirkushov Yurevich Oleg, RUDN University, Russia

Mutara Alvin, RUDN University, Rwanda

11:15 – 11:30

108.SciTech2025-208

Subsidence monitoring with differential interferometric synthetic aperture radar (DInSAR) in Dhaka, Bangladesh

Hatamiafkoueieh Javad, Amini Faramarz, RUDN University, Russia

11:30 – 11:45

109.SciTech2025-090

Mapping Land Degradation Hotspots for Agricultural Security Using Earth Observation Data: A Gender-Inclusive Approach

Bauka Nazifa, Jantiku Jagila, Akuh Charles Jahmal, National Space Research and Development Agency, Nigeria

11:45 – 12:00

110.SciTech2025-149

Examination of Experience in Applying Remote Sensing Methods for the Enumeration of Wild and Domestic Animals

Belova Tatiana, RUDN University, Russia

12:00 – 12:15

111.SciTech2025-157

Climate Change Perceptions Among Fishermen and Residents of Flood-Prone Areas of the Gambia: are Their Perceptions Accurate?

Jobe Lamin B., Russian State Hydrometeorological University, Gambia

12:15 – 12:30

112.SciTech2025-209

Using Time Series of Remote Sensing Images, It is Possible to Analyze and Monitor Coastline Changes and Geomorphological Landforms at Different Times

Hatamiafkoueieh Javad, Shirali Masoud, RUDN University, Russia

12:30 – 12:45

113.SciTech2025-174

GRACE Satellite Observations-based Assessment of Groundwater Storage

Monitoring in Ghana: Implications for Water Resource Management

Afrifa George, Ansah-Narh Theophilus, Tandoh Joseph, Ghana Space Science and Technology Institute, Ghana Atomic Energy Commission, Ghana
Opoku-Sarkodie Richmond, Methodist University Ghana, Ghana

12:45 – 13:00

114.SciTech2025-210

Determining the Impact and Geomorphological Process of the Frouncescence Phenomenon on Changes in Geomorphological Landform Patterns Case Study: Yazd-Ardakan Plain

Hatamiafkoueieh Javad, Shirali Masoud, RUDN University, Russia

TECHNICAL SESSION 10 (SPLE)

Place: Hall Saturn

Day: Wednesday, December 3 · Time: 10:00 to 12:30 Moscow Time (GMT+3)

SPACE POLICY, LAW & ECONOMICS 1

Co-Chair:

Irina Chernych
RUDN University, Russia

Co-Chair:

Ekaterina Kovaleva
RUDN University, Russia

10:00 – 10:15

115.SciTech2025-014

Artificial Intelligence Application for Managerial Decisions Support at Ground-Based Space Stations

Abdalaziz Abueissa H. T., RUDN University, Sudan
Andreeva Larisa O., Vinokurov Yegor A., RUDN University, Russia

10:15 – 10:30

116.SciTech2025-017

The Role of Biotechnology in Shaping Space Bioeconomy: A Strategic and Managerial Framework for Sustainable Long-Duration Missions

Naserzadeh Yousef, P.A. Stolypin International Institute of Informatization and Public Administration (MIIIGU) Moscow, Russia. And., Department of Agrobiotechnology. Peoples' Friendship University of Russia (RUDN University), Iran
Mahmoudi Niloufar, Poskonnaya Yuliya Dmitrievna, Nikulin Daniil Pavlovich, RUDN University, Russia

10:30 – 10:45

117.SciTech2025-021

Artificial Intelligence for Decision Optimization in Space Governance and Economics

Pyankov Valeriy, Kovaleva Ekaterina, RUDN University, Russia
Mustafa Ali, RUDN University, Sudan

10:45 – 11:00

118.SciTech2025-022

Revolutionary Evolutions of System Engineering Management from First Space Era to Second Space Era

Chang Yi Wei, Minghsin Institute of Science and Technology, Taiwan
Chern Jeng-Shing, York University, Canada
Fong Chen-Joe, Taiwan Space Agency (TASA), Taiwan

11:00 – 11:15

119.SciTech2025-049

Economic Aspects of Labour Potential of Space Branch Staff

Kovaleva Ekaterina, Razoumnaya Maria, RUDN University, Russia
Al Khakim Rida, RUDN University, Syrian Arab Republic

11:15 – 11:30

120.SciTech2025-104

Analysis of the factors influencing the risks of space flights

Asoyan Artur, RUDN University, Russia
Abanub Rezk, RUDN University, Egypt
Allamov Atageldy, RUDN University, Turkmenistan

- 11:30 – 11:45 **121.SciTech2025-114**
Innovative Management Strategy Development in Better Unmanned Aerial Vehicle Counter Systems Production in the Digital Economy Context
Ermakov Dmitry, Malashkina Olga, RUDN University, Russia
Obeid Ahmed M.N., RUDN University, Iraq
- 11:45 – 12:00 **122.SciTech2025-116**
Life Cycle Analysis and Economic Assessment of the Development and Implementation of Deployable Space Modules
Nasarzadeh Yousef, P.A. Stolypin International Institute of Informatization and Public Administration (MIIIGU) Moscow, Russia. And., Department of Agrobiotechnology. Peoples' Friendship University of Russia (RUDN University), Moscow, Russia, Iran
Poskonnaya Yuliya Dmitrievna, Nikulin Daniil Pavlovich, RUDN University, Russia
- 12:00 – 12:15 **123.SciTech2025-130**
A Preliminary Study on the Economic Effectiveness of Suborbital Tourism And Point-to-Point Transportation
Chang Yi-Wei (Eva), Pai Tung-Yueh, Minghsin Institute of Science and Technology, Taiwan
Chern Jeng-Shing (Rock), CHERN JENG-SHING, Canada
- 12:15 – 12:30 **124.SciTech2025-132**
Review of Aerospace Engineering in the 21st Century: Innovations, Challenges, Trends and Future Perspectives
Onyekachukwu Nwosu, Austine Michael, Austine Maximus, Gregory University Uturu, Nigeria

TECHNICAL SESSION 11 (SMS)

Place: Hall Mercury

Day: Thursday, December 4 · Time: 10:00 to 13:45 Moscow Time (GMT+3)

SPACE MATERIALS & STRUCTURES 3

Co-Chair:

Serdar Yazyev

RUDN University, Russia

Co-Chair:

Marina Rynkovskaya

RUDN University, Russia

10:00 – 10:15

125.SciTech2025-018

Brutalism and the Cosmic Aesthetic: Why Concrete Monoliths Evoke a Sense of Otherworldliness

Medina Pena Leydy Yurany, RUDN University, Colombia

10:15 – 10:30

126.SciTech2025-038

Self-Healing Habitats: Using Biomimicry and Advanced Materials for Resilient Space Structures

Alkhoury Diala, RUDN University, Syrian Arab Republic

10:30 – 10:45

127.SciTech2025-080

Numerical Analysis of Mold Temperature Influence on the Component Quality Created by Sand Casting Process

Getu Bogale Negewo, Reza Kashyzadeh Kazem, RUDN University, Russia

10:45 – 11:00

128.SciTech2025-134

Review of Innovations in Space Structures and Materials

Onyekachukwu Nwosu, Austine Michael, Austine Maximus, Gregory University Uturu, Nigeria

11:00 – 11:15

129.SciTech2025-135

Superabsorbent Polymers for Water Management in Extraterrestrial Habitats: Materials, Mechanisms, and Systems Integration

Mazumdar Aparajita, Laad Meena, Symbiosis Institute of Technology, Symbiosis International University, India

11:15 – 11:30

130.SciTech2025-140

Next-Generation Space Structures and Materials: Harnessing Sensors, Actuators, and On-Board Intelligence for Deep Space Exploration

Chakraborty Ankush, Obeid Mahmoud, Rynkovskaya Marina, RUDN University, India

11:30 – 11:45

131.SciTech2025-142

Neutron Stars: Extreme Physics Laboratories for Understanding Gravity and Nucleosynthesis

Ruslanovich Daniil, RUDN University, Russia

- 11:45 – 12:00 **132.SciTech2025-153**
Efficiency of Using Permanent Steel Mesh Formwork in the Construction of Spaceport Launch Pads
Okolnikova Galina E., RUDN University, National Research University MGSU, Russia
Alzaibak Kenan, RUDN University, Syrian Arab Republic
- 12:00 – 12:15 **133.SciTech2025-156**
Nanomaterials: Revolutionizing Lightweight, High-Strength Spacecraft Structures
Jain Ananya, Laad Meena, Symbiosis Institute of Technology, Symbiosis International University, India
- 12:15 – 12:30 **134.SciTech2025-163**
Development of a Mechanical Ground Support System for Hybrid Rocket Operation
Martins Jean Dereck, Macena Joao Vitor, Souza Jessica, Cecilio Daniel, Castro Lucas, Ziglio Beatriz, Domingos Keven, Krykhtine Fabio, Castro Pinto Fernando, Gaspar Matheus, Motta Lucas, Vianna Rafael, Universidade Federal do Rio de Janeiro, Brazil
- 12:30 – 12:45 **135.SciTech2025-165**
Enhancement of the Performance of Concrete Cosmodrome Structures through Functionally Graded Material
Dabi Gizachew Megersa, Rynkovskaya Marina, RUDN University, Ethiopia
- 12:45 – 13:00 **136.SciTech2025-180**
A Numerical Study on Structural Performance of Beam-Column Joints under Space Launch Dynamic Loads: Full Replacement of Conventional Concrete with Hybrid Steel-Basalt Fiber-Reinforced Concrete
Baza Tewodros Temede, Rynkovskaya Marina I, Dereje Lami Sileshi, RUDN University, Russia
- 13:00 – 13:15 **137.SciTech2025-181**
Failure Mechanisms of High-Strength Concrete in Spaceport Launch Structures
Okolnikova Galina E., RUDN University, National Research University MGSU, Russia
Saeed Wagdi A., RUDN University, Yemen
- 13:15 – 13:30 **138.SciTech2025-182**
Application of Permanent Formwork Made Of Glass Fiber Reinforced Concrete In Cosmodrome Construction
Okolnikova Galina E., RUDN University, National Research University MGSU, Russia
Algnde Gamal, RUDN University, Syrian Arab Republic
- 13:30 – 13:45 **139.SciTech2025-187**
Shape optimization of the roof of a scientific research base on the Moon
Ermakova Evgenia, Rynkovskaya Marina, RUDN University, Russia
Gebre Tesfaldet, RUDN University, Eritrea

TECHNICAL SESSION 12 (AIML)

Place: Hall Mars

Day: Thursday, December 4 · Time: 10:00 to 13:15 Moscow Time (GMT+3)

AIML IN SPACE APPLICATIONS

Co-Chair:

Ketan Kotecha

Symbiosis Institute of Technology, India

Co-Chair:

Renuganth Varatharajoo

Universiti Putra Malaysia, Malaysia

10:00 – 10:15	140.SciTech2025-050 <i>Application of Artificial Intelligence in Processing and Analyzing of Telemetry Data</i> Buchake Samarth, Laad Meena, Symbiosis Institute of Technology, Symbiosis International University, India
10:15 – 10:30	141.SciTech2025-059 <i>Intelligent Space Structures: Sensor-Driven Materials and Adaptive Systems for Interplanetary Missions</i> Obeid Mahmoud, Abu-Mahadi Mohammed, RUDN University, Jordan
10:30 – 10:45	142.SciTech2025-078 <i>AI-GEAR: Integrating Earth Observation Data and AI-Driven Geospatial Analytics for Gender-Responsive Climate Resilience in African Agriculture</i> Jantiku Jagila, Akuh Jahmal Charles, Bauka Nazifa, National Space Research and Development Agency, Nigeria
10:45 – 11:00	143.SciTech2025-099 <i>The Use of Artificial Intelligence to Determine Surface Roughness in Mechanical Engineering</i> Malkova Marianna, Klimov Vladimir, Peoples' Friendship University of Russia, Russia Aung Pyae Sone, Sergo Ordzhonikidze Russian State Geological Exploration University, Russia
11:00 – 11:15	144.SciTech2025-113 <i>Research of Machine Learning Methods for Optimizing Management Efficiency in the Space Industry</i> Shishkin Ilya, Fonkants Roman, Shatalova Irina, RUDN University, Russia
11:15 – 11:30	145.SciTech2025-123 <i>Machine Learning in Predicting Mineralization in South Peru from Satellite Imagery and Geophysical Data</i> Abramov Vladimir, Karelina Elena, Markov Vladimir, RUDN University, Russia
11:30 – 11:45	146.SciTech2025-129 <i>Using Neural Networks to Process Data from Inertial Sensors of the Spacecraft</i> Smetanin Ilya, Smetanin Egor, Sinelnikov Anton, Gutiérrez Benavides Esteban Josue, RUDN University, Russia Bykanova Uliana, Lomonosov Moscow State University Branch in the City of Sarov, Russia

11:45 – 12:00	147.SciTech2025-131 <i>The AI Frontier in Space: Review of Deep Learning Techniques for Data Frugality and On-Orbit Efficiency in Earth Observation</i> Gawande Shreya, Laad Meena, Symbiosis Institute of Technology, Symbiosis International University, India Divine Finbarrs, Symbiosis Institute of Technology, Symbiosis International University, Nigeria
12:00 – 12:15	148.SciTech2025-139 <i>Interpretable Neuro-Symbolic Decision Support for Exoplanet Discovery</i> Tlupov Islam, RUDN University, Russia
12:15 – 12:30	149.SciTech2025-159 <i>Space Engineering and Operations Support for Unmanned Aircraft and Artificial Intelligence Systems in Tackling Nigeria's Security Challenges</i> Ikwen Akomaye, Kruglova Larisa, Undie Franka, Abiola Ayodele, RUDN University, Russia
12:30 – 12:45	150.SciTech2025-164 <i>Evolutionary Optimisation of Neural Networks for Accurate Prediction of Space Mission Outcomes</i> Hameed Safa, RUDN University, Russia
12:45 – 13:00	151.SciTech2025-169 <i>Space-Enabled Health Intelligence: Using AI and Earth-Observation Technologies to Improve Disease Forecasting and Healthcare Delivery in Remote Regions</i> Ikwen Akomaye, Kruglova Larisa, Ogar Joseph, RUDN University, Russia Undie Franka, RUDN University, Nigeria
13:00 – 13:15	152.SciTech2025-193 <i>Evolving Neural Network Based Global Optimization for Solar Sail Interplanetary Trajectories</i> Abdullah Amirul Fiqri, Varatharajoo Renuganth, Mohd Harithuddin Ahmad Salahuddin, Department of Aerospace Engineering, Universiti Putra Malaysia, Malaysia, Malaysia Dachwald Bernd, Faculty of Aerospace Engineering, FH Aachen University of Applied Sciences, Germany, Germany Hiraki Koju, Department of Space Systems Engineering, Kyushu Institute of Technology, Japan, Japan

TECHNICAL SESSION 13 (SPLE)

Place: Hall Neptune

Day: Thursday, December 4 · Time: 10:00 to 12:30 Moscow Time (GMT+3)

SPACE POLICY, LAW & ECONOMICS 2

Co-Chair:

Irina Chernykh
RUDN University, Russia

Co-Chair:

Ekaterina Kovaleva
RUDN University, Russia

10:00 – 10:15

153.SciTech2025-155

Space Debris and Legal Framework: A Review of Mitigation, Liability, and Suggested Reforms

Chitnis Aditi, Laad Meena, Symbiosis Institute of Technology, Symbiosis International University, India

10:15 – 10:30

154.SciTech2025-158

Analysis of the Potential of International Cooperation in the Context Of The Competition of Lunar Programs: The Program of The USA "Artemis" & The Project of Russia and China "ISLS"

Bukareva Kira, Sergeeva Polina, RUDN University, Russia

10:30 – 10:45

155.SciTech2025-176

Commercial space flights

Glushkova Yuliya, RUDN University, Russia
Yixiao Zhou, RUDN University, China
Daher Saer, RUDN University, Lebanon

10:45 – 11:00

156.SciTech2025-183

About the Use of Virtual Polygons and Stands for Training Specialists in Power Engineering

Khmelev Roman, RUDN University, Russia
Nguyen Wang Mang, RUDN University, Vietnam

11:00 – 11:15

157.SciTech2025-199

Integrated Methodology for Space Industry Development: Combining Systems Engineering Best Practices with Adaptive Project Management

Tatarchenko Eugène, Research Center for Space Economy and Policy, Russia

11:15 – 11:30

158.SciTech2025-202

Space Activities on Celestial Bodies Except of the Moon: International Legal Aspects

Chernykh Irina, RUDN University, Russia

11:30 – 11:45

159.SciTech2025-204

From Data to Dialogue: Leveraging AI-Based Terminological Collocation Extraction to Build a Unified Lexicon for Space Policy and International Collaboration

Korzin Andrey, Shalayeva Elena, Dmitrichenkova Svetlana, RUDN University, Russia

11:45 – 12:00

160.SciTech2025-206

Contradictions Between National Interests and the Principle of the Common Heritage of Mankind in the Era of Commercial Space Exploration
Dementev Andrei, RUDN University, Russia

12:00 – 12:15

161.SciTech2025-219

The Policy and Legal Roadmap for Competitive and Sovereign Space Markets in the 2030s
Narkhanim Orujova, Space Agency of the Republic of Azerbaijan (Azercosmos), Azerbaijan

12:15 – 12:30

162.SciTech2025-220

A Framework for the Long-Term Analysis of Space Economy
Fabio P. Kryktine, Universidade Federal do Rio de Janeiro, Brazil
Oludolapo A. Olanweraju, Felix Mora-Camino, Durban University of Technology, South Africa
Harvey S. R. Cosenza, Instituto Tecnológico de Chihuahua, Mexico
Sergio González-Rojo

TECHNICAL SESSION 14 (EO)

Place: Hall Pluton

Day: Thursday, December 4 · Time: 10:00 to 13:00 Moscow Time (GMT+3)

EARTH OBSERVATIONS 3

Co-Chair:

Tarun Singh

Symbiosis Institute of Geoinformatics, India

Co-Chair:

Olga Saltykova

RUDN University, Russia

10:00 – 10:15

163.SciTech2025-012

High-Resolution Downscaling of Precipitation Derived from CMIP6-GCMs Using Multiscale Geographically Weighted Regression (MGWR): A Remote Sensing Approach for Semi-Arid Region

Karan Kunal, Singh Dharmaveer, Symbiosis Institute of Geoinformatics, India
Laskar Amzad, Physical Research Laboratory Ahmedabad, India

10:15 – 10:30

164.SciTech2025-020

Monitoring the Agglomeration of Constantine through Remote Sensing and Geospatial Analysis

Daikh Adel, Merchela Wassim, University of Constantine3-Salah Boubnider (UC3SB), Algeria

10:30 – 10:45

165.SciTech2025-051

Satellite Radar Monitoring for Quarry Slope Stability

Esina Ekaterina, RUDN University, Russia

Doskalov Akbar, RUDN University, Uzbekistan

10:45 – 11:00

166.SciTech2025-072

Geophysical Investigations of the Moon Structure to Identify the Most Promising Sites for Establishing Bases for Mineral Exploration

Kostenko Alla, Ussova Valentina, Voronova A, RUDN University, Russia

Mutro Tekla, RUDN University, Namibia

11:00 – 11:15

167.SciTech2025-111

Instrumental Processing of Spectral Satellite Images and Gravity Data in the Search for Water Resource in the Lunar Surface

Abramov Vladimir, Tomilova Polina, RUDN University, Russia

Kadir Daniar, RUDN University, Iraq

11:15 – 11:30

168.SciTech2025-136

Assessment of Solar Radiation as a Power Generation Source in Nigeria Using Earth Observations (EO) Data From Satellites

Awomewe Olumide, Department of Space Science and Applied Physics, University of Zimbabwe, Zimbabwe

Odunmorayo Michael, Department of Meteorology and Climate Science, Federal University of Technology Akure, Nigeria

- 11:30 – 11:45 **169.SciTech2025-137**
Prediction of Structures Favorable for the Localization of Platinum-Group Mineralization Based on Spectral and Structural Interpretation of Satellite Images
Shemyakina Elizaveta, Iniushin Aleksander, RUDN University, Russia
- 11:45 – 12:00 **170.SciTech2025-144**
Problems of Storing Terrain Data: from Maps to 3D Models
Dryga Danila, RUDN University, Russia
- 12:00 – 12:15 **171.SciTech2025-145**
Predicting Agricultural Drought and Heat Stress through Satellite Thermal Remote Sensing: A Systematic Review towards Next-Generation Earth Observation and Space Mission Integration
Ghosh Riya, Symbiosis Institute of Geoinformatics, Symbiosis International University, India
ambrish Ambrish, Department of Geography, Delhi School of Economics, University of Delhi, India
- 12:15 – 12:30 **172.SciTech2025-211**
Estimating Biomass and Carbon Stock Using Polarimetric Radar Images and Optical Images
Hatamiafkoueieh Javad, Shirali Masoud, Amini Faramarz, RUDN University, Russia
- 12:30 – 12:45 **173.SciTech2025-212**
Identification of Laterite Layers Using Remote Sensing Techniques (Case Study: Khoranoq Laterites)
Hatamiafkoueieh Javad, Shirali Masoud, RUDN University, Russia
- 12:45 – 13:00 **174.SciTech2025-213**
Locating Educational Centers Using the AHP Evaluation Technique in a Geographic Information System Environment (Case Study: Guidance and High Schools in the New Pardis County)
Hatamiafkoueieh Javad, Shirali Masoud, RUDN University, Russia