III YOUNG SCIENTISTS CONGRESS BUSINESS PROGRAMME

November 28–30, 2023, Sirius Federal Territory

Programme accurate as at December 5, 2023

November 28, 2023

10:00–11:30

Sirius Science and Art Park
plenary session hall

Big Challenges: Opportunities for Development

Nature-Like Technologies: A New Era of Human Development

Given the growth in the world population, rising energy consumption, the depletion of natural resources, and climate change, ensuring the sustainable development of modern society and preserving world civilization as a whole is one of the global challenges of the present time. For new generations, we must maintain access to sufficient sources of usable water, food, materials, energy, and other resources. The growing consumption of natural resources is a trend that can only be reversed through the consistent replacement of existing technologies with nature-like technologies, i.e., reproducing systems and processes of living nature in the form of technical systems and technological processes that are integrated into the natural environment and natural resource circulation. The approach to fundamentally new, nature-like technologies that do not damage the surrounding world, but exist in harmony with it and will restore the balance that humans have disturbed between the biosphere and the technosphere was announced by Russian President Vladimir Putin at the plenary meeting of the 70th anniversary session of the UN General Assembly on 28 September 2015 in New York. In order to increase the efficiency of Russia's scientific and technical policy, ensure the country's technological independence and competitiveness, achieve its national development goals, and implement strategic national priorities through the rapid development of nature-like technologies, the Russian president signed the corresponding Decree No. 818 on 2 November 2023. The decree assigns the functions of the leading scientific organization in this regard to the Kurchatov Institute National Research Centre. What are nature-like technologies, what opportunities and threats do they pose to the world, and what are the main focuses for their development?

Moderator:

- **Mikhail Kovalchuk**, President, Kurchatov Institute National Research Centre

Panellists:

- **Vladimir Avdeenko**, Deputy Executive Director, Director of Agricultural Biotechnology, Innopraktika
- **Ilya Eremin**, Deputy Director for Research, Academician B.V. Petrovsky Russian Scientific Center for Surgery
- **Valery Falkov**, Minister of Science and Higher Education of the Russian Federation
- **Alexander Gabibov**, Director, Shemyakin–Ovchinnikov Institute of bioorganic chemistry
- **Viktor Ilgisonis**, Director of Scientific and Technical Research and Development, State Atomic Energy Corporation ROSATOM
- **Oleg Naraykin**, Vice President, National Research Centre 'Kurchatov Institute'
- **Gennady Onishchenko**, Deputy President, Russian Academy of Education
- **Raif Vasilov**, Deputy Head of the NBICS Nature-like Technologies Complex, National Research Centre 'Kurchatov Institute'

10:00–11:30

Sirius Science and Art Park
conference hall 1

Opportunities for the Decade of Science and Technology in Russia

Run-Up to the 300th Anniversary of the Russian Academy of Sciences: The Future, Not the Past

In 2024, the Russian Academy of Sciences will celebrate its 300th anniversary. What academic traditions have taken shape over this time? How can they help strengthen Russia's research potential? How can we fully unleash the potential of young people to develop domestic science? How can scientists make a personal contribution to the development of their country?

Moderator:

- **Gennady Krasnikov**, President, Russian Academy of Sciences

Panellists:

- **Andrey Kotelnikov**, Chairman of the Board of Young Scientists, Russian Academy of Sciences
- **Lyubov Kotova**, Senior Researcher, A.F. Physico-Technical Institute Ioffe

- **Irina Le-Daigen**, Associate Professor of the Department of Chemical Enzymology of the Faculty of Chemistry, Lomonosov Moscow State University
- **Alexander Voronov**, Head of the Center for Innovative Design, Faculty of Public Administration, Chairman of the Council of Young Scientists, Lomonosov Moscow State University

10:00–11:30

Sirius Science and Art Park
conference hall 2

Opportunities for the Decade of Science and Technology in Russia

The Russian Science and Technology Scene in Search of New Heroes

In Russia, diverse projects to promote science are currently becoming part of a single ecosystem, as their reach and quality of their content expands. However, Russian science and technology has a weak personification; there is no clear image of a hero, such as a scientist, engineer, or technological entrepreneur. In this regard, it is particularly important to determine how existing and planned media projects are helping to solve the problem of filling the information space with the names of people who are drivers of Russia's innovative development and whose achievements any Russian can be proud of. The session participants will share experience and opinions on the steps and media techniques that are crucial for the emergence of domestic heroes who inspire young Russians to achieve new scientific and technological breakthroughs. What is the reason for the low personification of science and technology? What images of heroes are essential for Russia to achieve technological sovereignty? What resources are needed to produce such heroes for the entire country? What heroes have already emerged from existing initiatives to promote science and technology? What further work should be done with them and who should do it? Is science a sink or swim world, or do scientists and tech developers need professionals who will take them by the hand and lead them along the path of promoting their knowledge and personality? Who could serve as such a guide? What benefits do scientists see from participating in media projects? How can scientists have a high media profile, while not betraying the scientist and developer in themselves? Does publicity harm their main activities? Where can we find a happy middle ground?

Moderator:

- **Vera Podguzova**, Senior Vice President, Director of External Relations Directorate, Promsvyazbank

Panellists:

- **Gleb Fedorov**, Chief Producer, National Priorities
- **Vasily Popkov**, Head of the Scientific Group "Invasive Neural Interfaces", Lomonosov Moscow State University (MSU)
- **Natalya Popova**, First Deputy General Director, Innopraktika
- **Denis Sekirinsky**, Deputy Minister of Science and Higher Education of the Russian Federation
- **Andrey Voronin**, Acting Vice-Rector for Education, University of Science and Technology MISIS; Deputy Chairman of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

Front row participants:

- **Elena Bocherova**, Executive Director, Cyberprotect
- **Danila Kalinikin**, Head, AGNI Startup Factory Startup Studio; Participant of the Second Season of the "Challenge" Reality Show
- **Dan Medovnikov**, Director of the Innovation Management Institute, Graduate School of Business, National Research University Higher School of Economics

10:00–11:30

Sirius Science and Art Park
conference hall 3

Big Challenges: Opportunities for Development

Ocean Exploration: Boundless Scientific Depths

We will discuss the main problems associated with studying and developing the World Ocean, such as the ocean's role in the climate, its biological and mineral resources, and extreme ocean-related events. This will help provide the Congress participants with an idea of the prospects for the development of the World Ocean as a possible human habitat, on the one hand, as well as the ability to forecast the state of the ocean and its role in climate change, on the other hand. Can we predict climate change without taking into account the role of the ocean? What is the current ecological state of the ocean and how will it change in the future? Is the resource base of the oceans limited solely to mineral and environmental resources?

Moderator:

- **Sergey Gulev**, Head of Laboratory, P.P. Shirshov Institute of Oceanology of the Russian Academy of Sciences

Panellists:

- **Fedor Gippius**, Associate Professor, Department of Oceanology, Faculty of Geography, Lomonosov Moscow State University
- **Sergey Konovalov**, Director, Marine Hydrophysical Institute of Russian Academy of Sciences
- **Kirill Vinnikov**, Director, Institute of the World Ocean, Far Eastern Federal University
- **Peter Zavialov**, Acting Deputy Director for Scientific and Organizational Work, Head of Laboratory, P.P. Shirshov Institute of Oceanology of the Russian Academy of Sciences

10:00–11:30

Sirius Science and Art Park
conference hall 4

The Country's Scale as a Space for Opportunities

New Approaches to the Development of Science Cities of the Russian Federation and Other Territories with High Scientific and Technological Potential

In the current realities, it is important to discuss and prepare proposals on new approaches to the development of science cities in Russia and other territories with high scientific and technological potential. Additional measures for the infrastructural development of such territories have been taken in accordance with the Russian president's instructions issued following a meeting of the Council on Science and Education on 8 February 2023.

Moderators:

- **Vladimir Ivanov**, Deputy President, Russian Academy of Sciences
- **Victor Sidnev**, President, Union for Russian Science Cities Development

Panellists:

- **Sergey Kabyshev**, Chairman of the Committee of the State Duma of the Federal Assembly of the Russian Federation on Science and Higher Education
- **Mikhail Kuznetsov**, Director, Union for the Development of Science Cities
- **Tatyana Leonova**, Head of the City Administration of Obninsk
- **Nikita Marchenkov**, Chairman, Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Presidential Council of the Russian Federation for Science and Education; Head, Kurchatov Complex for Synchrotron-Neutron Research, National Research Center "Kurchatov Institute"
- **Vadim Medvedev**, Rector, University of the National Technology Initiative 2035"; General Director, National Technology Initiative Project Support Fund
- **Andrey Naumov**, Head, Troitsk Branch of the P.N. Physical Institute Lebedev RAS; corresponding member, Russian Academy of Scienceses
- **Dmitriy Plishkin**, Head of Administration, Federal Territory "Sirius"
- **Vladimir Shevchenko**, Rector, National Research Nuclear University MEPhI
- **Grigory Trubnikov**, Director, Joint Institute for Nuclear Research

10:00–11:30

Sirius Science and Art Park
conference hall 5

Development Tools

Effective Tools to Develop Mathematics Education

Mathematics is a complex scientific field that plays a decisive role in the development of modern technologies, so the training of highly qualified mathematicians is a strategic objective. Difficulties with attracting students to mathematics and mastering the curriculum can be resolved by taking new approaches to education, which are being developed by students, graduate students, and young scientists themselves. Examples of such initiatives in Russia include the 'Summer Mathematical Lecture' and 'Big Mathematical Workshop', which have already had positive results that will be presented to the scientific and educational community during the roundtable, with a follow-up discussion about the prospects for introducing and scaling such approaches.

Moderator:

- **Olga Postnova**, Deputy Director, Euler International Mathematical Institute, St. Petersburg Department of Steklov Mathematical Institute of Russian Academy of Sciences

Panellists:

- **Darya Aksenova**, Author of the "Summer Mathematical Lecture" Project
- **Andrey Bogdanov**, Executive Director, Physics and Technology School Development Foundation
- **Sergey Ospichev**, Deputy Director, Mathematical Center in Akademgorodok; assistant professor, Novosibirsk National Research State University
- **Ivan Yaschenko**, Director, Moscow Center for Continuous Mathematical Education
- **Dmitry Zaporozhets**, Deputy Director for Research, Saint Petersburg Branch of the Steklov Mathematical Institute of Russian Academy of Sciences

Front row participants:

- **Ilya Alekseev**, Postgraduate student, St. Petersburg State Universit
- **Marina Dzyuba**, Postgraduate student, Herzen State Pedagogical University of Russia
- **Zalina Kusraeva**, Leading Researcher, Department of Functional Analysis, Southern Mathematical Institute, Vladikavkaz Scientific Center of the Russian Academy of Sciences
- **Alexey Miller**, Researcher, Leonhard Euler International Mathematical Institute

10:00–11:30

Sirius Science and Art Park
conference hall 6

Space for International Scientific and Technical Cooperation

Attracting Young Foreigners to Russian Science: New Opportunities and Proven Practices

Global Universities is an association that brings together leading Russian universities that ensure that Russian research and education maintains a stable presence in the global market. The Association's member universities have developed a wide range of tools to attract young foreigners and involve them in science. Discussing this issue will be useful for Russian universities that are looking for tools to develop international scientific projects. Even though Russian universities and scientists have seen their presence wane in projects being implemented by countries that have unfriendly relations with Russia, new opportunities are arising for the development of science with new international partners. There has been an uptick in interest in Russian research among young foreigners. For example, the intellectual competition 'International Olympiad of the Association for Master's and Postgraduate Students' annually attracts roughly 80,000 young people from 192 countries, almost a third of whom plan to participate in research projects at Russian universities as part of their postgraduate programmes. Young people around the world have shown the greatest interest in business, management, engineering, technology, computer science, data science, biology, biotechnology, clinical medicine, and public health. The greatest demand has been seen for: financial management, entrepreneurship, artificial intelligence, computer science, information systems, biochemistry, molecular biology, the design and construction of civil facilities, electrical engineering, electronics, and general mechanical engineering. The discussion will focus on the following issues: what factors influence the decision of young foreign scientists to choose Russia as a place for their scientific research? What are the most effective tools for attracting young foreigners to conduct research? How can we improve the attractiveness of Russian scientific institutions and universities for young foreign scientists? How can we overcome the language barrier and ensure communication with foreign students and researchers in Russian research projects? What forms of support for young foreigners are most effective for them to successfully adapt to the Russian scientific environment?

Moderator:

- **Irina Karelina**, Executive Director, Association of Global Universities

Panellists:

- **Dmitry Arseniev**, Vice-Rector for International Affairs, Peter the Great St. Petersburg Polytechnic University (SPbPU)
- **Marina Borovskaya**, President, Southern Federal University; Chairman, Council of Rectors of Universities of the South of Russia
- **Larisa Efremova**, Vice-Rector for International Academic Mobility, Peoples' Friendship University of Russia
- **Andrey Keller**, Director, Sociocenter
- **Dmitry Livanov**, Rector, Moscow Institute of Physics and Technology (National Research University)
- **Konstantin Mogilevsky**, Deputy Minister of Science and Higher Education of the Russian Federation
- **Oleg Nagornov**, First Vice-Rector, National Research Nuclear University "MEPhI"
- **Danis Nurgaliev**, Vice-Rector for Oil and Gas Technologies, Environmental Management and Geosciences, Kazan (Volga Region) Federal University
- **Dmitry Vishnevsky**, Rector, Donbass State Technical University

10:00–11:30

Sirius Science and Art Park
conference hall 7

The Country's Scale as a Space for Opportunities

Region of Beneficial Science: Regional Centres for the Commercialization of Scientists' Research Results and Expertise

Today, there are three interrelated problems with the economic development of many of Russia's regions, which can be solved with the active involvement of scientific and educational organizations: a shortage of skilled professions in the R&D and technological development sectors; a lack of companies that create long-term demand for technological development; and a lack of technological resources to ensure the competitiveness of companies in the regions in the medium term. World-class campuses are being designed to overcome these challenges. As part of their creation, though, the regional authorities and universities have reached an important fork in the road. What is the current situation with the commercialization of scientists' research results and expertise in Russia's regions today? What problems do the regions plan to solve by building new campuses and a commercialization system? Do the regions

have a technology development strategy and how is it formed? What businesses' expectations from the development of a regional commercialization system? Which highly skilled professionals will be most in demand over the next 5–7 years?

Moderator:

- **Alexander Fertman**, Director of Science and Education Department, Skolkovo Foundation

Panellists:

- **Oleg Churilov**, Director of the Department for the Development of Technological Entrepreneurship and Technology Transfer, Ministry of Science and Higher Education of the Russian Federation
- **Ivan Glukhikh**, Deputy Head Tyumen Branch, Russian Federal Research Institute of Fisheries and Oceanography
- **Vitaliy Litke**, Deputy Minister of Education and Science, Government of the Chelyabinsk Region
- **Yury Marfin**, Rector, Pacific State University
- **Alexander Safonov**, Senior Vice President for Development, Skolkovo Institute of Science and Technology (Skoltech)
- **Sergey Sukhantsev**, Deputy Director for Quality, Perm Scientific and Production Instrument-Making Company

10:00–11:30

Sirius Science and Art Park
conference hall 8

Open Program of the Congress of Young Scientists

10:00–11:30

Sirius Science and Art Park
conference hall 9

Opportunities for the Decade of Science and Technology in Russia

Who Controls Everything? Information Support for Scientific Policy

As part of the 'Solutions and Services for the Professional Community' focus of the Decade of Science and Technology in Russia, experts will discuss opportunities for using information resources for the science and technology industry and propose ways to improve information and analytical support in order to make management decisions in science and development. What information technologies have already been successfully tested by researchers? How can researchers find the information they need and eliminate unnecessary information? What risks exist when using information technologies in science? What resources could be useful for promoting scientific results? How should we prioritize research and development topics? Is there a risk of research being excluded that is of strategic importance in the future? What technologies help minimize such risks? How can we properly combine various information technologies when justifying the effectiveness of the expected scientific result?

Moderators:

- **Alexander Dvoinikov**, General Director, Directorate of Scientific and Technical Programs
- **Elena Maslennikova**, Head of the department of scientific and methodological support of projects, Directorate of Scientific and Technical Programs

Panellists:

- **Pavel Arefiev**, Head of the Analytical Department, Scientific Electronic Library (eLIBRARY.RU)
- **Yury Chekhovich**, Executive Director, Antiplagiat
- **Dmitriy Devyatkin**, Head of Department, Federal Research Center "Informatics and Management" of the Russian Academy of Sciences; Development Director, RITECH
- **Larisa Lapidus**, Professor, Ph.D. in Economics; Director, Social and Economic Innovations Center (SEIC), Faculty of Economics, Lomonosov Moscow State University
- **Albina Nesterova**, General Director, Neopoisk; General Director, Infra-M
- **Evgenia Ryzhova**, Advisor to the General Director for Scientific and Technical Development, Federal State Unitary Enterprise "Main Radio Private Center"
- **Denis Yanyshev**, Director, Centre for the Development of Electronic Educational Resources, Lomonosov Moscow State University
- **Oleg Yena**, Strategic Development Supervisor, Project Office of the Federal Institute of Industrial Property

10:00–11:00

Sirius Science and Art Park
Lomonosov Hall

Growth Opportunities: Lectures by Prominent Scientists and Business Representatives

Lecture

How Memory and Thinking Are Related

Panellist:

- **Konstantin Dudin**, Mnemonic technician, two-time memorization record holder; Founder, School of Memory Development

10:00–11:30

Sirius Science and Art Park
Kurchatov Hall

The Russian Science Foundation School

Meeting with the Leadership of the Russian Science Foundation

What challenges does the Russian Science Foundation face today? What is the ideal path for grant recipients? What new areas is the RSF developing in its activities and what results has the RSF achieved in the run-up to the tenth anniversary of its establishment?

Moderator:

- **Yulia Gorbunova**, Vice President, D.I. Mendeleev Russian Chemical Society; Acting Dean, Faculty of Fundamental Physicochemical Engineering, Lomonosov Moscow State University (MSU)

Panellists:

- **Vladimir Bushkov**, Development and Innovation Advisor, SIBUR; Member of the Scientific and Technological Council, Russian Science Foundation
- **Alexander Khlunov**, General Director, Russian Science Foundation
- **Alexander Klimenko**, Chairman of the Scientific and Technological Council, Russian Science Foundation

10:00–11:30

Sirius Science and Art Park
Mendeleev Hall

The Country's Scale as a Space for Opportunities

Recap of Satellite Events: Astrakhan

Air and Fish: Scientific Solutions for the Astrakhan Region

The Astrakhan Region hosted another satellite event of the III Young Scientists Congress that brought together more than 50 scientists from all over Russia and representatives of the regional executive authorities to solve two of the most important problems facing the region: the creation of an integrated system to monitor air quality and the preservation of aquatic biological resources in the Volga-Caspian basin. What measures are experts proposing to restore Astrakhan's status as the "fish capital of Russia"? What best practices of expert groups will the region use to improve its air quality? What are the general impressions of the event? What further steps need to be taken to put the proposals made during the satellite event into practice? How effective will they be for the Astrakhan Region?

Moderator:

- **Timur Shiyapov**, Head of the Technology Transfer Center, Peoples' Friendship University of Russia

Panellists:

- **Maksim Ivanov**, Deputy Head, Service for Natural Resources Management and Environmental Protection of the Astrakhan Region
- **Anna Kudryavtseva**, Candidate of Biological Sciences; Deputy Director for Research, Head of Laboratory, Institute of Molecular Biology named after V.A. Engelhardt (IMB RAS)
- **Sergey Shipulin**, Deputy Head, Volga-Caspian Branch of the FSBSI All-Russian Scientific Research Institute of Fisheries and Oceanography
- **Mikhail Valov**, Director of the Institute of Life and Earth Sciences, Astrakhan Tatishchev State University FSBEI HE
- **Natalya Zubkova**, Deputy Head of the Directorate of Fisheries and Fish Farming of the Ministry of Agriculture and Fishing Industry, Government of the Astrakhan Region

10:00–11:30

Sirius Science and Art Park
Atom Hall

Opportunities for the Decade of Science and Technology in Russia

Getting Young People Involved in Science: Creating Youth Laboratories as Part of the 'Science and Universities' National Project

Since 2018, the Ministry of Education and Science of the Russian Federation has been implementing a project to create new youth scientific laboratories as part of the 'Science and Universities' national project. To date, 740 such laboratories have already been set up at scientific organizations and universities, and by 2024 the number of youth laboratories will increase to 900. The laboratories conduct research in such scientific fields as: microelectronics, new medicine, new energy, agricultural sciences, climate, artificial intelligence, and environmental management. The creation of new youth laboratories has been a success: academic institutes and universities have a great need for them as an opportunity to share the experience they have accumulated and get young scientists, university graduates, and students in their final year of studies involved in scientific work, while the regions view them as a real opportunity to influence the scientific and technological agenda and utilize the potential of federal

institutions and universities to solve problems facing the regional economies. The session will serve as a discussion platform about the role and importance of youth laboratories as a tool for supporting young scientists.

Moderator:

- **Ivan Smirnov**, Deputy Director, Institute of Bioorganic Chemistry named after. Academicians M.M. Shemyakin and Y.A. Ovchinnikov Russian Academy of Sciences

Panellists:

- **Leonid Fershtat**, Head of Laboratory, Leading Researcher, Institute of Organic Chemistry named after. N.D. Zelinsky RAS (Institute of Organic Chemistry RAS)
- **Victoria Kunina**, Head of Laboratory, Federal Research Center "Subtropical Scientific Center of the Russian Academy of Sciences"
- **Anton Maximov**, Director, Institute of Petrochemical Synthesis named after A.V. Topchiev of the Russian Academy of Sciences
- **Alexey Ryndin**, Director, Federal Research Center "Subtropical Scientific Center of the Russian Academy of Sciences"
- **Alexander Sokolov**, Deputy Director, Arctic Research Station, Institute of Plant and Animal Ecology, Ural Branch of the Russian Academy of Science
- **Andrey Voshkin**, Deputy Director, N.S. Kurnakov Institute of Inorganic Chemistry of the Russian Academy of Sciences
- **Nikita Zhadnov**, Researcher, P.N. Physical Institute Lebedev Russian Academy of Sciences

10:00–11:30

Sirius Science and Art Park
Buran Hall

Development Tools

Modern Challenges and Trends of Russian Scientific Periodicals

Russian scientific communication, which includes a wide range of scientific journals, monographs, and conferences, is currently facing difficulties in terms of the need to balance national sovereignty and maintain ties with the global scientific community. The decision has been made to transfer the publication of 141 scientific journals of the Russian Academy of Sciences to the Nauka Publishing House, which means that Russia's largest scientific publishing house has restored the previous scale of its activities. Russia is actively working to create its own trusted lists of scientific journals, changing its approaches to scientometric assessments, and launching digital services for scientists. What does the expert community view as the most significant challenges in this regard? In what focus areas will scientific communication most actively develop?

Moderator:

- **Nikolay Fedoseenkov**, Director, Nauka Publishing House

Panellists:

- **Sergey Adonin**, Deputy Director for Research, Irkutsk Scientific Center of Siberian Branch of the Russian Academy of Sciences; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Anatoliy Kalyaev**, Head of the Laboratory of Neural Network Systems, A.V. Kalyaev Research Institute of Multiprocessor Computing Systems of the Southern Federal University; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Olga Karpenko**, Deputy Editor-in-Chief, Consortium Psychiatricum; Board Member, Moscow Branch of the Russian Society of Psychiatrists
- **Pavel Kashkarov**, Assistant to the President, National Research Centre 'Kurchatov Institute'
- **Andrey Khazin**, Rector, Russian State Social University; Academician, Russian Academy of Arts
- **Vladislav Panchenko**, Vice President, Kurchatov Institute National Research Centre; Vice President, Russian Academy of Sciences
- **Alexander Petukhov**

Front row participants:

- **Mikhail Fomin**, Head of Strategic Development Department, Nauka Publishing House
- **Irina Ilyina**, Director, Russian Research Institute of Economics, Politics and Law in Science and Technology

11:45–12:45

Sirius Science and Art Park
Lomonosov Hall

Growth Opportunities: Lectures by Prominent Scientists and Business Representatives

Lecture

Northern Russia: Historical and Anthropological Projections

Panellist:

- **Andrey Golovnev**, Director, Peter the Great Museum of Anthropology and Ethnography of Russian Academy of Sciences (the Kunstkamera)

12:00–13:30

Sirius Science and Art Park
Kurchatov Hall

The Russian Science Foundation School

Lecture

Speech by Deputy General Director of the Russian Science Foundation

What are the Russian Science Foundation's core activities? What are the guiding principles in the work of its expert councils? What are some of the specific aspects of its competitive selection and grant lines?

Moderator:

- **Yulia Krasilnikova**, Deputy Head of Public Relations Department, Russian Science Foundation

Panellist:

- **Andrey Blinov**, Deputy General Director, Russian Science Foundation

12:15–13:45

Sirius Science and Art Park
conference hall 1

Space for International Scientific and Technical Cooperation

Contribution to Social and Technological Development by Slavic Universities in the EAEU and the CIS

In the modern scientific and educational world, there are four unique universities that were co-founded by the governments of two countries: Russia–Armenia, Russia–Belarus, Russia–Kyrgyzstan, and Russia–Tajikistan. Despite the different names of the universities, they are generally defined in Russia as "Slavic". This format for establishing universities appeared after the collapse of the USSR and imposed certain requirements in terms of determining their mission, goals, and objectives, as well as the special aspects of managing and funding them. Each university has its own unique features, but there are also common goals. The panel discussion will address the experience of these universities and their history, as well as identify top priorities for their social and technological development until 2050. The discussion will pay particular attention to the role and place of young scientists in the development and modernization of "Slavic" universities, including the importance of the Young Scientists Council and the Student Research Society in improving the quality of education and involving talented young people in science and higher education for the benefit of their countries.

Moderator:

- **Konstantin Mogilevsky**, Deputy Minister of Science and Higher Education of the Russian Federation

Panellists:

- **Denis Fomin-Nilov**, Acting Rector, B.N. Yeltsin Kyrgyz-Russian Slavic University
- **Ksenia Goryacheva**, First Deputy Chairman of the Committee State Duma of the Federal Assembly of the Russian Federation on Science and Higher Education
- **Maxim Rumyantsev**, Rector, Siberian Federal University
- **Edward Sandoyan**, Rector, Russian-Armenian (Slavic) University
- **Vadim Smirnov**, Referent of the Office of the President of the Russian Federation for Interregional and Cultural Relations with Foreign Countries

Front row participants:

- **Eliza Abdilazizova**, Postgraduate Student at the Faculty of Medicine, Kyrgyz-Russian Slavic University named after B.N. Yeltsin
- **Dmitry Arseniev**, Vice-Rector for International Affairs, Peter the Great St. Petersburg Polytechnic University (SPbPU)
- **Aydar Kalimullin**, Director, Institute of Psychology and Education of the Kazan Federal University
- **Shushanik Kazariyan**, Young Scientist, Russian-Armenian (Slavic) University
- **Georgy Nadareishvili**, First Vice-Rector - Vice-Rector for Strategic Development, Pirogov Russian National Research Medical University
- **Inna Shevchenko**, Rector, Southern Federal University (SFedU)
- **Lola Solieva**, Associate Professor of the Department of Management and Marketing, Russian-Tajik (Slavic) University
- **Meri Tadevosyan**, Young Scientist, Russian-Armenian (Slavic) University

12:15–13:45

Sirius Science and Art Park
conference hall 2

The Country's Scale as a Space for Opportunities

Floating Universities

Russia's Floating University scientific and educational programme is a proven technology for the career guidance, training, and integration of young personnel for marine sciences based on the principle of learning through research. The programme helps students find a suitable research team and supervisor, research teams find talented students, and industry representatives find future employees. In 2023, students submitted more than 3,500 applications to participate in the Floating University Winter School, of which almost 100 went on scientific marine expeditions, including to the seas of the Arctic and Pacific Oceans. The Floating University coordination centre and partner organizations are ready to share their experience in implementing the scientific and educational programme, as well as opportunities for interagency cooperation and interaction with industry.

Moderator:

- **Alexey Paevsky**, Curator, Decade of Science and Technology

Panellists:

- **Olga Konovalova**, Deputy Head of Research and Development Department, Center for Marine Research, Lomonosov Moscow State University
- **Polina Lobanova**, Associate Professor, Department of Oceanology, St Petersburg University
- **Pavel Maryandyshev**, First Vice-Rector for Strategy and Research, Lomonosov Northern (Arctic) Federal University; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Olesya Rutenko**, Leading Engineer, Department of Biodiversity and Marine Bioresources, Institute of the World Ocean, Far Eastern Federal University; Manager of the Project 'Pacific Floating University'
- **Natalia Stepanova**, Head of the Scientific and Educational Program 'Floating University',Moscow Institute of Physics and Technology

12:15–13:45

Sirius Science and Art Park
conference hall 3

Development Tools

Instructions for How to Build a Scientific Career at a Corporation

Young scientists dream of building a scientific career at a large company: they can do what they love and also build a successful corporate career. But do companies themselves actually offer such an exciting career path? How broad a range of opportunities does the modern corporate world offer for scientific professionals? Where can young scientists apply their knowledge and skills to solve complex problems and develop innovative solutions? What areas of science and research are the most promising and in demand today?

Moderator:

- **Nikita Pavlov**, Ambassador of the Tochka Junior Project; Student, Private Educational Institution of Higher Education Saint Tikhon's Orthodox University for the Humanities

Panellists:

- **Alexey Agafonov**, First Deputy General Director, Russia – Land of Opportunity
- **Alexander Krainov**, Director for Development of Artificial Intelligence Technologies, Yandex
- **Sergey Mardanov**, Deputy General Director for Business Development, SR Space
- **Ekaterina Rakhmankina**, Deputy General Director for Human Resources and Organizational Development, Science and Innovations
- **Pavel Stepanov**, Deputy General Director, Geoscan Group of Companies

Front row participants:

- **Anna Kazantseva**, Ambassador of the Tochka Junior Project; Student, National Research University Higher School of Economics
- **Darya Nemirovich-Skrabatun**, Lead Mathematical Engineer, Ctrl2GO Solutions
- **Alexander Rasskazchikov**, Ambassador of the Tochka Junior Project; Student, National Research University Higher School of Economics

12:15–13:45

Sirius Science and Art Park
conference hall 4

Big Challenges: Opportunities for Development

'Chemistry Is Like Life': Micro and Small-Scale Chemistry Helping Humans

Chemistry has saved Russia in some of its most difficult times. For example, in the 1950s, a unique state chemicalization programme was created and launched, and within just a few short years, chemists were feeding the country thanks to new fertilisers and plant protection products, providing clothes for the country thanks to the production of new fibres and fabrics, ensuring the country's defence, and eventually

sending flights into space thanks to the creation of solid rocket fuel. How can chemistry be used to help key industries today? What is micro- and small-scale chemistry and why is it crucial to develop these particular branches of chemical production today? How can we learn to make generics? What role do scientific organizations and universities play in creating the next in the line of well-known products and innovative materials and medicines? How should personnel be trained to address these issues?

Moderators:

- **Yulia Gorbunova**, Vice President, D.I. Mendeleev Russian Chemical Society; Acting Dean, Faculty of Fundamental Physicochemical Engineering, Lomonosov Moscow State University (MSU)
- **Stepan Kalmykov**, Vice-President, Russian Academy of Sciences

Panellists:

- **Valery Buhtiyarov**, Director, Federal Research Center Boreskov Institute of Catalysis of the Russian Academy of Sciences
- **Anton Maximov**, Director, Institute of Petrochemical Synthesis named after A.V. Topchiev of the Russian Academy of Sciences
- **Alexander Mazhuga**, First Deputy Chairman of the Committee of the State Duma of the Federal Assembly of the Russian Federation for Science and Higher Education
- **Vasily Retivov**, Deputy Director for Chemical Research and Technology, Research Center "Kurchatov Institute"
- **Sergey Tutov**, Head of Research and Development, Sibur
- **Mikhail Varfolomeev**, Head of the Department of Petroleum Engineering, Kazan Federal University
- **Andrey Voshkin**, Deputy Director, N.S. Kurnakov Institute of Inorganic Chemistry of the Russian Academy of Sciences

12:15–13:45

Sirius Science and Art Park
conference hall 5

Big Challenges: Opportunities for Development

Genetic Technologies to Ensure Biological Safety

There have been active discussions in recent years about advances in synthetic biology, the availability of biotechnologies, and their impact on biological safety risks. Russia has extensive practical and scientific experience in combatting biological threats. As part of the country's Federal Scientific and Technical Programme for the Development of Genetic Technologies, three leading scientific organizations of the Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing have established the world-class Centre for Genomic Research to Ensure Biological Safety and Technological Independence. The Centre's main goal is to develop and introduce genetic technologies for the diagnosis, prevention, and treatment of dangerous infectious diseases in order to ensure Russia's biological safety, as well as create a domestic reagent base to ensure the country's technological independence in the development of genetic technologies. Based on an initiative from the Russian president, the Federal Service for the Oversight of Consumer Protection and Welfare is implementing the Sanitary Shield project, which aims to strengthen Russia's ability to prevent and respond to biological threats and integrates the best modern technologies into the practice of epidemiological surveillance.

Moderator:

- **Ivan Dyatlov**, Director, State Research Center for Applied Microbiology and Biotechnology of Rospotrebnadzor

Panellists:

- **Mariya Antonets**, Researcher, State Scientific Center of Virology and Biotechnology "Vector" of Rospotrebnadzor
- **Anastasia Gladysheva**, Senior Researcher of the Department of Molecular Virology Flaviviruses and Viral Hepatitis, State Scientific Center of Virology and Biotechnology "Vector" of Rospotrebnadzor
- **Alexander Tyumentsev**, Head of the Experimental Pharmacology Laboratory, Central Research Institute for Epidemiology of Rospotrebnadzor
- **Anastasiya Vagayskaya**, Junior Researcher, State Research Center for Applied Microbiology and Biotechnology of Rospotrebnadzor

12:15–13:45

Sirius Science and Art Park
conference hall 6

Opportunities for the Decade of Science and Technology in Russia

The Science of Promotion: Scientists – the New Leaders of Public Opinion

Despite the active development and implementation of a huge number of successful projects and discoveries, the achievements made by Russian science are the "property of a select few". Information about them is not sufficiently distributed to a wide audience, so people have a limited awareness about the successes of the scientific sector. To popularize science among a broader audience and strengthen patriotic values, Russia's technological achievements need to be discussed in a language that is

accessible. Social media is the most suitable option for solving this problem, since the younger generation trusts the opinion of bloggers. Young scientists themselves are the best ones to talk about scientific achievements and can become public opinion leaders thanks to popular science content on national social media networks. Why is the issue of promoting scientific achievements in the media so important today? How does the popularization of science affect Russia's economic and cultural progress? Can the media and new media set trends to make science and the scientific community more appealing to young people? Why should the country's young minds become the new opinion leaders? Why is business interested in young scientists taking centre stage so that there is more scientific content?

Moderator:

- **Andrey Serov**, General Director, "Challenge" Youth Community

Panellists:

- **Anna Dunaeva**, Coordinator, "Razgon" Youth Community
- **Danila Kalinikin**, Head, AGNI Startup Factory Startup Studio; Participant of the Second Season of the "Challenge" Reality Show
- **Andrey Kondaurov**, Philosopher, Teacher, Participant of the Second Season of the "Challenge" Reality Show
- **Aleksey Lebedev**, Director, Art Training; Curator, Innopraktika School
- **Natalya Popova**, First Deputy General Director, Innopraktika
- **Valeria Rodina**, Director of Public Relations, Insight People
- **Adel Valiullin**, Head of the Center for Artificial Intelligence Technologies, Gazprombank

12:15–13:45

Sirius Science and Art Park
conference hall 7

Development Tools

Applied Capabilities of Scientific Projects: Work with Regional Customers and Investors

The development of innovative management and the practical use of scientific developments are major priorities facing the scientific community, as well as national business and regional customers today. How can we build a process in which authors' ideas are transformed into a tangible result both for themselves and for society as a whole? How can we identify the needs of the real sector of the economy so that the research that is carried out has a chance of being put into practice? What is considered a successful scientific development? How can a region serve as a qualified customer for research and development?

Moderator:

- **Vasily Petrechenko**, Vasily Petrechenko, Deputy General Director, Scientific Park of Lomonosov Moscow State University

Panellists:

- **Victor Anisimov**, Director, Kuban Science Foundation
- **Vladimir Ivanov**, Deputy President, Russian Academy of Sciences
- **Alexander Shvalev**, Deputy General Director for Innovation, Innovation Hub LLC (INNOHAB Rosatom)
- **Konstantin Timolyanov**, Chairman of the Board, Management Company of the Interregional Scientific and Educational Center of the South
- **Artem Vodeniktov**, Head of Expert Support Department, Ctrl2Go Solutions

Ideas and Projects Leaders of "Strong Ideas for New Times" Forum:

- **Vitaly Fedorishchev**, Deputy Director, Tyumen Corrugated Pipe Plant
- **Igor Kozhelin**, General Director, SR DATA
- **Liliya Panteleenko**, General Director, Econ
- **Ekaterina Savenko**, General Director, Living Ground
- **Polina Solodovnikova**, General Director, SAPFIR-Chemical Technologies
- **Pavel Stepanov**, General Director, Integrated Control and Automation Systems
- **Vyacheslav Vavilov**, Director, "Motors of the Future" Advanced Engineering School, Ufa University of Science and Technology
- **Denis Zheleznov**, Student, Employee, Y.A. Gagarin Saratov State Technical University
- **Дарья Токарева**

12:15–13:45

Sirius Science and Art Park
conference hall 8

Open Program of the Congress of Young Scientists

12:15–13:45

Sirius Science and Art Park
conference hall 9

The Country's Scale as a Space for Opportunities

Satellite Events: Kamchatka

From a Source of Disaster to a Source of Knowledge: The Dangerous Natural Phenomena of Kamchatka as Potential for the Development of Science in the Region

The Kamchatka Territory is a unique natural laboratory for studying all kinds of phenomena and objects. The unique natural landscape, with its pristine territory, diverse terrestrial and marine ecosystems, enormous populations of Pacific salmon, rookeries of sea pinnipeds, habitat of sea otters, high level of thermal, seismic, and volcanic activity, allows for a wide variety of research in the region to study nature and its impact on human life, and also provides an opportunity to develop applied research in order to monitor hazardous natural processes and minimize risks from hazardous natural phenomena for humans and the economy. In 2023, the Russian Ministry of Science and Higher Education will wrap up its comprehensive programme 'Ecological Safety of Kamchatka: Study and Monitoring of Hazardous Natural Phenomena and Manmade Impacts'. The programme was launched after the catastrophic red tide events in autumn 2020, which impacted the health and well-being of people in Kamchatka, and also resulted in the mass death of marine aquatic organisms. The implementation of this programme from 2021 to 2023 by leading Russian scientific organizations revealed the need for the further development of comprehensive scientific research in Kamchatka, and the expansion of the scientific agenda. The session will present the results of scientific research conducted in 2021-2023 and recap the experience of two satellite events of the Young Scientists Congress in Kamchatka. The speakers will focus on the concept of the new Programme for Comprehensive Scientific Research in Kamchatka, which was initiated by Kamchatka Territory government. The programme will include scientific research and the development of new technologies in the following four areas: ecology and biodiversity, volcanology and seismology, renewable energy, and people living in the extreme conditions of the North. The new programme proposes creating a world-class centre in Kamchatka to conduct fundamental and applied scientific research of the region's natural objects and human potential in order to introduce technological innovations and strengthen Russia's position in the scientific development of the World Ocean, the Far East, and the Arctic.

Moderator:

- **Alexander Fertman**, Director of Science and Education Department, Skolkovo Foundation

Panellists:

- **Danila Chebrov**, Director of the Kamchatka Branch, Federal Research Center "Unified Geophysical Service of the Russian Academy of Sciences"
- **Aleksandra Lebedeva**, Deputy Chairman of the Government of the Kamchatka Territory
- **Olga Rebkovets**, Acting Rector, Vitus Bering Kamchatka State University; Founder, Total Dictation Foundation
- **Denis Sekirinsky**, Deputy Minister of Science and Higher Education of the Russian Federation
- **Kirill Vinnikov**, Director, Institute of the World Ocean, Far Eastern Federal University

12:15–13:45

Sirius Science and Art Park
Mendeleev Hall

The Country's Scale as a Space for Opportunities

Satellite Events: Yamalo-Nenets Autonomous District

Yamal Becomes Top Voluntary Technology Certification Centre in Russia's Arctic Zone

Russia's regions are hosting satellite events of the Young Scientists Congress as part of the Decade of Science and Technology. The Yamalo-Nenets Autonomous District will hold its second satellite event on 13–17 December 2023, which will definitively secure the region's status as Russia's leading expert platform for studying permafrost and climate changes in order to develop adaptation measures. The region currently faces challenges that need to be solved with new technologies, unconventional approaches to research, and changes to existing standards and rules for the construction and operation of buildings and structures in the Arctic. A new format of interaction with partners that is being created through the Yamal Voluntary Certification Centre will serve as a mechanism for introducing proven solutions. More specifically, the region is ready to provide everyone with equal opportunities to test new technologies in difficult, albeit unique natural and climatic conditions. In doing so, Yamal intends to solve its problems with critical technologies, attract industrial partners, create conditions for young researchers, and make experiments at Yamal testing sites a part of the graduate theses of leading Russian universities. How is the region developing its expertise in matters concerning permafrost and climate? What research programmes and scientific and technological experiments will be developed and launched in cooperation with the participants of the satellite event?

Moderator:

- **Anatoly Mirny**, General Director, Independent Geotechnika; Associate Professor, Faculty of Geology, Lomonosov Moscow State University

Panellists:

- **Andrey Alekseev**, Head of the Center for Geocryological and Geotechnical Research, N.M. Gersevanova Research, Survey and Design-Technological Institute of Foundations and Underground Structures

- **Aleksey Lanis**, Head of the Department of Track and Track Management, Siberian State Transport University
- **Denis Napolskikh**, Director of the Department of Transport and Road Facilities of the Yamalo-Nenets Autonomous Okrug
- **Sergey Ovsyannikov**, Head of the Department of Architecture of Civil and Industrial Buildings, Tomsk State University of Architecture and Civil Engineering; Doctor of Technical Sciences, Professor
- **Andrey Yashnov**, Head of the Department of Bridges, Siberian State University of Transport, Associate Professor, Doctor of Technical Sciences

12:15–13:45

Sirius Science and Art Park
Atom Hall

Development Tools

Young Teachers: A Guarantee of the Continuity of Russia's Great Medical Education Traditions

The session features a discussion of key problems in training personnel for the healthcare system in Russia with young teachers and scientists who work at medical universities and research institutes and won the national competition for the best young teachers in the training of healthcare personnel. It is crucial to consider the methodological and research skills of a modern teacher in the healthcare sector, as well as the expertise required to properly support the educational process. The key goal is to identify the basic professional skills of a young teacher in the training of personnel for the healthcare system. How can we unleash the creative and professional capabilities of young vocational school teachers so that they can work effectively in the modern educational environment? How are progressive educational approaches and practices developing within the modern educational model? How is the introduction of new methods transforming teaching technologies? What shapes public opinion about the need to develop modern medical and pharmaceutical education? How are teaching methods and technologies changing as the digital economy continues to develop?

Moderator:

- **Nikita Krasnoshchekov**, Chairman of the Council of Young Scientists and Specialists, Russian Academy of Education; Member, Coordination Council for Youth Affairs in Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

Panellists:

- **Alyona Abdrashitova**, Associate Professor of the Department of Pediatric Dentistry, Kazan State Medical University
- **Elena Baranova**, Academic Head of the Department of Medical Genetics, Russian Medical Academy of Continuing Professional Education of the Ministry of Health of the Russian Federation
- **Tatyana Litvinova**, Vice-Rector for Educational Work, I.M. Sechenov First Moscow State Medical University of the Ministry of Healthcare of the Russian Federation
- **Gennady Onishchenko**, Deputy President, Russian Academy of Education
- **Tatyana Osipenko**, Senior Lecturer, Institute of Linguistics and Intercultural Communication, I.M. Sechenov First Moscow State Medical University of the Ministry of Healthcare of the Russian Federation Sechenovskiy University
- **Elena Savelyeva**, Associate Professor of the Department of Pharmacy, Krasnoyarsk State Medical University named after Professor V.F. Voino-Yasenetsky
- **Anastasia Sinitsyna**, Assistant at the Department of Pharmacy, I.M. Sechenov First Moscow State Medical University of the Ministry of Healthcare of the Russian Federation

12:15–13:45

Sirius Science and Art Park
Buran Hall

The Country's Scale as a Space for Opportunities

Scientific Research by Young Scientists on the Sustainable Development of Rural Areas

Rural areas make up more than 98% of all populated areas in Russia and are home to one quarter of the total population or almost half of the population if small towns are included (57.7 million people). One of Russia's priority national goals is to meet the needs of rural residents for a comfortable living environment in terms of the availability of high-quality essential social services, as well as professional and personal fulfilment. A key factor in the sustainable development of rural areas is the creation of conditions for the innovative and technological development of the main sectors of the economy by supporting young scientists. Their scientific research is what drives the progressive development of Russia's vast territory. Encouraging research and project-based activities among young people in rural areas and intensifying different forms of cooperation between young scientists who study problematic issues in rural areas are effective tools for supporting scientific research among young people in rural areas as part of the implementation of key aspects of Russia's scientific and educational policy. What issues will the scientific community need to address in the next ten years in order to ensure the sustainable development of rural areas? What needs to be done to attract talented and motivated young people from rural areas to science? Which interdisciplinary scientific focuses are currently a priority in the agricultural industry and why? The technological frontier of the digital transformation of rural areas:

what are the priority focuses of scientific research among young scientists in terms of developing digital solutions for the country's rural areas?

Moderator:

- **Ekaterina Kharchenko**, Deputy Chairman of the Committee of the State Duma of the Federal Assembly of the Russian Federation for Science and Higher Education

Panellists:

- **Yulia Alferova**, Director General, National Agency for Entrepreneurship Development, Director of the Competence Center Digital Transformation of Business and Public Administration of the Digital Economy Development Fund
- **Lyubov Belesku**, Advisor to the First Deputy Chairman of the Board, Russian Agricultural Bank
- **Igor Gaydamashko**, Acting Rector, Sochi State University
- **Maksim Kirilov**, Director, Center for Rural Development of Nizhny Novgorod State Engineering and Economic Institute
- **Andrey Pashtetsky**, Acting Director, N.V. Tsitsin Main Botanical Garden of the Russian Academy of Sciences; Deputy Chairman, Coordination Council for Youth Affairs in Scientific and Educational Spheres of the Council under the President of the Russian Federation on Science and Education
- **Elena Pevtsova**, Rector, V.I. Vernadsky Russian State University of National Economy
- **Natalia Yaitskaya**, Deputy Director for Science, Federal Research Center Subtropical Scientific Center of the Russian Academy of Sciences
- **Natalia Zinovieva**, Director, Academician Ernst All-Russian Research Institute of Animal Husbandry

13:30–14:30

Sirius Science and Art Park
Lomonosov Hall

Growth Opportunities: Lectures by Prominent Scientists and Business Representatives

Lecture

Arctic Ecosystems in the Era of Climate Change and Large-Scale Industrial Development

Climate warming is most pronounced in the Arctic. Yamal is the energy heart of Russia and a leader in hydrocarbon production. Reindeer herders graze some of the world's largest reindeer herds in the region. How is this all affecting ecosystems? During the lecture, you will see and hear amazing examples of how Arctic wildlife, such as Arctic fox, Northern falcons, and Yamal walruses, is responding to modern changes, in addition to unexpected examples from the north of Western Siberia.

Panellist:

- **Alexander Sokolov**, Deputy Director, Arctic Research Station, Institute of Plant and Animal Ecology, Ural Branch of the Russian Academy of Science

14:15–15:45

Sirius Science and Art Park
plenary session hall

Big Challenges: Opportunities for Development

Megascience Class Infrastructure: The Foundation for Creating a Unified Scientific and Technological Space

Resolution No. 21 of the Council of Ministers of the Union State of Russia and Belarus dated 16 October 2023 approved the Strategy for the Scientific and Technical Development of the Union State for the Period until 2035. The Strategy will be implemented by establishing a unified scientific, technological, and educational space that is primarily based on megascience research infrastructure. Such infrastructure is already being built in Russia pursuant to a decree issued by the Russian president as part of the Federal Scientific and Technical Programme for the Development of Synchrotron and Neutron Research. A network of megascience installations, the only one of its kind in the world, is being created and modernized as a metrological basis for the development of nature-like technologies. Today, the unified scientific and technological space is already expanding to the CIS and countries that have friendly relations with Russia. The first stage involved scientists from Belarus, Uzbekistan, and Iran joining the International Centre for Neutron Research based on the PIK high flux reactor. The next stage not only involves increasing the number of participating countries, but also establishing a common network of synchrotron and neutron research, as well as creating an integrated information and communication infrastructure. What opportunities do megascience installations offer? What prospects and plans exist for international cooperation in this area? What unique opportunities do megascience facilities offer for young scientists?

Moderator:

- **Mikhail Kovalchuk**, President, Kurchatov Institute National Research Centre

Panellists:

- **Arutyun Avetisyan**, Director, Ivannikov Institute for System Programming of the Russian Academy of Sciences

- **Alexander Blagov**, Vice President, Kurchatov Institute National Research Centre
- **Seyed Amir Hossein Feghhi**, Deputy of the Atomic Energy Organization of Iran; Head, Nuclear Science and Technology Research Institute
- **Boris Korobets**, Rector, Far Eastern Federal University
- **Pavel Logachev**, Director, Budker Institute of Nuclear Physics of the Siberian Branch of the Russian Academy of Sciences
- **Vladislav Panchenko**, Vice President, Kurchatov Institute National Research Centre; Vice President, Russian Academy of Sciences
- **Mannab Tashmetov**, Deputy Director, Institute of Nuclear Physics of the Republic of Uzbekistan
- **Grigory Trubnikov**, Director, Joint Institute for Nuclear Research

Front row participant:

- **Vasily Velikhov**, Assistant to the President of the Center for Information Technology and Artificial Intelligence, "Kurchatov Institute" National Research Center

14:15–15:45

Sirius Science and Art Park
conference hall 1

Opportunities for the Decade of Science and Technology in Russia

How to Get on TV: Tools for Promoting Scientific Developments

How often do scientists have to take part in recording a story or talk about their developments during a press tour instead of writing a scientific article or conducting an experiment? It seems like it takes a lot of time and is not particularly significant. But is that true? One of the key objectives of the Decade of Science and Technology is to change people's attitudes about the achievements and prospects of Russian science and ensure that they know about the latest domestic developments, trust scientists, and are interested in new research. This enhances the importance of scientists and alters their role. During the discussion, leading journalists, teachers, and press service employees will explain how to become the central figure of a story on television or an Internet show, what advantages and bonuses scientists get from publications about their developments in the media, what scientific communications are, and how they enable scientists to promote their projects by creating opportunities for cooperation with business and development institutions. What are the key media trends in science communication today? How has the role of the scientist changed as scientific knowledge becomes more popular? What tools exist for promoting research and development, and which of them are the most relevant and in demand? Would it be effective to create brand media for a scientific institute, university, or technology company? How are the projects of the Decade of Science and Technology helping scientists advance their research?

Moderator:

- **Alexey Paevsky**, Curator, Decade of Science and Technology

Panellists:

- **Olga Bakina**, Marketing Director, Technologies and Creativity
- **Gleb Fedorov**, Chief Producer, National Priorities
- **Grigory Kovbasyuk**, General Director, TV Channel "Science"
- **Anna Kovtunova**, Head of Educational Projects Service, RT
- **Irina Timofeeva**, Professor, Institute of Chemistry, St. Petersburg State University; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

14:15–15:45

Sirius Science and Art Park
conference hall 2

Development Tools

Start the Game: Training on Gamification Tools in Education

Gamification has become firmly embedded in our lives today. Gamified processes demonstrate more effective indicators than conventional and familiar tools. Numerous companies are using it in various fields. But are there tools for developing gamification personnel in Russia? What research about gamification is currently available? What research is lacking? What skills should a gamifier have? Are standard educational methods effective in this regard? What is needed to increase the number of universities that teach this specialization in Russia?

Moderator:

- **Maryam Karpova**, Head of the "Start the Game" All-Russian Competition

Panellists:

- **Alexey Agafonov**, First Deputy General Director, Russia – Land of Opportunity
- **Alexander Bondar**, Director of the Department of Educational, Scientific and Technical Activities, Ministry of the Russian Federation for Civil Defense, Emergency Situations and Disaster Relief

- **Aleksey Fedoseev**, President, Association of Technology Kruzhoks; Leader of the Berloga Project, National Cyberphysical Platform
- **Mikhail Nachevsky**, Head of Digital Transformation Department, Plekhanov Russian University of Economics
- **Pavel Zhukov**, Head of Educational Projects at the Gamification Laboratory, Sberbank

14:15–15:45

Sirius Science and Art Park
conference hall 3

Big Challenges: Opportunities for Development

New Building Materials and Technologies: The Role of Scientific Institutions in Technological Leadership

Technological leadership in the construction industry largely depends on science. Technologies that originate at research centres are a reliable foundation for safe and high-quality construction. The technological sovereignty of the construction industry is among the highest in the country, with various estimates putting it at more than 97%. What advanced construction technologies and materials are Russian scientists developing and introducing? How are they being used in the construction of unique facilities in Russia and other countries?

Moderator:

- **Dmitry Kuzevanov**, President, Reinforced Concrete Association

Panellists:

- **Sergey Kaloshkin**, Director, Institute of New Materials and Nanotechnologies, National University of Science and Technology "MISIS"
- **Denis Konin**, Deputy Director for Research, Research Institute of Building Constructions (TSNIISK) named after V. A. Koucherenko
- **Rafael Sharafutdinov**, Director, Gersevanov Research Institute of Bases and Underground Structures
- **Evgeny Stepanov**, Head of Product Development for Plastics and Organic Synthesis Products, SIBUR
- **Evgeny Sumarokov**, Head of Digital Technologies Department, Research Institute of Concrete and Reinforced Concrete (NIIZHB) named after A.A. Gvozdev

14:15–15:45

Sirius Science and Art Park
conference hall 4

Opportunities for the Decade of Science and Technology in Russia

Russian Scientist: From Researcher to Business Partner

In partnership with Gazprom Neft

Modern scientists do much more than just conducting research. They are increasingly dealing with the issue of commercializing their developments and transforming them into a knowledge-intensive business. Partnerships between business and young scientists, which are broadly supported by the government, help to meet ambitious goals that would be impossible to approach alone. What industry challenges are businesses working on together with scientists? How can a scientist identify a niche that needs to be filled and choose his/her own development trajectory? How do technology scouting and technology partnerships work? How can we transform scientific research into a technological solution that is ready to be scaled?

Moderator:

- **Ilya Dementyev**, Rector, Gazprom Neft Corporate University

Panellists:

- **Mikhail Bely**, General Director, RIOS Engineering
- **Artem Boev**, Director of the Natural Resources Engineering School, Tomsk Polytechnic University
- **Alexey Borovkov**, Vice Rector for Digital Transformation, Peter the Great St. Petersburg Polytechnic University
- **Alexander Kustov**, Associate Professor of the Department of General Chemistry, M.V. Lomonosov Moscow State University
- **Mikhail Nikulin**, Head of the Technology Center for Industrial Innovation, Gazpromneft
- **Sergey Tutov**, Head of Research and Development, Sibur
- **Vladislav Zhukov**, Director for Business Engineering Project Development, Gazpromneft – Technology Partnerships

14:15–15:45

Sirius Science and Art Park
conference hall 5

Opportunities for the Decade of Science and Technology in Russia

Development of Human Capital Starting from School

School education is a fundamental stage in the formation of human capital: knowledge acquired at school plays an important role in people's further ability to tap into their professional potential and shape their personal well-being and the well-being of society as a whole. Obviously, additional education, clubs, children's participation in project activities, extracurricular activities, and the atmosphere in the family also play a significant role in the development of schoolchildren and the shaping of their personality. What tools can motivate children to study subjects in depth and help schoolchildren learn about popular areas of science and technology? What are some of the successful cases in the development and popularization of educational initiatives? How can Russia's human resources potential be developed starting from school? What improvements can be made to the social and educational environment at school? How can schoolchildren be motivated to study in depth the subjects that are essential to realizing their potential? How can we help schoolchildren learn about modern technologies and in-demand fields of science and technology? What initiatives help promote science and technology among children? Why is it important to focus on teacher retraining? How do universities start working with young people who just completed school? How can we get parents more involved in the process of teaching and raising students?

Moderator:

- **Natalya Popova**, First Deputy General Director, Innopraktika

Panellists:

- **Mikhail Degtyarev**, Governor of Khabarovsky Territory
- **Valery Falkov**, Minister of Science and Higher Education of the Russian Federation
- **Dmitry Livanov**, Rector, Moscow Institute of Physics and Technology (National Research University)
- **Vadim Medvedev**, Rector, University of the National Technology Initiative 2035"; General Director, National Technology Initiative Project Support Fund
- **Vladimir Shevchenko**, Rector, National Research Nuclear University MEPhI
- **Tatyana Vasilieva**, Deputy Minister of Education of the Russian Federation
- **Stanislav Voskresensky**, Governor of Ivanovo Region

Front row participants:

- **Roman Kamaev**, Deputy General Director, ANO "National Priorities"
- **Darya Kozyreva**, Head of the Department of Patriotic Projects, All-Russian Public-State Movement of Children and Youth Movement of the First
- **Aleksandra Lebedeva**, Deputy Chairman of the Government of the Kamchatka Territory
- **Maxim Pratusevich**, Director, Presidential Physics and Mathematics Lyceum No. 239
- **Andrey Sanosyan**, Deputy Governor of Nizhny Novgorod Region

14:15–15:45

Sirius Science and Art Park
conference hall 6

Opportunities for the Decade of Science and Technology in Russia

Boundless Worlds: How Science Fiction Shapes the Image of the Future

In partnership with Sberbank

Science fiction helps shape the future by presenting new technologies and scientific discoveries that could change the world. The works of science fiction writers inspire scientists and researchers to make discoveries that will enable us to improve our lives. Science fiction helps us realize that the future is not inevitable and that we can influence its course through our actions and choices. It also helps us imagine what the consequences of scientific developments and initiatives will be, and can warn of possible threats to humanity, such as environmental disasters, global conflicts, or unemployment caused by the introduction of new technologies. How can science fiction help shape an image of the future? Is science fiction a reflection of modern technology, or, on the contrary, does it stimulate progress and development? How can science fiction help us develop science and create technology, as well as build a society of the future?

Moderator:

- **Albert Efimov**, Candidate of Philosophy, Vice President - Director of the Research and Innovation Department, Sberbank

Panellists:

- **Irina Belykh**, Co-founder, Program Director, FANK Contemporary Science Film Festival; Member of the Expert Council for Non-Fiction Films, Ministry of Culture of the Russian Federation; Member of the Board, European Academy of Science Films
- **Konstantin Frumkin**, Candidate of Cultural Studies, Head of the Media Relations Department, National Research Nuclear University "MEPhI"
- **Andrey Sebrant**, Candidate of Physical and Mathematical Sciences, Director of Strategic Marketing, Yandex

14:15–15:45

Sirius Science and Art Park
conference hall 7

The Country's Scale as a Space for Opportunities

Satellite Events: Khabarovsk

People, Technologies, and Natural Resources of the Khabarovsk Region

Satellite events of the Young Scientists Congress are being held to get the Russian scientific community involved in solving some of the most important practical problems facing the country's regions. The Khabarovsk Region hosted a satellite event of the III Young Scientists Congress for the first time in September 2023, which was attended by scientists, representatives of the executive authorities, and industrial companies in the region. More than 130 experts from 22 cities of Russia worked on solving key problems in the region, such as predicting flood zones when the Amur River level rises, getting researchers and engineers in engage in technology transfers, using wood waste to produce biofertilizers, and enriching minerals at mining enterprises in the region. How effective are the solutions proposed by the experts in terms of meeting the region's needs? What is the future work plan for their implementation?

Moderator:

- **Yury Marfin**, Rector, Pacific State University

Panellists:

- **Alexander Fertman**, Director of Science and Education Department, Skolkovo Foundation
- **Alexey Ilyin**, Director, Research Center for Creative Industries; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Pavel Maryandyshev**, First Vice-Rector for Strategy and Research, Lomonosov Northern (Arctic) Federal University; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Evgeny Nikonov**, Deputy Chairman of Khabarovsk Territory Government for Social Issues
- **Anton Yurmanov**, Director of the Youth Work Department, Russian Geographical Society

14:15–15:45

Sirius Science and Art Park
conference hall 8

Open Program of the Congress of Young Scientists

14:15–15:45

Sirius Science and Art Park
conference hall 9

Development Tools

Tango with a Cyborg: Digitalization and Social Change

The rapid development of information technologies, the cyborgization of ethical and moral aspects of social life, and the antagonism of artificial and 'anthropological' intelligence all accentuate the need for humanistic reflection about the ways to develop society and humankind in the digital era, and also raise questions about spirituality and the harmonious holistic development of human consciousness in the current conditions. But only a balanced human personality can and should become the key to new opportunities to ensure Russia's scientific and technological leadership in the near future and for decades to come. A humanistic examination of digital technologies: how can we counter cyberbullying and cyber aggression? What role do digital technologies play in shaping a harmonious picture of the world among future scientists? The matrix of progress: is digitalization a necessary evil, or a new opportunity for humans? The effectiveness of numbers: how can Russian culture ensure the competitiveness of domestic inventions and the priority development of the country's scientific and technical sector amidst the changes that are occurring in civilization?

Moderator:

- **Andrey Reznichenko**, Head of the editorial office "Science", TASS Russian Information Agency

Panellists:

- **Anton Fortunatov**, Head of the Department of Socio-Political Communications, National Research Lobachevsky State University of Nizhny Novgorod
- **Andrey Polosin (online)**
- **Pavel Strizhak**, Scientific Supervisor of the Laboratory of Heat and Mass Transfer, National Research Tomsk Polytechnic University
- **Sophia Tikhonova**, Professor, Saratov State University

14:15–15:45

Sirius Science and Art Park
Mendeleev Hall

The Country's Scale as a Space for Opportunities

Satellite Events: Arkhangelsk

Innovations in Shipbuilding: New Solutions to Current Problems

Shipbuilding, as one of the most knowledge-intensive industries, requires a continuous range of advanced research to develop new principles and approaches to identifying priorities in the innovative design and construction of ships and vessels. If Russia is the first to obtain fundamental knowledge, then it will be the first to develop technology. If Russia uses the knowledge that its competitors have acquired, they will do it first. To achieve the goals of increasing the energy efficiency and eco-friendliness of ships and reducing carbon dioxide emissions, it is crucial to move from power-saving features to fundamentally new comprehensive technical measures. What are they? The prospect of developing shipbuilding will force Russia to use alternative energy sources, which include hydrogen, battery-driven electric propulsion, and, of course, solar and wind power. How are additive technologies and special materials for the Arctic being created and introduced? Why is it important to pay special attention to the creation of marine robotics and intelligent systems for unmanned navigation?

Moderator:

- **Vladimir Nikitin**, President, Academician A.N. Krylov Russian Scientific and Technical Society of Shipbuilders

Panellists:

- **Maksim Grigorov**, Head of the Center for Marine Scientific and Technical Development, Krylov State Scientific Center
- **Vladimir Lobyntsev**, Head of Laboratory, National Research Centre Kurchatov Institute
- **Vyacheslav Magarovskiy**, Head of the Division of Hydroaerodynamics, Krylov State Research Centre FSUE
- **Dmitriy Makarov**, Professor, Northern Arctic Federal University named after M.V. Lomonosov FSAEI HE
- **Dmitry Nikushchenko**, Doctor of Technical Sciences, Professor of the Department of Applied Mathematics and Mathematical Modeling, St. Petersburg State Marine Technical University

14:15–15:45

Sirius Science and Art Park
Atom Hall

Big Challenges: Opportunities for Development

Forefront of Space Exploration

The space industry is one of the drivers of the development of science and high technology, as it contributes to the emergence of new services in all sectors of the economy. It is crucial to identify the major challenges in the rocket and space industry that face humanity in general and Russia in particular. The most important research tasks include: creating and developing groups of small spacecrafts, improving the quality of communications and navigation, building low orbital systems, designing a Russian orbital station, and exploring deep space. In order to implement these complex technological projects, the government, private companies, scientific organizations, and universities need to establish cooperation and identify their main tasks. Particular attention should be paid to creating strong interdisciplinary research teams and training highly skilled scientific and engineering professionals who are capable of offering innovative solutions. How will launching and implementing promising innovative projects help Russia strengthen its position as one of the leading space powers in the world in the long term?

Moderator:

- **Mikhail Pogosyan**, Rector, Moscow Aviation Institute (National Research University); Chairman, Commission on Education and Science, Public Chamber of the Russian Federation

Panellists:

- **Anton Alekseev**, General Director, "New Space" Corporation for Aerospace Activities
- **Andrey Elchaninov**, First Deputy General Director, Roscosmos State Corporation **(online)**
- **Oleg Mansurov**, General Director, SR Space
- **Kirill Okhotkin**, Deputy General Director for Science, Information Satellite Systems named after Academician M.F. Reshetnyova
- **Alexander Povalko**, Advisor to the Rector, Moscow Institute of Physics and Technology (National Research University)
- **Volik Vladimir**, Deputy General Director for Programs and Strategy, "Energia" Rocket and Space Corporation

Front row participants:

- **Mostafa Agha**, Young Scientist, American Physical Society (APS)

- **Andrey Volyntsev**, Department Head, Academician V.I. Kuznetsova Research Institute of Applied Mechanics; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

14:15–15:45

Sirius Science and Art Park
Buran Hall

Big Challenges: Opportunities for Development

Scientific Equipment: Russian Solutions for Comfortable and Efficient Work

Discussions about providing laboratories with scientific equipment and instrumentation are of paramount importance. The idea of Our Lab is to unite information about scientific and engineering equipment, as well as provide a tool to search for foreign analogues. The discussion will include a presentation of the 'Custom-Made Work' module, which is a new tool that can be used to find co-contractors for the development, testing, and manufacturing of equipment. What barriers exist today and how can they be overcome? Why is there a stereotype about the low quality of domestic devices? Who benefits from "instrumental non-patriotism" and how are businesses and the state responding to these challenges? What proposals do universities, research institutes, businesses, and young scientists have? What specific examples of the development of high-tech devices already exist and what other ones can we expect in the next two years?

Moderators:

- **Sergey Adonin**, Deputy Director for Research, Irkutsk Scientific Center of Siberian Branch of the Russian Academy of Sciences; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Olga Tarasova**, Director, Center for Development of Scientific and Educational Initiatives; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

Panellists:

- **Dmitry Kurochkin**, Vice President, Chamber of Commerce and Industry of the Russian Federation
- **Alexander Mazhuga**, First Deputy Chairman of the Committee of the State Duma of the Federal Assembly of the Russian Federation for Science and Higher Education
- **Andrey Naumov**, Head, Troitsk Branch of the P.N. Physical Institute Lebedev RAS; corresponding member, Russian Academy of Scienceses
- **Maxim Nikitin**, Leading Researcher, Head of the Laboratory Nanobiotechnology, The Moscow Institute of Physics and Technology; Co-Founder, Abisense
- **Mikhail Presnyakov**, Candidate of Technical Sciences, Head of the Directorate for the creation of the research installation "SILA" of the National Research Center "Kurchatov Institute"; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Denis Sekirinsky**, Deputy Minister of Science and Higher Education of the Russian Federation
- **Konstantin Vernigorov**, General Director, Sibur Polylab; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

15:15–16:15

Sirius Science and Art Park
Lomonosov Hall

Growth Opportunities: Lectures by Prominent Scientists and Business Representatives

Open mic with Yury Oganesyan

Panellist:

- **Yury Oganesyan**, Scientific Director of the Laboratory of Nuclear Reactions named after G.N. Flerova, Joint Institute for Nuclear Research **(online)**

15:45–18:00

Sirius Science and Art Park
Kurchatov Hall

The Russian Science Foundation School

Open Mic

Members of the Russian Science Foundation School are invariably interested in the Q&A session with RSF Deputy General Director Andrey Blinov. The session will provide an opportunity to discuss all the pressing issues concerning the Foundation's grant recipients and offer ideas on how to improve the system of grant support for science.

Moderator:

- **Yulia Krasilnikova**, Deputy Head of Public Relations Department, Russian Science Foundation

Panellist:

- **Andrey Blinov**, Deputy General Director, Russian Science Foundation

16:30–18:00

Sirius Science and Art Park
plenary session hall

Opportunities for the Decade of Science and Technology in Russia

Development of Russian Science in the 20th Century: The Foundation of Modern Breakthroughs

In the 1920s, the foundations of a new state, the USSR, were laid. The industry that had been destroyed needed to be restored and put on a new track as quickly as possible, and the economy, education, and science had to be developed based on new principles. Despite the difficult economic situation, internal political turmoil, and almost complete external isolation, the Bolshevik government understood the importance and urgency of measures needed to develop science in the Soviet republic. After World War II, the atomic project became a catalyst for the development of many new areas of science and technology, and changed the geopolitical picture of the world. As part of nuclear and, a little later, space projects, complex interdisciplinary and integrated technologies and industries, such as new materials science, nuclear energy, computing technology, microelectronics, nuclear medicine, and robotics, began to develop. Having deeply studied the principles of the structure of nature and its mechanisms, we can actually reproduce its processes with modern science. This will provide people with a fundamentally different level of energy consumption that is economical, like nature itself, and will create new opportunities for increasing life expectancy, improving its quality, and living in harmony with the biosphere.

Moderators:

- **Mikhail Kovalchuk**, President, Kurchatov Institute National Research Centre
- **Gennady Krasnikov**, President, Russian Academy of Sciences

Panellists:

- **Arutyun Avetisyan**, Director, Ivannikov Institute for System Programming of the Russian Academy of Sciences
- **Andrey Fursenko**, Aide to the President of the Russian Federation
- **Lilia Gumerova**, Chairman of the Committee on Science, Education and Culture of the Federation Council of the Federal Assembly of the Russian Federation; Chairman, Permanent Commission on Science and Education, Interparliamentary Assembly of Member Nations of the Commonwealth of Independent States
- **Alexander Kaleri**, Chief expert of the scientific and technical center “Design” manned space complexes and transport systems", Energia
- **Igor Kirillov**, Chief of the Radiation, Chemical and Biological Protection Troops of the Armed Forces of the Russian Federation

16:30–18:00

Sirius Science and Art Park
conference hall 1

Development Tools

SciComm: What Happens When Scientists and Creative Specialists Get Together?

The ambitious goal of making science fashionable can be solved using different tools. One of them involves attracting a young audience through content. Lots of scientists began their path to science when they were young. Reading a popular science book, subscribing to a magazine, or watching a film or science show can all arouse genuine interest that goes on to become the meaning of life for scientists. As part of the Decade of Science and Technology, the Internet Development Institute has opened a laboratory to connect the creative and scientific worlds by uniting teams in media projects. The past year has not only shown successful examples of combining science and media, but also demonstrated a trend of audiences becoming more interested in such projects. Scientific and popular science projects are gaining more and more new audiences and expanding the ecosystem of collaboration: discussion clubs are being opened, newspapers are being published, and formats for cooperation are expanding. This has all become possible thanks to the creative industry’s active cooperation with scientists. It is time to take a scientific snapshot and evaluate the results of the work that has been carried out over the last year: what are some of the new projects and what results have they had? Has the development of scientific and popular science content strengthened on the Internet? What measures have been taken to provide systemic support for such projects? How can we expand scientific expertise in artistic projects and shows?

Moderator:

- **Alexey Goreslavsky**, Director General, Internet Development Institute (IRI)

Panellists:

- **Alexey Fedorov**, "Quantum Information Technologies" Scientific Group Head, Russian Quantum Center; Director, Institute of Physics and Quantum Engineering, National University of Science and Technology "MISIS"
- **Ilya Ipatov**, General Producer, "Newton for Dummies" Project
- **Georgiy Lapshakov**, General Director, Pochva; Creator, Producer, Popular Science Show "Otnauchim"
- **Kseniya Stepanova**, Senior Researcher, Institute for the History of Material Culture of the Russian Academy of Sciences
- **Andrey Voronin**, Acting Vice-Rector for Education, University of Science and Technology MISIS; Deputy Chairman of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

Front row participant:

- **Anna Gureeva**, Deputy Director of the Department of Information Policy and Integrated Security, Ministry of Science and Higher Education of the Russian Federation

16:30–17:30

Sirius Science and Art Park
conference hall 2

Growth Opportunities: Lectures by Prominent Scientists and Business Representatives

Lecture

Historical Genetics: Exploring the Past from Ancient DNA

Panellist:

- **Evgeniy Rogaev**, Scientific Adviser, Sirius University of Science and Technology

16:30–18:00

Sirius Science and Art Park
conference hall 3

The Country's Scale as a Space for Opportunities

A Successful Career in Science: The Experience of the Winners of the 'Leaders of Russia' Competition

The session is being organized by the Iskra community of finalists and winners of the 'Science' track of the 'Leaders of Russia' competition

The 'Leaders of Russia' competition is the flagship project of the presidential platform 'Russia – Land of Opportunity' and aims to find and develop promising managers in various fields. Since 2017, the competition has collected more than _ applications, and its winners hold responsible positions at major Russian companies and among the country's federal executive authorities. In 2020 and 2021, an additional specialized track 'Science' was held as part of the competition, which aims to create a community of leaders for the country's scientific and technological development. Over the entire period, the track has collected more than _ applications.

The winners and finalists of the 'Science' track, who are also heads of higher educational institutions and knowledge-intensive segments at major Russian companies, will share their experience of participating in and winning the competition, analyse the barriers and pitfalls of building a scientific career, and also discuss specific aspects of management activities in science and its potential social elevators. Using real career tracks as an example, the session participants will learn how to succeed in science and achieve substantial results in their activities.

Moderator:

- **Alexander Petukhov**

Panellists:

- **Oxana Achkasova**, Deputy Director General, Russia – Land of Opportunities
- **Yury Marfin**, Rector, Pacific State University
- **Vadim Zakharov**, Rector, Ufa University of Science and Technology

Front row participants:

- **Aleksandr Barbarich**, First Vice Rector, Sakhalin State University
- **Mikhail Fomin**, Head of Strategic Development Department, Nauka Publishing House
- **Sergey Gorbachev**, Head of Department for Work with Regional Government Bodies, Polyus Management Company
- **Anatoliy Kalyaev**, Head of the Laboratory of Neural Network Systems, A.V. Kalyaev Research Institute of Multiprocessor Computing Systems of the Southern Federal University; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Ilya Menshikov**, Deputy Head of the Engineering and Technical Center, Leading Researcher, A.N. Frumkin Institute of Physical Chemistry and Electrochemistry of the Russian Academy of Sciences

- **Evgeny Stepanov**, Head of Product Development for Plastics and Organic Synthesis Products, SIBUR
- **Dmitry Yuriev**, Project Manager of the Directorate for Strategy, Innovation and Sustainable Development, Gazprom Neft

16:30–18:00

Sirius Science and Art Park
conference hall 4

Big Challenges: Opportunities for Development

‘Distant Sky’: Technological Frontiers of Satellite Construction, Data Processing, and Launch Systems

Private space companies around the world are rapidly accelerating the development of new technological solutions and space systems. Today, more than 120 such companies operate in Russia in 21 market segments. They are developing small spacecraft and payloads, launch vehicles, artificial intelligence systems, and advanced communication systems and are ready to provide competitive space services. Technological barriers must be overcome for the development of each individual segment. Significant areas that require attention include technological frontiers in the use of artificial intelligence for data processing aboard ships and on Earth, the creation of multi-sensor satellite constellations that manoeuvre in orbit, and vehicles for the mass launch of small spacecraft into low and ultra-low orbits. What are some of the future technological challenges that will be encountered when building a single, seamless sky architecture, in which satellites and drones will operate at different altitudes under a single regulatory and technological system?

Moderator:

- **Evgeny Gribov**, Head of technological development of companies of the National Technology Initiative, National Technology Initiative Platform

Panellists:

- **Olga Babanina**, Chief Project Designer, STC
- **Nikolay Dzis-Voinarovsky**, General Director, 3D Research and Development
- **Igor Kozhelin**, General Director, SR DATA
- **Oleg Larionov**, General Director, KB Laros
- **Mikhail Seryy**, Head of Department at the Aerospace Technology Competence Center, T1
- **Vsevolod Shevtsov**, Director of the Department for the creation of spacecraft and software development, Sitronics

16:30–18:00

Sirius Science and Art Park
conference hall 5

Development Tools

Not Only Memes: How Social Media Can Advance Science

Over the year and a half of its existence, the popular science community VNauke on the social network VKontakte has taken a significant place in scientific education and became a laureate of the ‘For Loyalty to Science’ prize of the Russian Ministry of Education and Science. This platform enables scientists to communicate directly with citizens, mostly young people, who are interested in science. How is social media contributing to the dissemination of scientific knowledge, the development of technology, and the generation of opinions about the future of humanity? Why did children previously want to become astronauts, but now they want to become bloggers? How can we once again get the younger generation interested in developing in science? What technologies could change the world in the coming decades? Can social media, as well as their memes and clips, help educate young people about science? What is the main tool for promoting science in Russia?

Moderator:

- **Alexander Dementier**, Journalist, writer; author, Popular Science Community

Panellists:

- **Natalya Bakhova**, Deputy Director of the Institute of Gastronomy for Scientific Work, Siberian Federal University
- **Evgenia Belousova**, Leader of the tech-community VK Tekhprosvet, editor-in-chief, TG channel "Louis Ivanovich Vyuton"
- **Stanislav Bushev**, Vice-Rector, Moscow State University named after M.V. Lomonosov
- **Elizaveta Isaeva**, Author, VKontakte Community "VNauke"
- **Alexander Rikel**, Associate Professor of the Department of Social Psychology, Deputy Dean of the Faculty of Psychology for Extracurricular Activities, Moscow State University named after M.V. Lomonosov
- **Georgy Shakhgildyan**, Deputy Vice-Rector for Development, Russian University of Chemical Technology named after D.I. Mendeleev

16:30–18:00

Sirius Science and Art Park
conference hall 6

Opportunities for the Decade of Science and Technology in Russia

Science in Cinema: How Do Directors Work, What Do Scientists Think, and What Do Viewers See?

Scientific cinema is one of the most effective ways to ensure scientific communication. When scientists become actively involved in the filmmaking process, they ensure the accuracy and reliability of the information that is presented. They also help filmmakers turn complex scientific concepts into simple ones that everyone can understand. Independent documentary films dedicated to science help us reveal the emotional aspects of the scientific process and get viewers to engage in a dialogue with the author or main character of the film. Films of this genre awaken viewers' interest in science, affect their perception of the world around them, and encourage new research and discoveries. Scientific cinema takes us on an amazing journey where scientists and filmmakers work together to reveal to us the importance of science. How does this connection take place and how does scientific research translate to the screen?

Moderators:

- **Irina Belykh**, Co-founder, Program Director, FANK Contemporary Science Film Festival; Member of the Expert Council for Non-Fiction Films, Ministry of Culture of the Russian Federation; Member of the Board, European Academy of Science Films
- **Vera Pavlova**, Deputy General Director for Science and Education, Polytechnic Museum

"DAO" Movie:

- **Alexander Belenov**, Head of the Laboratory of Blockchain Technologies "ChainLab", IDEAS Center
- **Nikita Sevastyanov**, Artist, Film Director

Green Square Film:

- **Anastasia Kuzenkova**, Postgraduate student of the research laboratory "Dosimetry and environmental radioactivity", Department of Radiochemistry, Faculty of Chemistry, Moscow State University named after M.V. Lomonosov
- **Denis Sokolov**, Director

"Living skin" Film:

- **Anastasia Emelyanova**, Film Director
- **Anastasia Rychagova**, Founder, Director, Arukey

Mukhrino Carbon Polygon:

- **Danil Ilyasov**, Head of the laboratory for studying the spatiotemporal variability of the carbon balance of forest and swamp ecosystems of the middle taiga of Western Siberia, Ugra State University

16:30–18:00

Sirius Science and Art Park
conference hall 7

Development Tools

The Science of Teaching: Modern Approaches to Educational Policies in Russia

Russia needs to carry out systematic work to improve the quality of education at all levels and to introduce advanced training and education methods and technologies in order to ensure the country's technological leadership and sustainable economic development, as well as to preserve its intellectual sovereignty. During the Year of the Teacher and Mentor, which has been declared in Russia, advanced research on the entire spectrum of educational sciences based on verified and reliable scientific data plays a special role in this process. During the panel discussion, we will discuss key problems with the theory and methodology of pedagogy and psychology, education and mentoring, the promotion of natural science and the humanities, as well as practical psychological and pedagogical activities, including correctional pedagogy. How can the teachers of today motivate children to study their subjects and generate interest in science in the future?

Moderator:

- **Nikita Krasnoshchekov**, Chairman of the Council of Young Scientists and Specialists, Russian Academy of Education; Member, Coordination Council for Youth Affairs in Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

Panellists:

- **Eduard Galazhinsky**, Rector, National Research Tomsk State University
- **Olga Migacheva**, Head of Educational Projects, Non-profit Foundation for the Development of Science and Education "Intellect"
- **Ksenia Mironik**, Postgraduate Student, St. Petersburg Academy of Postgraduate Pedagogical Education; Deputy Director for Innovation, Literature Teacher, Private Educational Institution Gazprom School Saint-Petersburg
- **Yulia Potapova**, Associate Professor of the Department of General and Social Psychology, Dostoevsky Omsk State University (OmSU)

- **Alena Salakhova**, Associate Professor of the Department of Theory and Methods of Teaching Mathematics and Computer Science, Moscow Pedagogical State University
- **Maxim Voronin**, Associate Professor of the Department of State and Law and Political Science, Assistant Dean, Lomonosov Moscow State University

Front row participants:

- **Elena Lanina**, Junior Researcher of the Laboratory of Mathematical and Theoretical Physics, Moscow Institute of Physics and Technology (National Research University)
- **Ekaterina Zhdanova**, Researcher at the Laboratory of Theoretical and Methodological Problems of Historical Education, Faculty of History, Lomonosov Moscow State University

16:30–18:00

Sirius Science and Art Park
conference hall 9

Big Challenges: Opportunities for Development

Medical Neurotechnologies: Synthesizing Expertise to Respond to the Challenges of the Times

The brain, and the human nervous system as a whole, is an extremely complex apparatus that coordinates the vital functions of the body and regulates its behaviour. Humanity is still trying to understand the operating principles of the brain and influence how it functions. These attempts have led to the emergence of neurotechnologies, a set of methods that can read and control information from the nervous system. Some neurotechnologies are already being used in medicine to correct diseases of the nervous system, while others are just making their way from the laboratory to the clinic. But one thing is for sure: they work, they are a highly interdisciplinary field, and they are an extremely attractive field of science, technology, medicine, and business where any young scientist/engineer/doctor/entrepreneur can realize their potential. What inspires young scientists who have chosen neurotechnologies as a field to reach their potential? What difficulties are they experiencing? How do they see the future of neurotechnologies? Can Russia compete globally in this area? What advice could young scientists give to young scientists who are only now choosing their path in science and technology?

Moderator:

- **Vsevolod Belousov**, Director, Federal Center of Brain Research and Neurotechnologies of the Federal Medical Biological Agency

Panellists:

- **Daria Kleeva**, Researcher at the Center for Bioelectrical Interfaces, National Research University Higher School of Economics
- **Olga Kudryashova**, Researcher, Federal Center of Brain Research and Neurotechnologies of the Federal Medical Biological Agency
- **Maxim Ostras**, Director of Strategic Development, LIFT Center; Head, QLU
- **Vasily Popkov**, Head of the Scientific Group "Invasive Neural Interfaces", Lomonosov Moscow State University (MSU)
- **Marina Shurupova**, Researcher at the Research Center for Medical Rehabilitation, Federal Center of Brain Research and Neurotechnologies of the Federal Medical Biological Agency
- **Gurgen Sogoyan**, Postgraduate Student at the Center for Neurobiology and Neurorehabilitation, Skolkovo Institute of Science and Technology (SkolTech)

Front row participant:

- **Georgy Nosov**, Researcher at the Neurotechnology Laboratory, Federal Center of Brain Research and Neurotechnologies of the Federal Medical Biological Agency

16:30–18:00

Sirius Science and Art Park
Mendeleev Hall

The Country's Scale as a Space for Opportunities

Best Practices of Regional Support Measures

Breakthroughs in science and technology by Russia's regions are a key component of the country's spatial evolution, which cannot be accomplished without developing a system of regional measures to support scientific research, which organically complements the system of federal support measures. What support measures at the federal level can every scientist from the Russian regions take advantage of? How can young researchers receive support from regional funds to support their scientific activities? What is the best way to take advantage of the Russian Science Foundation's support as part of a line of regional grant competitions? How can young scientists choose tools for regional support for their scientific research?

Moderator:

- **Alexander Mazhuga**, First Deputy Chairman of the Committee of the State Duma of the Federal Assembly of the Russian Federation for Science and Higher Education

Panellists:

- **Anzhela Asaturova**, Director, Federal Scientific Center for Biological Plant Protection; grant recipient, Russian Science Foundation

- **Aleksandra Lebedeva**, Deputy Chairman of the Government of the Kamchatka Territory
- **Nikita Marchenkov**, Chairman, Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Presidential Council of the Russian Federation for Science and Education; Head, Kurchatov Complex for Synchrotron-Neutron Research, National Research Center "Kurchatov Institute"
- **Denis Sekirinsky**, Deputy Minister of Science and Higher Education of the Russian Federation
- **Maxim Vlasov**, Deputy General Director, Moscow Innovation Agency

Front row participants:

- **Anton Pankratov**, Deputy Chairman of the Committee on Science and Innovation of the Tula Region
- **Iskander Vakhitov**, Researcher at the research laboratory “Heterostructures for post-silicon electronics”, Institute of Physics, Kazan (Volga Region) Federal University; Chairman, Association of Young Scientists of KFU

16:30–18:00

Sirius Science and Art Park
Atom Hall

Opportunities for the Decade of Science and Technology in Russia

‘Be the First’ Interactive Meeting with Russian Cosmonauts on the ISS

The meeting will include a live broadcast with Roscosmos cosmonauts aboard the International Space Station.

A meeting with members of the Roscosmos Cosmonaut Corps about their training for space flights, space missions, the continuity of generations, traditions, and mentoring in the Cosmonaut Corps, and international cooperation in the implementation of space projects.

Moderator:

- **Andrey Volyntsev**, Chairman of the Council of Young Scientists and Specialists, Roskosmos State Corporation for Space Activities

Panellists:

- **Nikolay Chub**, Test Cosmonaut of the Roscosmos Cosmonaut Corps
- **Oleg Kononenko**, Pilot-cosmonaut, Hero of Russia
- **Sergey Kud-Sverchkov**, Pilot-cosmonaut, Hero of Russia

16:30–18:00

Sirius Science and Art Park
Buran Hall

Development Tools

From Contact to Contract: What Do Companies and Universities Need to Change to Ensure Businesses Benefit from Collaborating with Researchers?

In recent years, the Russian government has been making concerted efforts to develop and support technological entrepreneurship and create a technology transfer system at universities. In certain segments, we are seeing rapid growth in products and services from new companies, notably in such areas as educational platforms or machine learning for image recognition. But in the deeptech sector, where B2B business models predominate, setting goals and establishing the recipient of innovations, i.e. large companies and corporations, and not only the source of innovation (universities, research centres, small businesses, etc.), are starting to play an important role. As tasks become more complex and/or market competition increases, companies are finding it increasingly difficult to achieve new business goals using old methods, and they are searching for new technological and entrepreneurial solutions that could consistently generate additional revenue. Perhaps R&D and/or innovation departments could become the main driver of new growth. However, this may require companies to restructure their usual activities. On the other hand, universities that rely on the development and commercialization of technologies as an important competitive advantage are starting to build an ecosystem of services for researchers, entrepreneurs, and industrial companies, which will create conditions for the establishment of new businesses and the technological development of existing ones. The counter-movement of universities and real sector companies to obtain real economic effects needs to be intensified and synchronized. What questions will the moderator ask the speakers? What points should be highlighted? What should the main emphasis be?

Moderator:

- **Alexander Fertman**, Director of Science and Education Department, Skolkovo Foundation

Panellists:

- **Alexey Borovkov**, Vice Rector for Digital Transformation, Peter the Great St. Petersburg Polytechnic University
- **Roman Ivanov**, Director of the Scientific Center for Translational Medicine, Vice-Rector for Scientific and Technological Development, Sirius University of Science and Technology
- **Stepan Kalmykov**, Vice-President, Russian Academy of Sciences

- **Kirill Okhotkin**, Deputy General Director for Science, Information Satellite Systems named after Academician M.F. Reshetnyova
- **Vladimir Rakhteyenko**, Chief Executive Officer, Custis; Developer, Modeus Platform for Managing Individual Educational Paths
- **Vladimir Shevchenko**, Rector, National Research Nuclear University MEPhI
- **Pavel Sorokin**, Head of Programs for the Expertise and Functional Development Unit, Gazpromneft STC; Member, Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Konstantin Vernigorov**, General Director, Sibur Polylab; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

16:30–18:00

Sirius Science and Art Park
conference hall 8

Open Program of the Congress of Young Scientists

17:00–18:00

Sirius Science and Art Park
Lomonosov Hall

Growth Opportunities: Lectures by Prominent Scientists and Business Representatives

Lecture

Green Economy: Science and Myths

Panellist:

- **Nikolay Durmanov**, Special Representative of the Ministry of Science and Higher Education of the Russian Federation for Biological and Environmental Safety

18:15–19:00

Sirius Science and Art Park
conference hall 2

Interaction of Young Scientists in Federal Districts

Meeting of the Council of Young Scientists and Student Research Society with the Coordinator of the Coordinating Council for Youth Affairs in Science and Education of the Russian Presidential Council for Science and Education

Southern Federal District

Moderator:

- **Anna Gneush**, Head of the Department of Biotechnology, Biochemistry and Biophysics, I.T. Trubilin Kuban State Agrarian University; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

18:15–19:00

Sirius Science and Art Park
conference hall 3

Interaction of Young Scientists in Federal Districts

Meeting of the Council of Young Scientists and Student Research Society with the Coordinator of the Coordinating Council for Youth Affairs in Science and Education of the Russian Presidential Council for Science and Education

Far Eastern Federal District

Moderator:

- **Ilya Kupriashkin**, Vice-Rector for Science and Innovation, Transbaikal State University; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

18:15–19:00

Sirius Science and Art Park
conference hall 4

Interaction of Young Scientists in Federal Districts

Meeting of the Council of Young Scientists and Student Research Society with the Coordinator of the Coordinating Council for Youth Affairs in Science and Education of the Russian Presidential Council for Science and Education

Volga Federal District

Moderator:

- **Anton Konakov**, Associate Professor, Department of Theoretical Physics, Faculty of Physics, N.I. Lobachevsky National Research Nizhny Novgorod State University; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

18:15–19:00

Sirius Science and Art Park
conference hall 5

Interaction of Young Scientists in Federal Districts

Meeting of the Council of Young Scientists and Student Research Society with the Coordinator of the Coordinating Council for Youth Affairs in Science and Education of the Russian Presidential Council for Science and Education
Northwestern Federal District

Moderator:

- **Alexey Ilyin**, Director, Research Center for Creative Industries; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

18:15–19:00

Sirius Science and Art Park
conference hall 6

Interaction of Young Scientists in Federal Districts

Meeting of the Council of Young Scientists and Student Research Society with the Coordinator of the Coordinating Council for Youth Affairs in Science and Education of the Russian Presidential Council for Science and Education
North Caucasus Federal District

Moderator:

- **Alexander Dobaev**, Head of the Technical Process Support Department, North Caucasus Mining and Metallurgical Institute; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

18:15–19:00

Sirius Science and Art Park
conference hall 7

Interaction of Young Scientists in Federal Districts

Meeting of the Council of Young Scientists and Student Research Society with the Coordinator of the Coordinating Council for Youth Affairs in Science and Education of the Russian Presidential Council for Science and Education
Siberian Federal District

Moderator:

- **Elizaveta Lider**, Senior Researcher, A.V. Nikolaev Institute of Inorganic Chemistry of the Siberian Branch of the Russian Academy of Sciences; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

18:15–19:00

Sirius Science and Art Park
conference hall 8

Interaction of Young Scientists in Federal Districts

Meeting of the Council of Young Scientists and Student Research Society with the Coordinator of the Coordinating Council for Youth Affairs in Science and Education of the Russian Presidential Council for Science and Education
Ural Federal District

Moderator:

- **Daria Telepaeva**, Associate Professor, Department of Sociology and Technologies of State and Municipal Administration, Ural Federal University; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

18:15–19:00

Sirius Science and Art Park
conference hall 9

Interaction of Young Scientists in Federal Districts

Meeting of the Council of Young Scientists and Student Research Society with the Coordinator of the Coordinating Council for Youth Affairs in Science and Education of the Russian Presidential Council for Science and Education
Central Federal District

Moderator:

- **Alina Pavlova**, Head of the Testing Center, Expert Center; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

November 29, 2023

09:30–11:00

Sirius Science and Art Park
conference hall 1

Big Challenges: Opportunities for Development

New Stage in the Study of Organ Physiology and Pathology at the Level of Individual Cells

The current level of technological development has led to a breakthrough in the study of the normal operation and pathology of biological systems, not only at the macro level of organs and tissues, and has made it possible to achieve higher resolution and study populations of single cells that collectively make up a particular organ. The session participants will discuss the use of new methods in biomedical practices: single-cell next-generation sequencing, high-throughput flow cytometry, and multiplex immunohistochemical analysis. These advanced technologies will help to evaluate the entire complex interaction of different types of cells during the pathological process and eventually will lead to the creation of new treatment strategies that aim to correct abnormalities in a particular cell population, which will make medicine more personalized and enhance the overall effectiveness of therapy.

Moderator:

- **Oleg Demidov**, Leading Researcher, Immunobiology and Biomedicine, Scientific Center for Genetics and Life Sciences, Sirius University of Science and Technology

Panellists:

- **Sergey Deev**, Professor, Chief Researcher, Academicians M.M. Shemyakin and Y.A. Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Sciences
- **Evgeniy Denisov**, Head of the Laboratory of the Research Institute of Oncology of the Tomsk National Research Medical Center and the Laboratory of Single Cell Biology of the People's Friendship University of Russia
- **Pavel Rumyantsev**, Deputy Chief Physician, Chief Specialist Radiation Oncologist, Doctor of Medical Sciences, My Medical Center
- **Liliya Urusova (Selivanova)**, Head of the Reference Center for Pathomorphological Research, National Medical Research Center of Endocrinology of the Ministry of Health of Russia

09:30–11:00

Sirius Science and Art Park
conference hall 2

Opportunities for the Decade of Science and Technology in Russia

Interdisciplinary Research on Childhood: Modern Myths and Scientific Data

Modern research indicates that childhood not only plays an enormous role in the long-term development of a particular child, but also in the evolution of a country's human capital. Conducting large-scale interdisciplinary studies of childhood can provide objective data and evidence-based practices to effectively support this period and unlock the potential of each child, including when it comes to such issues as child health as well as correctional and rehabilitation work. What myths about child development have a negative impact on the process of raising and educating children? How should we organize children's leisure time based on scientific data about the influence of games and reading on a child's development? How can young scientists get involved in interdisciplinary research and what issues need to be studied further?

Moderator:

- **Alexander Veraksa**, Head of the Department of Educational Psychology and Pedagogy, Faculty of Psychology, Lomonosov Moscow State University

Panellists:

- **Tatyana Batysheva**, Director, Scientific and Practical Center for Child Psychoneurology of the Moscow City Health Department; Chief Specialist in Pediatric Rehabilitation, Ministry of Health of the Russian Federation
- **Elfiya Dorofeeva**, General Director of the Mozaika-Sintez children's literature publishing house
- **Igor Gaydamashko**, Acting Rector, Sochi State University
- **Aydar Kalimullin**, Director, Institute of Psychology and Education of the Kazan Federal University
- **Yury Semenov**, Head of the Research Center of the State Budgetary Institution "Academy of Sciences of the Republic of Sakha (Yakutia)"

Front row participants:

- **Natalya Kravchenko**, Chair, Commission for the Development of Preschool, School, and Secondary Vocational Education and Educational Activities, Public Chamber of the Russian Federation
- **Yana Smirnova**, Associate Professor of the Department of General and Applied Psychology, Altai State University

- **Olga Sysoeva**, Scientific Supervisor of the Center for Cognitive Research, Sirius University of Science and Technology

09:30–11:00

Sirius Science and Art Park
conference hall 3

Development Tools

Megagrants: Results and Plans

The megagrant programme has helped create 345 world-class scientific laboratories at Russian universities and scientific organizations. Leading scientists from 40 countries are involved in such scientific research, including more than 100 Russian scientists who live abroad. Thanks to the programme, they were able to return to their homeland, and many of them have stayed here to live and work after the completion of the grant. As of 2022, as a result of research conducted as part of the programme, almost 10,000 articles had been published in scientific journals indexed in the Web of Science Core Collection database, with almost 3,000 of them being published in first quartile journals. The programme's implementation has had a positive impact on the activities of universities and scientific organizations, not only due to the opening of laboratories equipped with the latest equipment, but also due to improvements in the educational process. Over the course of the programme, 268 educational programmes were created, developed, and implemented as part of the declared focus of scientific research. The programme is also crucial to attracting talented young researchers to science and creating the most comfortable conditions for research work and successful professional trajectories for them. Young researchers under the age of 39 make up 67% of employees at megagrant laboratories. Since 2010, more than 1,100 young scientists have defended their Ph.D. theses as part of work conducted using the megagrants. There are already examples of scientific laboratories being transformed into scientific centres, research institutes, and other research structures, which is a testament to the high standards and effectiveness of the programme. Overseas, the megagrant programme is rightfully considered a hallmark of Russian science. What is the significance of the programme for Russian science, universities, and scientific organizations? How is the modernization process coming along? What opportunities do researchers have as part of the megagrant programme?

Moderator:

- **Irina Korotkova**, General Director, Inconsult K

Panellists:

- **Andrey Abramov**, Head of Laboratory, Institute of Neurology, University College London
- **Alexander Gabibov**, Director, Shemyakin–Ovchinnikov Institute of bioorganic chemistry
- **Dmitriy Ivanov**, Professor; Head of the "Biomaterials" Department, Scientific Center for Genetics and Life Sciences of the Science and Technology University "Sirius"; Director of Research, French National Center for Scientific Research (CNRS); Head of the Laboratory of Engineering Materials Science, Lomonosov Moscow State University
- **Lilia Kiryanova**, Acting Rector, Sirius University of Science and Technology
- **Sergey Salikhov**, First Vice-Rector, University of Science and Technology MISIS
- **Anton Shashkin**, Acting Director of the Department of State Policy in the Field of Scientific and Technological Development, Ministry of Science and Higher Education of the Russian Federation

Front row participants:

- **Roman Cherbunin**, Researcher, I.N. Uraltseva Laboratory of Spin Optics, St. Petersburg State Universit
- **Alexander Ksenofontov**, Senior Researcher at the Laboratory of Computer Synthesis of Chemical Compounds, Institute of Solution Chemistry named after G

09:30–11:00

Sirius Science and Art Park
conference hall 4

Space for International Scientific and Technical Cooperation

Russian-Iranian Scientific and Technical Cooperation

There has recently been intensive rapprochement between Russia and Iran in all areas of life, including scientific and technical cooperation. Russia and Iran regularly hold forums of university rectors. Scientific cooperation between Russian and Iranian universities is intensifying. Student exchanges are on the rise. Russia provided 300 scholarships to Iranian students in April 2023. In Iran, interest in studying the Russian language at schools and universities is growing rapidly. However, not enough consideration has been given to the prospects for Russian-Iranian scientific cooperation and the reasons for insufficient student exchanges. The new challenges that young scientists and students in Russia and Iran face are related to sanctions and the sovereign provision of laboratories with modern equipment. The departure of foreign suppliers of equipment and reagents from the Russian and Iranian markets, complications with global supply chains, and the refusal of other countries to meet their repair and service obligations require new solutions from both the government and scientists. Such issues as equipping scientific laboratories, educational workshops, colleges, and medical centres and ensuring their stable operation are becoming critical for both states, as well as for public associations and scientists. What factors are hindering the growth of student exchange between Russia and Iran? Which sectors are the most promising for scientific cooperation? What is the best way to increase interest in the Persian language and literature among Russian humanities students? How can the two countries strengthen scientific cooperation in producing modern technologies, which is currently a particularly important and significant field? What prospects exist for Russian and Iranian specialists to intensify their joint work in scientific laboratories?

Moderator:

- **Andrey Fursenko**, Aide to the President of the Russian Federation

Panellists:

- **Behrooz Abtahi**, Vice-Rector, Shahid Beheshti University
- **Seyed Mahmoud Reza Aghamiri**, President, Shahid Beheshti University
- **Alexander Blagov**, Vice President, Kurchatov Institute National Research Centre
- **Seyed Amir Hossein Feghhi**, Deputy of the Atomic Energy Organization of Iran; Head, Nuclear Science and Technology Research Institute
- **Alimurad Gadzhiev**, Vice Rector for Research and Innovation, Dagestan State University; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Mikhail Gordin**, Rector, Bauman Moscow State Technical University
- **Lana Ravandi-Fadai**, Head, Eastern Cultural Center; Senior Research Fellow, Institute of Oriental Studies of the Russian Academy of Sciences; Associate Professor, Department of Contemporary East and Africa, Russian State University for the Humanities
- **Peyman Salehi**, Deputy Minister of Science, Research and Technology of the Islamic Republic of Iran

Front row participants:

- **Mohammad Hossein Choopan Dastjerdi**, Nuclear Science and Technology Research Institute, Head of the Isfahan Miniature Neutron Source Reactor (NSTRI)
- **Bita Dadpou**, Researcher, Atomic Energy Organization of Iran
- **Hamed Jafarpour**, Associate Professor, Saint Petersburg Mining University
- **Egor Khatuntsev**, Postgraduate student, Department of Modern Oriental and African Studies, Russian State University for the Humanities
- **Mahdi Rezaeian**, Chief Executive Officer, FATSA, Member of the Atomic Energy Organization of Iran
- **Farzaneh Shafiee**, Co-Founder, Center for Linguistic and Information Support Sail

09:30–11:00

Sirius Science and Art Park
conference hall 5

Opportunities for the Decade of Science and Technology in Russia

Museums: A Showcase of Scientific and Technological Progress

Achievements in science and technology are among the key indicators of any country's development. And best of all, a vast audience can see these achievements at museums, which serve as spectacular platforms that can inform people about complex concepts in a simple manner using an unconventional and interactive format as well as multimedia to demonstrate the latest achievements in science and technology, while turning numbers, details, formulas, and wires into a real immersive show that can excite even the youngest guests. What practices are most important for specialized museums? How do museums create their exhibitions and how does this reflect current scientific and technological progress? What are the criteria for an "ideal" museum from the viewpoint of visitors and in terms of maximizing the representation of scientific and technological achievements? How do multimedia formats bring museum realities to life?

Moderator:

- **Ivan Dementyev**, Deputy Director for Research, Moscow Transport Museum

Panellists:

- **Andrey Cheremisinov**, Advisor to the General Director for Information Projects, State Atomic Energy Corporation Rosatom
- **Andrey Golovnev**, Director, Peter the Great Museum of Anthropology and Ethnography of Russian Academy of Sciences (the Kunstkamera)
- **Leonid Gusev**, Vice-Rector, Lomonosov Moscow State University; Head of the Project Office of the Decade of Science and Technology
- **Lydia Lobanova**, Director, Museum of Cryptography
- **Vera Pavlova**, Deputy General Director for Science and Education, Polytechnic Museum

09:30–11:00

Sirius Science and Art Park
conference hall 6

Space for International Scientific and Technical Cooperation

Russia–Africa: Development via Science and Education

The advancement of Russian-African relations largely depends on fully unlocking their scientific potential. Youth scientific organizations play a special role in this process, since they create conditions for conducting effective research activities and also help to strengthen professional scientific ties between scientists who specialize in African studies. Research into economic, geopolitical, and

sociocultural problems of modern societies is a key focus area for young Africanist scholars. What African studies centres currently exist in Russia? How can we build effective mechanisms of cooperation between them? How can the Second Russia–Africa Summit and Economic and Humanitarian Forum serve as a catalyst for attracting young scientists to African studies? What topics are of the greatest interest to African studies scholars in Russia today? What attracts young scientists from Africa to come to Russia to conduct their professional activities?

Moderator:

- **Gleb Sugakov**, Chairman (Co-Chairman) of the Council of Young Scientists, Institute for African Studies of the Russian Academy of Sciences; Junior Researcher, Centre for Global and Strategic Studies

Panellists:

- **Andrey Barinov**, Chairman (Co-Chairman) of the Council of Young Scientists, Institute for African Studies of the Russian Academy of Sciences; Researcher, Centre for Global and Strategic Studies
- **Andrey Baykov**, Vice Rector for Research and International Cooperation, Moscow State Institute of International Relations; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Masamba Kah**, Expert on Interaction with Universities in Africa, Patrice Lumumba Peoples' Friendship University of Russia
- **Ivan Loshkarev**, Research Fellow at the Center for Middle Eastern and African Studies, Institute of International Studies at MGIMO University
- **Thabo Mbeki**, President of the Republic of South Africa (1999-2008) **(online)**
- **Philadelphia Ngobeni**, Researcher, Water Resources Research Group, Department of Civil Engineering, University of Cape Town
- **Vladislav Panchenko**, Vice President, Kurchatov Institute National Research Centre; Vice President, Russian Academy of Sciences
- **Nazih Yaser Rebouh**, Associate Professor, Senior Scientist of the Environmental Management Department, Institute of Environmental Engineering, Patrice Lumumba Peoples' Friendship University of Russia
- **Vyacheslav Samoilov**, Head of the Department of International Information Security, Chairman of the Council of Young Scientists, Moscow State Linguistic University
- **Vasily Sidorov**, Coordinator of the Council of Young Scientists, Institute for African Studies of the Russian Academy of Sciences

09:30–11:00

Sirius Science and Art Park
conference hall 7

The Country's Scale as a Space for Opportunities

Federal Project 'Popularization of Science and Technology': A New Approach

One of the key tasks of the Decade of Science and Technology, which is taking place in Russia from 2022 to 2031 based on a decree from the Russian president, is to popularize science among a vast audience. Many scientific and educational projects are being implemented in Russia thanks to proactive individuals who care about science. Substantial support from the state is needed to scale these projects. One effective tool for such support is grants, which were first launched in 2023 as part of the federal project 'Popularization of Science and Technology'. During the session, we will recap the projects that have received support and also present changes to the federal project 'Popularization of Science and Technology', which will take effect starting from 2024, taking into account feedback from the community.

Moderator:

- **Konstantin Fursov**, Associate Professor, ITMO University; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

Panellists:

- **Magomed Nakhaev**, Deputy Director of the Department of State Policy in the Field of Scientific and Technological Development, Ministry of Science and Higher Education of the Russian Federation
- **Evgeniy Samarov**, Director of the Higher School of Systems Engineering, Moscow Institute of Physics and Technology (National Research University)

Front row participants:

- **Anna Dzarakhokhova**, Head of the Department for the Promotion of Science and Technology, Ministry of Science and Higher Education of the Russian Federation
- **Daniil Kuznetsov**, Science journalist; editor-in-chief IQ.hse.ru portal; diploma student of the II degree of the IX All-Russian Prize "For fidelity to science"
- **Alexey Maleyev**, Distance Learning Director, Moscow Institute of Physics and Technology (National Research University)
- **Olga Moiseeva**, Scientific Universe Project Manager

- **Alexandra Overchenko**, Project Manager "Ticket to the Arctic"
- **Anna Podolyanchuk**, Curator of the project "Science on Strelka Festival," FSBNU FIC "Soil Institute named after V.V. Dokuchaev"
- **Egor Sokolov**, The author of the project "Open cycle of interactive online video podcasts about medicine" ZaMEDchechnaya science "; clinical resident of 1 year in the specialty "Cardiology," Federal State Budgetary Educational Institution of Higher Education "Volgograd State Medical University" of the Ministry of Health of the Russian Federation

09:30–11:00

Sirius Science and Art Park
conference hall 8

Growth Opportunities: Lectures by Prominent Scientists and Business Representatives

Project SLON

Young scientists talk simply and clearly about their research.

Moderator:

- **Алексей Сивухин**, Старший преподаватель, Ивановский государственный университет, сооснователь проекта «СЛОН»

Panellists:

- **Dmitry Kormilitsyn**, Head of the Department of Electrical Systems, Ivanovo State Energy University
- **Dmitry Krivosheev**, Head of Research and Educational Projects, Genotek
- **Igor Nikonov**, Student of the Department of Information Technologies, Ivanovo State Energy University

09:30–11:00

Sirius Science and Art Park
conference hall 9

Opportunities for the Decade of Science and Technology in Russia

Popular Science Tourism: Results of the Second Year and Prospects

A key objective of getting Russian citizens to visit scientific infrastructure sites is to prepare and implement an action plan to develop popular science tourism in Russia, which will enable the general public to visit unique research infrastructure sites and learn about the achievements of Russian science and technology. What routes have already been created as part of the initiative, and how many people have already visited popular science tourism sites? What is the youth scientific community's role in organizing popular science tourism routes? What role does the 'More than Travel' programme play in the development of popular science tourism in Russia? What barriers do the regional authorities face when creating popular science tourism routes? How is work on popular science tourism routes being organized and how can a region or institute get involved in the programme? What opportunities does the student tourism programme of the Russian Ministry of Education and Science create in terms of popular science tourism? What routes are available for schoolchildren in the popular science tourism format through the 'More than Travel' programme?

Moderator:

- **Andrey Pashtetsky**, Acting Director, N.V. Tsitsin Main Botanical Garden of the Russian Academy of Sciences; Deputy Chairman, Coordination Council for Youth Affairs in Scientific and Educational Spheres of the Council under the President of the Russian Federation on Science and Education

Panellists:

- **Alexey Agafonov**, First Deputy General Director, Russia – Land of Opportunity
- **Daria Bessudnova**, Curator, Popular Science Tourism Initiative
- **Elena Gershelis**, Executive Director of the International Science Center for Ecology and Climate Change Issues, Sirius University of Science and Technology
- **Roman Kamaev**, Deputy General Director, ANO "National Priorities"
- **Nikita Savosteenko**, Senior Lecturer, Scientific and Innovation Management Engineer, South Ural State University
- **Timur Siraev**, Director, Foundation for the Development of Production Systems and Industrial Tourism
- **Natalia Yaitskaya**, Deputy Director for Science, Federal Research Center Subtropical Scientific Center of the Russian Academy of Sciences

09:30–10:30

Sirius Science and Art Park
Lomonosov Hall

Growth Opportunities: Lectures by Prominent Scientists and Business Representatives

Lecture

Modern Challenges for the Aviation Industry: Russia's Position in International Aviation

Aviation in Russia is one of the most rapidly developing sectors of the economy. The extensive route

network and the latest technologies make it possible to connect remote regions of the country, which ensures the mobility of the population and contributes to the development of the regional economy. In addition, due to its scientific and technical complexity, aviation is a powerful engine for the development of the country's economy. Aviation activities receive close scrutiny not only from aviation authorities, but also from the general public. Enhancing flight safety and improving the environmental performance of aviation transport are global requirements that all aircraft manufacturers and operators must follow. For domestic aviators, these global challenges are also superimposed by the purely national goals of ensuring Russia's technological sovereignty. How is the aviation industry functioning under these conditions, and are there prospects for the future? How does aviation science help solve current problems? What is Russia's place in international aviation today? What does the future of Russian aviation look like? How can we ensure that Russia's national interests will be taken into account at international aviation organizations and in global technology markets?

Panellist:

- **Sergey Chernyshev**, Vice President, Academician, Russian Academy of Sciences; Scientific Director, Professor N.E. Zhukovsky Central Aerohydrodynamic Institute

09:30–11:00

Sirius Science and Art Park
Mendeleev Hall

Pitch session

Presentation of Projects in the Areas of "Biotechnology and Materials" and "Ecology"

09:30–11:00

Sirius Science and Art Park
Atom Hall

Opportunities for the Decade of Science and Technology in Russia

Student Design Bureaus: A Tool for Strengthening the Role of Science and Technology

Student design bureaus aim to implement projects for the manufacturing of certain types of high-tech products, ensure the practical application of the results of intellectual activities, and accelerate work by joint technology teams comprised of schoolchildren, students, and employees of higher educational institutions, scientific organizations, and high-tech companies. In order to function successfully, student design bureaus must use the most modern design and calculation methods, which engineering students must master in practice as part of their key professional skills. What kind of experience do young scientists working in student design bureaus have? How can we create all the necessary conditions for student design bureaus to operate successfully? What role do student design bureaus play in the development of science and technology in Russia?

Moderator:

- **Andrey Keller**, Director, Sociocenter

Panellists:

- **Alena Aleshina**, Director of the Higher School of Power Engineering, St. Petersburg Polytechnic University (SPbPU)
- **Arkadiy Didkovskiy**, Head of the Youth Engineering Center, Bauman Moscow State Technical University
- **Alexey Karfidov**, Co-founder, general designer, Karfidov Lab; Head of the Department of Process Equipment Engineering, National University of Science and Technology "MISIS"
- **Anton Loschilov**, Director, Advanced Engineering School "Electronic Instrumentation and Communication Systems" named after A.V. Kobzeva, Tomsk State University of Control Systems and Radioelectronics
- **Sergey Shalynkov**, Technician of Research and Development Management, Tula State University
- **Tamara Sinelnikova**, Student at the Department of Engineering Cybernetics, National Research Technological University MISiS
- **Vyacheslav Vavilov**, Director, "Motors of the Future" Advanced Engineering School, Ufa University of Science and Technology
- **Andrey Volyntsev**, Chairman of the Council of Young Scientists and Specialists, Roskosmos State Corporation for Space Activities

09:30–11:00

Sirius Science and Art Park
Buran Hall

Opportunities for the Decade of Science and Technology in Russia

Digital Services and Solutions: New Opportunities for the Professional Community

Solutions and Services for the Professional Community is an initiative of the Decade of Science and Technology that aims to bring together digital resources that are useful to researchers and developers in their daily activities. What prospects exist for the development of digital solutions and services? What best practices for supporting the initiative can regional representatives use to share experience? What are some of the specific features of the transition from imported to domestic software? What problems need to be resolved?

Moderator:

- **Larisa Lapidus**, Professor, Ph.D. in Economics; Director, Social and Economic Innovations Center (SEIC), Faculty of Economics, Lomonosov Moscow State University

Panellists:

- **Gennady Baryshev**, Head of the Online Education Department of the Academic Department, National Research Nuclear University MEPhI
- **Marina Borovskaya**, President, Southern Federal University; Chairman, Council of Rectors of Universities of the South of Russia
- **Alexander Dvoinikov**, General Director, Directorate of Scientific and Technical Programs
- **Kirill Garev**, Head of the Department for Support of Work with Research and Development Data, Russian Center for Scientific Information
- **Lev Krasnov**, General Director, Colab Platform
- **Anna Lemyakina**, Director for National and Strategic Projects, Yandex.Cloud
- **Alexander Mazhuga**, First Deputy Chairman of the Committee of the State Duma of the Federal Assembly of the Russian Federation for Science and Higher Education
- **Vladimir Rakhteyenko**, Chief Executive Officer, Custis; Developer, Modeus Platform for Managing Individual Educational Paths
- **Anthony Schwindt**, Assistant to the Deputy Prime Minister of the Russian Federation
- **German Shemetov**, Head of the Department for the Development of Data Management Services in the Field of Research and Development, Russian Center for Scientific Information
- **Pavel Starikov**, Director, Centre of Information Technologies and Systems for Executive Power Authorities (CIT&S)
- **Denis Yanyshev**, Director, Centre for the Development of Electronic Educational Resources, Lomonosov Moscow State University
- **Dmitriy Zubtsov**, Head of the Academy of Technologies and Data, SberUniversity

11:15–12:15

Sirius Science and Art Park
Lomonosov Hall

Growth Opportunities: Lectures by Prominent Scientists and Business Representatives

Lecture

AI Science

Panellist:

- **Alexander Krainov**, Director for Development of Artificial Intelligence Technologies, Yandex

11:45–13:15

Sirius Science and Art Park
conference hall 1

Opportunities for the Decade of Science and Technology in Russia

Science Film Laboratory: Show Case

Returning Scientific Cinema to the Big Screen: How to Make Popular Scientific Films

In recent years, there has been a significant increase in the Russian audience's demand for entertaining popular science content. However, an audience survey showed that viewers most often associate popular science cinema with education, calling it "boring" and "serious", or with individual channels (like Science 2.0). According to the survey, people do not feel that the popular science content that is currently being produced is high-quality, entertaining cinema that one would go to the theatre to see. This is attributable to the fact that young directors do not always know how to make scientific films, much less make them genre-specific and interesting to a mass audience. The Scientific Film Laboratory 2.0 has set the goal of changing this perception and developed a production methodology to turn dry scientific research into an emotional scientific film. Using this methodology, young directors have made short films with scientists from Skoltech and the Faculty of Chemistry of Lomonosov Moscow State University. The participants will present the actual films and methodology in a showcase format. The format is open to a wide audience: young scientists, directors, and viewers who are interested in scientific cinema.

Moderator:

- **Yuliya Kiseleva**, Producer; Laureate of the All-Russian Prize "For Loyalty to Science"; co-founder, Science Film Laboratory 2.0

Panellists:

- **Olga Domovtseva**, Director of the film "Situation: Hogweed!"; laureate of "TEFI-2011"
- **Sergey Ivashko**, Head of the press service of the Faculty of Chemistry, Moscow State University named after M.V. Lomonosov
- **Polina Svezhentseva**, Director of the "There's Still Time" film; Laurel Prize finalist - 2022
- **Olga Ustinova**, Deputy Head of PR Service, Skolkovo Institute of Science and Technology (SkolTech)

Front row participants:

- **Mikhail Lebedev**, Professor, Moscow State University named after M.V. Lomonosov; Chief Researcher, Institute of Evolutionary Physiology and Biochemistry named after I.M. Sechenov, Russian Academy of Sciences
- **Darya Rybakova**, Curator of the initiative, Decade of Science and Technology Project Office

11:45–12:45

Sirius Science and Art Park
conference hall 3

Growth Opportunities: Lectures by Prominent Scientists and Business Representatives

Master Class

Assessment of the Prospects of Scientific and Technical Projects and Analysis of the Development of AI Technologies “from the First Algorithm to Enclosed Work” Based on Patent Analytics

The master class will feature a presentation of modern practices used to conduct an in-depth analysis of global patents for the sake of a quick, objective, and multi-faceted assessment of Russian scientific and technical projects. Students will learn about opportunities for applying patent analytics in new areas of science, technology, and innovation management.
The participants will consider modern tools that combine patent analytics with other valuable business analysis tools – technology scouting, foresight, and others. A separate part of the master class will include a discussion of patenting algorithms and the importance of IT patents for reengineering the history of artificial intelligence at leading industry companies and universities.

Panellist:

- **Oleg Yena**, Strategic Development Supervisor, Project Office of the Federal Institute of Industrial Property

11:45–13:15

Sirius Science and Art Park
conference hall 4

Opportunities for the Decade of Science and Technology in Russia

The Present and Future of Interdisciplinary Brain Research

The human brain conceals numerous secrets and is the least understood organ in our body. The parallel operation of tens of billions of neurons and trillions of synapses makes it impossible to create a model of how this organ functions that is even close to reality, and this greatly limits the capabilities of scientists. However, the development of modern technologies across physics, chemistry, microelectronics, and genetics is opening up new horizons for brain research. Scientists are now pinning their main hopes on interdisciplinary research in order to broaden their understanding of how the nervous system functions and apply this knowledge to the medicine of the future. What brain research technologies are believed to be the most promising today? How can modern methods be used to treat dangerous diseases of the nervous system and correct its irregularities? Is it possible to modify the brain and create Human 2.0?

Moderator:

- **Ruslan Yunusov**, Co-founder, Russian Quantum Center

Panellists:

- **Vsevolod Belousov**, Director, Federal Center of Brain Research and Neurotechnologies of the Federal Medical Biological Agency
- **Oleg Gusev**, Leading Researcher, Kazan Volga Region Federal University
- **Pavel Musienko**, Head of the Laboratory of Neuroprosthetics, St. Petersburg State University; Head of Neurobiology, Sirius University of Science and Technology
- **Alexey Osadchy**, Leading Research Fellow, AIRI Institute of Artificial Intelligence; Director, Centre for Bioelectric Interfaces, Institute for Cognitive Neuroscience, National Research University Higher School of Economics
- **Maxim Ostras**, Director of Strategic Development, LIFT Center; Head, QLU
- **Vladimir Sobolev**, Deputy Director of the Department of Strategic Development, Ministry of Science and Higher Education of the Russian Federation
- **Kamila Zarubina**, Vice President, Executive Director of the Cluster of Biological and Medical Technologies, Skolkovo Foundation

11:45–13:15

Sirius Science and Art Park
conference hall 5

Big Challenges: Opportunities for Development

Is there Science in IT?

Information technologies have gone hand in hand with science throughout their history. The invention of the transistor and the replacement of vacuum tubes with semiconductor devices made it possible to reduce the size of complex on-board and computer equipment and make it more fault-tolerant. The subsequent invention of integrated circuits and the development of silicon technologies gave rise to microelectronics as we know them today. The Russian IT sector is currently in a perfect storm, when it has to rapidly develop its own software and hardware solutions that are just as good as their Western counterparts in terms of their functional and technical features. The new import-independent solutions

must be adapted to the new architecture and the Russian electronic component base. R&D is key to achieving Russia's technological sovereignty. But does R&D exist in the context of information technologies? What is unique about the R&D model in IT and what experience does Russia have in building it? What role do universities play in this process?

Moderators:

- **Evgeny Abakumov**, Director for Information Infrastructure, State Atomic Energy Corporation Rosatom; Scientific Director, Scientific Center of Information Technologies and Artificial Intelligence, Sirius University
- **Lilia Kiryanova**, Acting Rector, Sirius University of Science and Technology

Panellists:

- **Elena Bocherova**, Executive Director, Cyberprotect
- **Leonid Novozhilov**, Director of Digital Development, Rostelecom
- **Sergey Rastorguev**, Co-Founder, CEO, IIP Tenlab
- **Ekaterina Skorb**, Director, Scientific and Educational Center for Infochemistry; Head, Laboratory of Intelligent Technologies in Infochemistry, ITMO University
- **Pavel Starikov**, Director, Centre of Information Technologies and Systems for Executive Power Authorities (CIT&S)

11:45–13:15

Sirius Science and Art Park
conference hall 6

Opportunities for the Decade of Science and Technology in Russia

Women in science: Trends and Prospects

Such issues as developing human scientific potential, including specific measures to support women scientists, are becoming particularly important during the Decade of Science and Technology. The session will address the role of women scientists in the development of scientific knowledge; how to overcome gender inequality in science and create favourable conditions to combine the values of a traditional family and effective work in science; opportunities for a uninterrupted scientific career for women scientists with children; the promotion of the achievements and successes of women scientists; and how to enhance the appeal of a scientific career for young researchers. What measures are crucial to developing women's professional trajectories in priority areas of science and technology? What is the secret to having effective female mentoring programmes in science? How does scientific diplomacy and the positioning of the achievements of Russian science in the global scientific arena help to create platforms for international communication between women scientists given the decline in traditional international contacts?

Moderators:

- **Yulia Gorbunova**, Vice President, D.I. Mendeleev Russian Chemical Society; Acting Dean, Faculty of Fundamental Physicochemical Engineering, Lomonosov Moscow State University (MSU)
- **Lilia Gumerova**, Chairman of the Committee on Science, Education and Culture of the Federation Council of the Federal Assembly of the Russian Federation; Chairman, Permanent Commission on Science and Education, Interparliamentary Assembly of Member Nations of the Commonwealth of Independent States

Panellists:

- **Natalia Altynnik**, Director, Small Technological University, V.G. Shukhov BSTU; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Evgenia Enshina**, Head of the National Branch, Women in Nuclear Global in Russia
- **Irina Ilyina**, Director, Russian Research Institute of Economics, Politics and Law in Science and Technology
- **Elena Khlestkina**, Director, Federal Research Center the N.I. Vavilov All-Russian Institute of Plant Genetic Resources
- **Yelena Lyapuntsova**, Chairperson, Coordinating Council, League of University Professors Interregional Public Organization; Professor of the Department of Innovative Entrepreneurship, N.E. Bauman Moscow State Technical University
- **Irina Timofeeva**, Professor, Institute of Chemistry, St. Petersburg State University; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

Front row participants:

- **Ksenia Ekimova**, Vice-Rector, Plekhanov Russian University of Economics
- **Laura Eksuzyan**, Student of the Faculty of Political Science, Lomonosov Moscow State University
- **Veronika Grudinina**, Assistant at the Department of Finance and Credit, North-Caucasus Federal University
- **Ekaterina Kharchenko**, Deputy Chairman of the Committee of the State Duma of the Federal Assembly of the Russian Federation for Science and Higher Education

- **Oksana Kuznetsova**, Director, V.M. Gorbatov Federal Research Center for Food Systems of the Russian Academy of Sciences
- **Ekaterina Rakhmankina**, Deputy General Director for Human Resources and Organizational Development, Science and Innovations
- **Olga Tarasova**, Director, Center for Development of Scientific and Educational Initiatives; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Marina Trusova**, Director, Research School of Chemical and Biomedical Technologies, National Research Tomsk Polytechnic University

11:45–13:15

Sirius Science and Art Park
conference hall 7

Development Tools

Challenge Accepted: Alternative to the Nobel Prize and Prospects for Young Scientists

Russia has numerous institutions that support young scientists. The Decade of Science and Technology offers a platform for new initiatives and one of its main goals is to get talented young people more involved in research and technology. How can we create a clear motivation and desire for members of the new generation to connect their lives with science? How can we encourage bold ideas without being afraid of breakthroughs, while at the same time assessing risks? How can we find a balance between the importance of fundamental science and the appeal of applied research? How important are the personal brands of young scientists and how can they become symbols of success in modern Russia? What growth prospects does Russia have right now? Why are future technologies needed for life in the present and how exactly can they drive Russia's positioning at the forefront of global technological innovation?

Moderator:

- **Leonid Shlyakhover**, President, Foundation for the Development of Scientific and Cultural Relations Challenge

Panellists:

- **Alexey Fedorov**, "Quantum Information Technologies" Scientific Group Head, Russian Quantum Center; Director, Institute of Physics and Quantum Engineering, National University of Science and Technology "MISIS"
- **Maxim Nikitin**, Leading Researcher, Head of the Laboratory Nanobiotechnology, The Moscow Institute of Physics and Technology; Member, Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Artem Oganov**, Professor, Head of the Materials Design Laboratory, Skolkovo Institute of Science and Technology (Skoltech); Doctor of Physical and Mathematical Sciences; Professor, Russian Academy of Sciences
- **Alexey Paevsky**, Curator, Decade of Science and Technology
- **Maxim Pratusevich**, Director, Presidential Physics and Mathematics Lyceum No. 239
- **Ekaterina Solntseva**, Chief Digital Officer, State Atomic Energy Corporation ROSATOM

11:45–13:15

Sirius Science and Art Park
conference hall 8

Big Challenges: Opportunities for Development

Shaping the Future Together: Cooperation between Science, Industry, and Education (Consortia 2.0)

World-class scientific centres that are currently conducting R&D based on the priorities of scientific and technological development, as well as world-class scientific and educational centres that were created as part of consortia, have managed to create research teams, jobs, and scientific infrastructure, train unique researchers, obtain fundamental knowledge, develop new technologies that are consistent with the world level in terms of their applicability and significance, and incorporate new competitive technologies and high-tech products into production. This strategic session will help identify the best practices of research, scientific, and technological consortia and present proposals for their strategic development, the current and planned results of their integration with industrial enterprises, and their contribution to the implementation of the key international research projects. The session aims to ensure joint interaction in the development of world-class scientific centres as well as scientific and educational centres in terms of exchanging information about best practices and scientific and technical achievements.

Moderators:

- **Sergey Chernyshev**, Vice President, Academician, Russian Academy of Sciences; Scientific Director, Professor N.E. Zhukovsky Central Aerohydrodynamic Institute
- **Victor Sadovnichy**, Rector, Lomonosov Moscow State University **(online)**

Panellists:

- **Alexey Borovkov**, Vice Rector for Digital Transformation, Peter the Great St. Petersburg Polytechnic University
- **Irina Burenina**, Director, Management Company of the Scientific and Educational Center of the Republic of Bashkortostan
- **Aleksey Chuklin**, Director, World-class Interregional Research and Education Center "MoreAgroBioTech"
- **Irina Ganieva**, Director, ANO Scientific and Educational Center Kuzbass
- **Evgeniy Grigoriev**, General Director, "TulaTECH" Scientific and Educational Center
- **Pavel Ilyushin**, Director, Perm Scientific and Educational Center "Rational Subsoil Use"
- **Timur Khalitov**
- **Eugene Kolganov**, Project Management Center, "Sever" Scientific and Educational Center
- **Denis Neustroev**, Director, Agency for the Development of Scientific and Educational Projects, West Siberian Interregional Research and Education Center
- **Danis Nurgaliev**, Vice-Rector for Oil and Gas Technologies, Environmental Management and Geosciences, Kazan (Volga Region) Federal University
- **Kirill Sypalo**, General Director, N.E. Zhukovsky Central Aerohydrodynamic Institute; Corresponding Member, Russian Academy of Sciences; Head, Superzvuk

Experts:

- **Dmitry Livanov**, Rector, Moscow Institute of Physics and Technology (National Research University)
- **Irina Manuylova**, Deputy Governor of the Novosibirsk Region
- **Tatyana Semenova**, Deputy Minister of Health of the Russian Federation
- **Ekaterina Zhuravleva**, Head of the research and production platform, advisor to the chairman of the board of directors, EFKO Group of Companies

11:45–13:15

Sirius Science and Art Park
conference hall 9

Big Challenges: Opportunities for Development

Advanced Science and Technologies of the Future

Microelectronics, quantum technologies, neural networks, and artificial intelligence are among the technologies at the forefront of science today and largely shape the world in which humanity will live tomorrow. Where have these technologies already proven their effectiveness, and where are they still inferior to conventional ones? How will world science develop further? How should we prepare for the technology boom that will be arriving any day now?

Moderator:

- **Gennady Krasnikov**, President, Russian Academy of Sciences

Panellists:

- **Alexander Dmitriev**, Researcher, Physico-Technical Institute named after A.F. Ioffe
- **Askar Rezvanov**, Head of Laboratory, NIIME
- **Sergey Rylov**, Senior Researcher, Federal Research Center for Information and Computing Technologies
- **Nikita Zhadnov**, Researcher, P.N. Physical Institute Lebedev Russian Academy of Sciences
- **Dmitry Zhevnenko**, Head of Laboratory, NIIME

Front row participants:

- **Fedor Meshchaninov**, Head of Laboratory, NIIME
- **Denis Turdakov**, Head of Information Systems Department, Ivannikov Institute for System Programming of the Russian Academy of Sciences

11:45–13:15

Sirius Science and Art Park
Kurchatov Hall

The Russian Science Foundation School

International and Regional Programmes of the Russian Science Foundation

What are some of the special features of the Russian Science Foundation’s regional competitions? What are the Foundation’s priority areas of international cooperation at the moment? What mechanisms are most effective today in the Foundation’s interaction with regional and international partners?

Moderator:

- **Anna Kudryavtseva**, Candidate of Biological Sciences; Deputy Director for Research, Head of Laboratory, Institute of Molecular Biology named after V.A. Engelhardt (IMB RAS)

Panellists:

- **Anzhela Asaturova**, Director, Federal Scientific Center for Biological Plant Protection; grant recipient, Russian Science Foundation
- **Arutyun Avetisyan**, Director, Ivannikov Institute for System Programming of the Russian Academy of Sciences
- **Andrey Blinov**, Deputy General Director, Russian Science Foundation
- **Alexander Makarov**, Director, V.A. Engelhardt Institute of Molecular Biology of the Russian Academy of Sciences
- **Alexander Soldatov**, Scientific Director, International Research Institute for Smart Materials, Southern Federal University

11:45–13:15

Sirius Science and Art Park
Mendeleev Hall

Development Tools

Phygital Science: Does Anyone Have Any Ideas?

The main discussion topic will be the prospects for developing innovative areas of science, combining classical approaches and digital technologies, and related changes in the training of specialists in various fields: from sports and education to the space industry and design. An equally important aspect is the support of young scientists and scientific projects that aim to popularize science among young people and ensure their harmonious development, taking into account the emergence of new material and technical conditions. In education, is the phygital format the missing link or a familiar reality? What is the educational potential of phygital sports and how can we train highly competitive specialists in this field right now? How is the phygital concept becoming the foundation for the development of innovative areas of science? What modern scientific technologies are specialists using today to maintain a healthy lifestyle among young people? The panel discussion will be a starting point in shaping the Phygital Science scientific initiative and the preparatory part of the business programme of the Games of the Future International Tournament in February-March 2024.

Moderator:

- **Kristina Kolesnikova**, Director of the Department of Communications, Youth and Social Projects, Agency for the Development of Computer Sports

Panellists:

- **Naida Abdullaeva**, Director, Scientific and Educational Center “Center for Prospective Development of Medicine and Technological Initiatives”; Associate Professor, Department of Normal Physiology, Dagestan State Medical University
- **Sergey Bachu**, Cybatlet; Test Pilot of Domestic Prosthetics, Motorika
- **Julia Gryaznova**, Head of Strategy, Analytics and Research Department, National Priorities
- **Aleksandr Karlyavin**, Executive Director, VS Gallery
- **Igor Stolyarov**, General Director, World Games of the Future; Head, Game of the Future 2024 Project

Front row participants:

- **Alena Mastiukova**, Research Fellow, Laboratory of Quantum Information Technologies, National University of Science and Technology "MISIS"
- **Aleksandr Petrunenko**, Phygital Athlete; Captain of the Physical Basketball Team RODINA MEDIA
- **Irina Sidorkova**, Russian Racing Driver, SMP Racing

11:45–13:15

Sirius Science and Art Park
Atom Hall

The Country’s Scale as a Space for Opportunities

Creating a Network of Modern Campuses: Advanced Infrastructure for Russia’s Scientific and Technological Development Science of a Large Country: Soviet Management Experience

Russian President Vladimir Putin has set the goal of creating at least 25 new campuses by 2030. Competitive selections for the campuses took place in 2021 and 2022, and today modern campuses are being built in 17 regions of Russia. Over this time, clear expectations have taken shape about what a modern campus should be. Campuses are not just the result of construction; they serve as an infrastructure base for the scientific and technological development of the country and its regions. The creation of such innovative infrastructure will contribute to the implementation of advanced educational and scientific projects and create conditions for the mobility of students and teachers in Russia, and also to attract foreign students. Each region that is implementing this project still needs to develop targeted campus models, identify priority thematic areas, and create programmes and product lines. Many regional teams have already carried out significant work, both in terms of developing campus concepts as well as major design and construction phases. However, there are still a lot of questions that need to be answered. How can we create advanced infrastructure, form new regional partnerships, initiate interregional cooperation, and integrate campuses into the urban environment?

Moderator:

- **Anthony Schwindt**, Assistant to the Deputy Prime Minister of the Russian Federation

Panellists:

- **Oksana Belokrylova**, Deputy Chairman of the Government of the Novgorod Region
- **Mikhail Gordin**, Rector, Bauman Moscow State Technical University
- **Viktor Ikonnikov**, Deputy Chairman of the Government of the Arkhangelsk Region
- **Vitaliy Litke**, Deputy Minister of Education and Science, Government of the Chelyabinsk Region
- **Irina Manuylova**, Deputy Governor of the Novosibirsk Region
- **Evgeny Nikonov**, Deputy Chairman of Khabarovsk Territory Government for Social Issues
- **Ludmila Ogorodova**, Deputy Governor for Scientific and Technological Development of the Tomsk Region
- **Dmitriy Samoylov**, Deputy Chairman of the Government of the Perm Territory for Education, Culture and Sports
- **Andrey Sanosyan**, Deputy Governor of Nizhny Novgorod Region
- **Stanislav Voskresensky**, Governor of Ivanovo Region

Front row participants:

- **Airat Gatiyatov**, Deputy Minister of Science and Higher Education of the Russian Federation
- **Dmitriy Plishkin**, Head of Administration, Federal Territory "Sirius"
- **Taisya Pogodaeva**, Director, Campus of the Big Ivanovo Manufactory

11:45–13:15

Sirius Science and Art Park
Buran Hall

Opportunities for the Decade of Science and Technology in Russia

Artists vs Technology: New Facets of the Science-Art Partnership

Combining science, art, and technology creates new narratives and focuses for the development of creative industries. Virtual reality, artificial intelligence, and other modern technologies are increasingly influencing the art world by offering new ways to interact with works of art and expanding the possibilities of the creative process. However, digital technologies in art are both a source of new opportunities and new challenges. On the one hand, combining science and art opens up new horizons for research and creativity. On the other hand, the emergence of new technologies raises concerns about the loss of uniqueness and individuality of the creative process. Some experts believe that art should remain a man-made manifestation of the human soul, and not simply be a mechanical implementation of programme algorithms. The jury is still out on whether virtual reality or computer graphics art has emotional depth and reference. How has the art market changed since the advent of artificial intelligence? To what extent can technology replace or complement the role of the artist? What creative technologies are trending now? What platforms exist to bring representatives of the scientific community and creative industries together? What opportunities are there at the intersection of science and art for creating innovative projects?

Moderators:

- **Evgenia Belousova**, Leader of the tech-community VK Tekhprosvet, editor-in-chief, TG channel "Louis Ivanovich Vyuton"
- **Evgenia Plotnikova**, Founder, NFT CONF Ed Community

Panellists:

- **Ekaterina Fominyh-Kapitsa**, Head, Neural Arts Digital Academy
- **Yaroslav Frantsev**, Artistic director, founder, RADI SVETA
- **Pavel Klimov**, Artist
- **Olga Lapinskaya**, Founder, Digital Illustration School LP-Sky School
- **Nastya Miro**, Artist
- **Lev Ushakov**, Creative States Trainer

Front row participants:

- **Alexander Belenov**, Head of the Laboratory of Blockchain Technologies "ChainLab", IDEAS Center
- **Irina Belykh**, Co-founder, Program Director, FANK Contemporary Science Film Festival; Member of the Expert Council for Non-Fiction Films, Ministry of Culture of the Russian Federation; Member of the Board, European Academy of Science Films
- **Dmitry Kalyakin**, Founder, MalevichArm

11:45–13:15

Sirius Science and Art Park
conference hall 2

Встреча с молодыми учеными

12:45–13:45

Sirius Science and Art Park
Lomonosov Hall

Growth Opportunities: Lectures by Prominent Scientists and Business Representatives

Lecture

New Adaptive Materials For Biomedicine

Panellist:

- **Dmitriy Ivanov**, Professor; Head of the "Biomaterials" Department, Scientific Center for Genetics and Life Sciences of the Science and Technology University "Sirius"; Director of Research, French National Center for Scientific Research (CNRS); Head of the Laboratory of Engineering Materials Science, Lomonosov Moscow State University

14:00–15:45

Sirius Science and Art Park
Lomonosov Hall

Growth Opportunities: Lectures by Prominent Scientists and Business Representatives

Discussion about the SIRIUS International Project

The Scientific International Research in Unique Terrestrial Station (SIRIUS) project is a series of isolated experiments whose duration is gradually increasing (from 17 to 365 days). The experiment simulates significant events that occur when international crew members stay on the space station for an extended period and also when they land on a planet.

Panellist:

- **Oleg Blinov**, Cosmonaut, crew commander of the SIRIUS-21 project

14:15–15:45

Sirius Science and Art Park
conference hall 1

Opportunities for the Decade of Science and Technology in Russia

How to Produce Popular Films about Science: Artistic Value, Scientific Approach, and Success with Audiences

One of the world's strongest schools of scientific cinema was lost during perestroika. Scientific cinema is now once again evolving and gaining popularity. Given its long absence from the screens, it has ceased to be perceived as a separate type of cinema with its own specifics and genre. Today, viewers feel that scientific cinema is like a lecture or documentary about a scientific topic. How can we restore viewers' interest in scientific cinema and properly present it to an audience so that it is different – dramatic, comedic, detective-like, emotional, and exciting? How can we teach directors to work with scientific cinema, using the entire arsenal of expressive means of cinema? How can we attract audiences to scientific cinema? What tools and opportunities are available for this?

Moderators:

- **Yuliya Kiseleva**, Producer; Laureate of the All-Russian Prize "For Loyalty to Science"; co-founder, Science Film Laboratory 2.0
- **Darya Rybakova**, Curator of the initiative, Decade of Science and Technology Project Office

Panellists:

- **Mikhail Lebedev**, Professor, Moscow State University named after M.V. Lomonosov; Chief Researcher, Institute of Evolutionary Physiology and Biochemistry named after I.M. Sechenov, Russian Academy of Sciences
- **Tatyana Matveeva**, Editor-in-Chief, ANO Internet Development Institute (IRI)
- **Maxim Nikitin**, Leading Researcher, Head of the Laboratory Nanobiotechnology, The Moscow Institute of Physics and Technology; Member, Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

Front row participants:

- **Sergey Ivashko**, Head of the press service of the Faculty of Chemistry, Moscow State University named after M.V. Lomonosov
- **Nikolay Novikov**, Producer; Board Member, Regional Cinema Support Fund; member of the expert council on non-fiction cinema, Ministry of Culture of the Russian Federation
- **Yulia Pozdnyakova**, Head of the Directorate for Propaganda and Popularization of Scientific Achievements, Siberian Branch of the Russian Academy of Sciences

14:15–15:45

Sirius Science and Art Park
conference hall 2

Space for International Scientific and Technical Cooperation

Scientific Space of the Union State: Key Issues in Russian-Belarusian Scientific and Technical Cooperation

Russia and Belarus have common scientific research interests and are already collaborating in numerous areas, from space to biotechnology. At present, one of Russia's top priorities in intensifying international cooperation is the creation of a common scientific and technological space with Belarus. Joint breakthrough research could be used for the development of the real sectors of the two countries' economies and ensure their technological sovereignty and independence, including as part of efforts to further replace imports. What are the current priorities for the development of scientific and technical cooperation between Russia and Belarus? What is the best way to productively organize cooperation between scientists from the two countries? What support measures are needed to create joint projects?

Moderator:

- **Andrey Voronin**, Acting Vice-Rector for Education, University of Science and Technology MISIS; Deputy Chairman of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

Panellists:

- **Sergey Adonin**, Deputy Director for Research, Irkutsk Scientific Center of Siberian Branch of the Russian Academy of Sciences; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Alexander Blagov**, Vice President, Kurchatov Institute National Research Centre
- **Dmitry Demin**, Deputy Chairman of the Council of Young Scientists, Russian Academy of Sciences; Deputy Director, All-Russian Research Institute of Phytopathology
- **Vasiliy Gurskiy**, Chief Scientific Secretary, National Academy of Sciences of Belarus
- **Anna Karpenko**, Scientific Secretary of the Council of Young Scientists, National Academy of Sciences of Belarus
- **Sergey Kravets**

14:15–15:45

Sirius Science and Art Park
conference hall 3

Development Tools

From Scientific Laws to Laws about Science

The rhythmic legislative regulation of scientific activities is a key component of Russia's scientific and technological development in the current geopolitical situation and rapidly changing world. An open dialogue needs to be held about ways to provide legislative support for scientific activities. What current legislative initiatives aim to enhance the efficiency of scientific activities in Russia? Why are issues about legislation related to the scientific and technological sector particularly relevant today? What proposals and initiatives need to be considered to improve the legal regulation of research and development?

Moderator:

- **Alexander Mazhuga**, First Deputy Chairman of the Committee of the State Duma of the Federal Assembly of the Russian Federation for Science and Higher Education

Panellists:

- **Vladimir Avdeenko**, Deputy Executive Director, Director of Agricultural Biotechnology, Innopraktika
- **Aleksey Filimonov**, Executive Director of the National Association for Technology Transfer
- **Sergey Kabyshev**, Chairman of the Committee of the State Duma of the Federal Assembly of the Russian Federation on Science and Higher Education
- **Nikita Marchenkov**, Chairman, Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Presidential Council of the Russian Federation for Science and Education; Head, Kurchatov Complex for Synchrotron-Neutron Research, National Research Center "Kurchatov Institute"

14:15–15:45

Sirius Science and Art Park
conference hall 4

Big Challenges: Opportunities for Development

A Scientist's Path in the World of Future Technologies

In partnership with Rosatom Quantum technologies

In the next 20–30 years, people who are currently going to school or just starting their careers in science will play an important role in creating the technologies of the future. Internationally recognized scientists from BRICS countries are actively creating ideal conditions for talented young people, while industry representatives have been boldly investing in science for several years. What mechanisms should be used to attract talented young people to science? What is the best way to maintain and constantly fuel interest in it? What motivates scientists to strive for new discoveries every day? How are these processes

structured in different countries, and how can they be supported and developed through international collaboration?

Moderator:

- **Ruslan Yunusov**, Co-founder, Russian Quantum Center

Panellists:

- **Oleg Gusev**, Leading Researcher, Kazan Volga Region Federal University
- **Valeria Kasamara**, Director, Association of Organizers of Student Olympiads "I am a Professional"
- **Maxim Pratusevich**, Director, Presidential Physics and Mathematics Lyceum No. 239
- **Umakant Rapol**, Professor of Physics, Indian Institute of Science Education and Research; Principal Investigator, I-Hub Quantum Technology Foundation
- **Ekaterina Solntseva**, Chief Digital Officer, State Atomic Energy Corporation ROSATOM
- **Dmitry Zauers**, Deputy Chairman of the Management Board, Gazprombank
- **Wei Zhang**, Professor, Renmin University of China

14:15–15:45

Sirius Science and Art Park
conference hall 6

Big Challenges: Opportunities for Development

Artificial Intelligence for Science: The Synergy of Achievements

Scientists utilize artificial intelligence in their research to process big data, create models, and predict outcomes. For example, AI in human genome research is speeding up and simplifying the analysis of millions of pieces of genetic data and helping to identify links between gene disorders and diseases. AI is also actively being used to simulate weather, growth in seasonal diseases, crops, and other phenomena. In addition, AI can help with the development of new drugs or materials, which affects the quality of life of millions of people. However, the potential of AI for science has not been fully utilized today. What can be done to change this? What is the practical significance of introducing AI into the work of scientific institutions? What parts of the research process and experiments can AI perform today? The synergy of AI and quantum computing offers prospects for a breakthrough in the creation of smart machines and the achievement of strong AI. What other areas of research can be enhanced with AI? Where can we expect breakthroughs? How can scientists learn to use AI? Who should be responsible for making scientists and AI compatible? What is the role of major technology companies that are actively developing AI for practical application? How should the infrastructure of research institutes and universities be modified so that their employees can use all the capabilities of AI in their work?

Moderator:

- **Albert Efimov**, Candidate of Philosophy, Vice President - Director of the Research and Innovation Department, Sberbank

Panellists:

- **Alexey Fedorov**, "Quantum Information Technologies" Scientific Group Head, Russian Quantum Center; Director, Institute of Physics and Quantum Engineering, National University of Science and Technology "MISIS"
- **Olga Kardymon**, Research Fellow, Head of Bioinformatics Group, AIRI – Artificial Intelligence Research Institute
- **Alexander Krainov**, Director for Development of Artificial Intelligence Technologies, Yandex
- **Pavel Starikov**, Director, Centre of Information Technologies and Systems for Executive Power Authorities (CIT&S)

14:15–15:45

Sirius Science and Art Park
conference hall 7

Development Tools

Is 100 Million for a Major Scientific Project a Reality or Dream?

As part of Resolution No. 1902 of the Russian Government dated 27 December 2019, the Ministry of Education and Science launched the so-called ‘100 million’ competition for ambitious scientific projects in priority areas of scientific and technological development. Based on the competition, support was provided for 41 projects (for three years), of which 21 projects were extended for a fourth year. What are the results of the four-year period? Is RUB 100 million a year enough to achieve a breakthrough result? What are some of the unique features of collaborating in consortia? Are there plans to develop and introduce new technologies based on the results of the project?

Moderator:

- **Stepan Kalmykov**, Vice-President, Russian Academy of Sciences

Panellists:

- **Sergey Deev**, Professor, Chief Researcher, Academicians M.M. Shemyakin and Y.A. Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Sciences

- **Yulia Gorbunova**, Vice President, D.I. Mendeleev Russian Chemical Society; Acting Dean, Faculty of Fundamental Physicochemical Engineering, Lomonosov Moscow State University (MSU)
- **Andrey Grunin**, Senior Researcher of the Nanophotonics Department, Faculty of Physics, Lomonosov Moscow State University (MSU)
- **Alexander Karpov**, Scientific Secretary of the Laboratory of Nuclear Reactions, Joint Institute for Nuclear Research
- **Maria Khorolskaya**, Researcher, Primakov National Research Institute of World Economy and International Relations of the Russian Academy of Sciences (IMEMO)
- **Denis Turdakov**, Head of Information Systems Department, Ivannikov Institute for System Programming of the Russian Academy of Sciences

Front row participant:

- **Aleksey Davydov**, Senior Researcher, Primakov National Research Institute of World Economy and International Relations of the Russian Academy of Sciences (IMEMO)

14:15–15:45

Sirius Science and Art Park
conference hall 8

Open Meeting of the Expert Council of the Ministry of Science and Higher Education of the Russian Federation on Scientific Support for Carbon Balance Control Technologies

14:15–15:45

Sirius Science and Art Park
conference hall 9

Opportunities for the Decade of Science and Technology in Russia

Large Country: Soviet Management Experience

Russian science is the successor of Soviet science. It is powerful and deeply involved in the country's technological development. The Soviet experience of the state-run organization, management, and support of scientific research is controversial, but despite all the ambiguity of the different assessments, experts agree that during the Soviet period the country managed to create a scientific industry that was able to respond to the technological challenges of the 20th century and function effectively for a long time in a competitive environment. The scientific discussion will address a number of significant questions: to what extent did the special nature of the Soviet state influence the content and focus of scientific policy, as well as the specific aspects of how science actually functioned and developed? Was the Soviet model of managing science in its various institutional sectors effective or successful? Which decisions and practices were effective and which ones had a distorting effect? In what areas were government decisions on the management of scientific research ahead of their time and in what areas were they lagging behind?

Moderator:

- **Evgeniya Dolgova**, Director, Center for the History of Russian Science and Scientific and Technological Development, Russian State University for the Humanities

Panellists:

- **Irina Dezhina**, Head of the Analytical Department of Scientific and Technological Development, Skolkovo Institute of Science and Technology (Skoltech)
- **Mikhail Gribovsky**, Professor of the Department of Russian History, Faculty of Historical and Political Sciences, National Research Tomsk State University
- **Marina Okuneva**, Senior Lecturer, Department of Law, Institute of Economics, Management and Law, Moscow City University
- **Denis Sekirinsky**, Deputy Minister of Science and Higher Education of the Russian Federation
- **Ekaterina Streltsova**, Director of the Center for Statistics and Monitoring of Science and Innovation, Institute for Statistical Research and Economics of Knowledge, National Research University Higher School of Economics
- **Svetlana Ulyanova**, Professor of the Department of Social Sciences, Peter the Great St. Petersburg Polytechnic University

Front row participants:

- **Elena Sinelnikova**, Deputy Director, St. Petersburg Branch of the S.I. Vavilov Institute of the History of Natural Science and Technology of the Russian Academy of Sciences
- **Valeria Sliskova**, Head of the Archive Department, N.N. Miklouho-Maclay Institute of Ethnology and Anthropology of the Russian Academy of Sciences

14:15–15:45

Sirius Science and Art Park
Kurchatov Hall

The Russian Science Foundation School

Pitch session

Science in 10 minutes: Grant Recipients of the Russian Science Foundation Talk about Their Research

The leaders of 12 projects selected by the Russian Science Foundation's expert councils will tell their

colleagues and media representatives about the results of their projects in laymen's terms.

Moderator:

- **Yulia Krasilnikova**, Deputy Head of Public Relations Department, Russian Science Foundation

Panellists:

- **Olga Goryacheva**, Senior Researcher, N.G. Chernyshevsky Saratov National Research State University
- **Elena Kiseleva**, BorisSenior Researcher, Privolzhsky Research Medical University
- **Irina Larionova**, Senior Researcher, Tomsk National Research Medical Center
- **Vasily Leonenko**, Associate Professor at the Faculty of Digital Transformations, Senior Researcher at the research center in the field of artificial intelligence "Strong Artificial Intelligence in Industry", ITMO University
- **Elena Mukhina**, Senior Researcher, Skolkovo Institute of Science and Technology (SkolTech)
- **Anastasia Penkova**, Professor, St. Petersburg State University

14:15–15:45

Sirius Science and Art Park
Mendeleev Hall

Space for International Scientific and Technical Cooperation

Results of a Satellite Event in the Perm Territory

Mine Water, a Smart City, the Fuel and Energy Industry, and the Cradle of Engineers

In October 2023, the Perm Territory hosted its first satellite event of the III Young Scientists Congress with Russian scientists and representatives of the executive authorities and industrial companies in the region. Roughly 80 experts from 26 Russian cities immersed themselves in the specifics of the Perm Territory. What technologies have been proposed to eliminate environmental pollution in the Kama River? How can we boost the efficiency of enterprises in the Perm fuel and energy sector? In addition, what will make Perm a leader among smart cities, and how can we increase the number of engineering personnel in the region? How effective are the solutions that have been proposed for the goals set by the region? What is the further action plan for their implementation?

Moderator:

- **Alexander Nikolaev**, Professor of the Department of Mining Electromechanics, Perm National Research Polytechnic University (PNRPU); Deputy Director for Scientific Projects, Technology Transfer Center PNRPU

Panellists:

- **Evgeny Averin**, Doctor of Technical Sciences, Project Manager, Skuratovsky Experimental Plant
- **Anastasiya Bozh'ya-Volya**, Senior Researcher, Public-Private Interaction Research Sector, Higher School of Economics - Perm
- **Yana Dorofeeva**, Deputy Head, State Autonomous Institution PC "Directorate of the interuniversity campus "Future of Parma"
- **Olga Dvoryanskikh**, Deputy Head of Department, Head of Regional Environmental Policy Department, Ministry of Natural Resources, Forestry and Ecology of the Perm Territory
- **Pavel Ilyushin**, Director, Perm Scientific and Educational Center "Rational Subsoil Use"
- **Dmitry Polshvedkin**, Deputy Minister of Natural Resources, Forestry and Ecology of the Perm Territory
- **Dmitriy Samoylov**, Deputy Chairman of the Government of the Perm Territory for Education, Culture and Sports
- **Denis Tropin**, Project Director, Academy of Technology, Data and Cybersecurity, Sber University

14:15–15:45

Sirius Science and Art Park
Atom Hall

Development Tools

Venture Investments and Other Tools to Support Knowledge-Intensive Businesses in Russia

Identifying the optimal private and public tools for attracting investment from the academic environment for innovative projects is a key component for supporting knowledge-intensive businesses in Russia. Scenarios need to be created for to attract funding and establish a business for the scientific community. What is the best way to attract investment to scale a knowledge-intensive business? How should funding be obtained from a venture fund? What conditions are private investors offering? What government support instruments exist? Could an industrial company help strengthen the solution?

Moderator:

- **Maxim Bardin**, Director for Development of Open Innovation and New Businesses, Gazpromneft — Technology Partnerships

Panellists:

- **Alexey Antropov**, Deputy General Director, Foundation for the Promotion of the Development of Small Forms of Enterprises in the Scientific and Technical Sphere (Innovation Promotion Fund)
- **Alexander Fertman**, Director of Science and Education Department, Skolkovo Foundation
- **Ilya Goldt**, Managing Director, New Industry Foundation
- **Ilya Odnokolov**, Head of the Department of Prospective Development, Gazprom Neft
- **Denis Pigarev**, Acceleration Program Manager, Gazpromneft — Technological Partnerships
- **Yulia Shadrina**, Director for Innovation Development, Tube Metallurgical Company (TMK)
- **Evgeny Shilov**, Co-founder, Technical Director, LABADVANCE
- **Alexey Tuzikov**, Executive Director of a Startup Ecosystem, Sberbank
- **Elena Vyatkina**, Director for Acceleration in the Oil and Gas Direction of the Cluster of Energy Efficient Technologies, Skolkovo Foundation

14:15–15:45

Sirius Science and Art Park
Buran Hall

Development Tools

The Role of Young Researchers in the Development of Engineering Education and Ensuring Russia's Technological Sovereignty

Personnel at Russian schools are being trained in the most in-demand subjects for the Russian economy, and conditions are being created for breakthrough developments and research that aim to solve problems related to priority areas of Russia's technological development that are relevant and important on a global scale. The Advanced Engineering Schools project is a tool that the federal executive authorities can use to support interaction and cooperation between advanced engineering schools and industry. What are the most effective approaches to promoting engineering? What opportunities does the project offer for young researchers? What is the best way to promote the professional growth of young researchers and support them as part of the project?

Moderator:

- **Vladimir Shevchenko**, Rector, National Research Nuclear University MEPhI

Panellists:

- **Vladimir Bushkov**, Development and Innovation Advisor, SIBUR; Member of the Scientific and Technological Council, Russian Science Foundation
- **Nikolay Efimov-Soini**, Head of the Department of Power Engineering, Advanced Engineering School, SPbPU "Digital Engineering"
- **Mikhail Gorlov**, Project Manager, State Atomic Energy Corporation ROSATOM
- **Boris Gurenko**, Head of the Scientific and Technological Laboratory for the Design of On-board Systems of Robotic Complexes, Southern Federal University
- **Alexey Podchufarov**, Executive Director of the Advanced Engineering School, N.E. Bauman Moscow State Technical University
- **Georgy Selikhanov**, Leading Researcher, Advanced Engineering School, ITMO University
- **Kirill Varenik**, Head of the Laboratory of Information Modeling Technologies, Yaroslav the Wise Novgorod State University

14:15–15:45

Sirius Science and Art Park
conference hall 5

Big Challenges: Opportunities for Development

Biomedicine Benchmarks: How Young Scientists Can Get to the Frontier of Science

The key aspects and principles of young scientists' actions are among the main focuses for further reaching the forefront of domestic and world science. Particular attention will be paid to scientific and technological benchmarks and achievements in biomedicine presented by Russian researchers. What skills and qualities does a young scientist need to work successfully on the frontier of science? What is the best way to correctly identify promising areas for scientific research? What support and incentive measures exist for young scientists in Russia and abroad? How can we ensure effective interaction between scientists and the government in the development and support of the biomedical industry?

Moderator:

- **Elena Maslenkova**, Chairman, Council of Young Scientists of Medical and Pharmaceutical Organizations of Higher Education and Science of the Ministry of Health of the Russian Federation

Panellists:

- **Vsevolod Belousov**, Director, Federal Center of Brain Research and Neurotechnologies of the Federal Medical Biological Agency
- **Roman Ivanov**, Director of the Scientific Center for Translational Medicine, Vice-Rector for Scientific and Technological Development, Sirius University of Science and Technology
- **Denis Logunov**, Deputy Director for Science, National Research Center for Epidemiology and Microbiology named after Honorary Academician N.F. Gamaleya of the Ministry of Health of the Russian Federation
- **Egor Prokhorchuk**, Dean of the Faculty of Biomedical Sciences, Russian National Research University. N.I. Pirogov Ministry of Health of Russia

16:30–18:00

Sirius Science and Art Park
conference hall 1

Big Challenges: Opportunities for Development

Conservation Genetics: Gene Pools of Wild Animals and Challenges of Our Times

Molecular genetic technologies based on an analysis of DNA have long proven to be key methods for resolving various controversial issues in biology and environmental protection. Directly identifying the hereditary component of biological diversity using DNA analysis is critical for the genetic identification of species and taxa of higher rank, populations, individuals, and interspecific hybrids, the reconstruction of related genealogical connections (family structure), the phylogenetic (evolutionary) relationships of organisms, and assessments of the state of the population (levels of intra- and interpopulation genetic diversity and the degree of inbreeding). However, despite the development of fundamental research in this area, the incorporation of their results into environmental protection practices in Russia is significantly lagging behind. This marks the first time that a discussion platform has been organized to present and discuss the biological, organizational, methodological, and legal problems associated with applying modern approaches based on the use of molecular genetic, population genetic, and genomic methods in practical environmental activities. Leading experts in this field of research will present reports about both the general concept of conservation genetics and the use of genetic and genomic approaches for the protection, conservation, and restoration of gene pools of rare and valuable animal species in Russia based on the example of various species of birds, mammals, and fish. Issues concerning the legal aspects of environmental genetics will be given special consideration. In particular, the participants will look at legislative innovations regarding the identification, certification, and management of biological resource collections of rare and protected species of animals, including for the purpose of conducting molecular genetic expert examinations as part of criminal cases involving the illegal capture and trafficking of fauna.

Moderator:

- **Ramilya Novikova**, Head of the Center for Scientific Research and Development, "VNII Ecology" Federal State Budgetary Institution

Panellists:

- **Oleg Grin**, Director, Scientific and Educational Center for Law and Bioethics in the Field of Genomic Research and Application of Genetic Technologies, Kutafin Moscow State Law University (MSAL)
- **Petr Kazimirov**, Researcher, "VNII Ecology" Federal State Budgetary Institution
- **Elena Mudrik**, Leading researcher at the genetic laboratory, Federal State Budgetary Institution All-Russian Scientific Research Institute "Ecology"; Leading Researcher, Federal State Budgetary Institution "IOGEN RAS"
- **Dmitriy Politov**, Chief Researcher, Head of the Genetic Laboratory, "Ecology" Federal State Budgetary Institution All-Russian Research Institute
- **Pavel Sorokin**, Senior Researcher, Federal State Budgetary Institution "IPEE RAS"

16:30–18:00

Sirius Science and Art Park
conference hall 3

Development Tools

Youth Laboratories: Priority 2035. Real Science through the Hands of Students

Youth laboratories at Russian universities play a key role in the development of research activities among young people. The session will serve as a platform to discuss the role and importance of youth laboratories in terms of involving young people in scientific research and obtaining new products and developments. More than 200 modern youth laboratories have already been created and are conducting work in the following areas: microelectronics, new medicine, new energy, as well as research in agricultural sciences, climate change, genetics, mathematics, physics, chemistry, robotics, ecology, and economics. Youth laboratories provide a format that offers successful young leaders the opportunity to put together an interesting team and realize their potential on a promising topic under the guidance of an established academician or a recognized specialist from Russia or another country. And the government, along with businesses, universities, and scientific organizations, provides the necessary resources not only for salaries, but also for instruments, mobility, and everything that is needed to work on science and create new competitive products and developments not just for Russia, but for world-class research as well. What are the advantages of youth laboratories in terms of research activities to enhance the appeal of Russian science and education for young researchers and students so that they can generate new products and engage in scientific activities? What is the best way to maintain competitiveness in the world market and preserve the country’s technological sovereignty? What are the

results of the activities of youth laboratories and what aspects of them contribute to effective youth engagement?

Moderator:

- **Andrey Keller**, Director, Sociocenter

Panellists:

- **Denis Alikin**, Head of the Laboratory of Functional Nanomaterials and Nanodevices, Associate Professor of the Department of Condensed Matter Physics and Nanoscale Systems, Ural Federal University named after the first President of Russia B.N. Yeltsin
- **Pavel Baranov**, Head of the Laboratory of Hyperspectral Systems, Saint Petersburg Electrotechnical University “LETI"
- **Olga Goryacheva**, Senior Researcher, N.G. Chernyshevsky Saratov National Research State University
- **Ilya Kovalev**, Director of the Youth Project Center, Moscow State Technological University "Stankin"
- **Pavel Sorokin**, Head of the Laboratory “Digital Materials Science”, National University of Science and Technology "MISIS"

16:30–18:00

Sirius Science and Art Park
conference hall 4

Space for International Scientific and Technical Cooperation

Young Scientists: Science without Borders

Russian science closely cooperates with the global research community based on the trend of increasing integration processes in scientific and technical matters. Cooperation in this regard is an integral part of effective interaction between states and is conducive to achieving a synergistic effect in economic development. The involvement of young foreign scientists and researchers in the process of conducting joint projects in priority areas of science, technology, and engineering is a key aspect of scientific and technical cooperation. Their direct communication with their Russian colleagues will help achieve the goals of the Strategy for the Scientific and Technological Development of the Russian Federation and the Decade of Science and Technology in terms of increasing the level of Russia’s technological sovereignty and the competitiveness of Russian science through the proper integration of the intellectual resources of different countries. The roundtable participants will present projects in several areas that are currently at the forefront of research not only in their own countries, but throughout the world: climate research, ecology, energy, energy conservation, agrobiotechnology, agriculture, artificial intelligence, and technologies for monitoring the Earth's surface.

Moderators:

- **Alexander Alimov**, Director of the Department for Multilateral Humanitarian Cooperation and Cultural Relations, Ministry of Foreign Affairs of the Russian Federation
- **Sergey Emelyanov**, Rector, Southwestern State University

Panellists:

- **Sedrati Abdenour**, Lecturer, University Abbes Laghrour (People's Democratic Republic of Algeria)
- **Ramon Arias**, Researcher, University of Oriente (Republic of Cuba)
- **Tursunai Bektemirova**, Senior Specialist, M.M. Adyshev Institute of Geology of the National Academy of Sciences of the Kyrgyz Republic
- **Zhanna Bulkhairova**, Director of Science and Innovation Department, Saken Seifullin Kazakh Agrotechnical Research University
- **Irina Chidunchi**, Associate Professor, Toraighyrov University (Republic of Kazakhstan)
- **Zhazgul Kelgenbaeva**, Researcher, National Academy of Sciences of the Kyrgyz Republic (Kyrgyz Republic)
- **Prasun Mishra**, Assistant Professor of Advanced Technology Development Centre, Indian Institute of Technology (Republic of India)
- **Michael Phumulani Mkoyi**, Postgraduate Student, Council for Scientific and Industrial Research, National Laser Centre (Republic of South Africa)
- **Tawanda Tinago**, Lecturer, Chinhoyi University of Technology (Republic of Zimbabwe)
- **Daria Tishkevich**, Senior Researcher, Scientific and Practical Materials Research Center National Academy of Sciences of Belarus (Republic of Belarus)

Front row participants:

- **Roman Chukov**, Assistant of the Director for Youth Policy, Roscongress Foundation
- **Dmitry Demin**, Deputy Chairman of the Council of Young Scientists, Russian Academy of Sciences; Deputy Director, All-Russian Research Institute of Phytopathology
- **Vitaly Okhlopkov**, Rector, Institute of Higher and Additional Professional Education of the Federal Scientific and Clinical Center for Reanimatology and Rehabilitation
- **Kirill Zykov**, Corresponding Member, Russian Academy of Sciences; Deputy Director for Research and Innovation, Research Institute of Pulmonology, FMBA of Russia

16:30–18:00

Sirius Science and Art Park
conference hall 5

Development Tools

Science in Law

Russian legal science plays a major role in almost all spheres of life. It can have a tremendous impact on the quality of justice, legal regulations that are adopted, the state of domestic jurisdiction, and education. How effectively is legal science being used in business, the legislative process, and government activities? What measures need to be taken to develop domestic legal science? What prospects does it offer for young researchers and what problems could they encounter?

Moderator:

- **Alan Lazarov**, Head of Organizational Management, Member of the Commission on New Technologies and Legal Support for the Digitalization of Society, Association of Lawyers of Russia

Panellists:

- **Andrey Kozlov**, Managing Partner, Lawyer, Law Firm "RussianLegal"
- **Dmitriy Lipin**, Deputy General Director, Institute named after N.E. Zhukovsky
- **Andrey Petrakov**, Acting Director, Business Law Institute; Deputy Head of the Department of Entrepreneurial and Corporate Law, Moscow State Law University named after O.E. Kutafin; Co-Chairman of the Youth Movement, Association of Lawyers of Russia
- **Natalya Tretyak**, General Director, Prosveshcheniye
- **Maxim Voronin**, Associate Professor of the Department of State and Law and Political Science, Assistant Dean, Lomonosov Moscow State University

16:30–18:00

Sirius Science and Art Park
conference hall 6

Space for International Scientific and Technical Cooperation

BRICS: Russia’s Chairmanship in 2024

At present, cooperation between BRICS countries in science, technology, and innovation (STI) is one of the most rapidly developing and intense areas of interaction between the five member nations. In 2024, the chairmanship of the BRICS association will pass to Russia on a rotational basis. Particular attention will be paid to issues related to STI: more than 15 events are scheduled, which, among other things, aim to bolster collaboration among BRICS scientists, research teams, and innovators in such areas as large research infrastructure; astronomy; biomedicine and biotechnology; information and communication technologies and high-performance computing systems; energy efficiency; materials science and nanotechnology; photonics; oceanic and polar research; and solid-state (LED) light sources. Other noteworthy events include the Young Scientist Forum, the BRICS Young Innovators Competition, as well as the recap of the sixth competition of research competitions as part of the BRICS STI Framework Programme on the climate agenda. During Russia’s chairmanship, ambitious and strategically important flagship research projects are slated to be launched with the mandatory participation of all five countries. The discussion will include an overview of the BRICS STI architecture and existing mechanisms of interaction, as well as a debate about the prospects for cooperation among BRICS countries as part of Russia’s chairmanship, taking into account initiatives that Russia has announced to conduct international land and sea expeditions, as well as organize internship programmes and the exchange of scientists. What impact will the expansion of the BRICS association from 1 January 2024 have on scientific and technical cooperation?

Moderator:

- **Irina Kuklina**, Executive Director, Analytical Center for International Scientific, Technological and Educational Programs

Panellists:

- **Gulnara Bikkulova**, Deputy General Director - Director of International Initiatives and Partnerships, Rosatom Corporate Academy
- **Irina Dezhina**, Head of the Analytical Department of Scientific and Technological Development, Skolkovo Institute of Science and Technology (Skoltech)
- **Pavel Drogovoz**, Vice-Rector for Science and Digital Development, Bauman Moscow State Technical University
- **Karin Kneissl**, Head, Center G.O.R.K.I. (Geopolitical Observatory on Key Issues in Russia); Minister of Foreign Affairs of the Republic of Austria (2017–2019)
- **Vladimir Kruzhayev**, Deputy Vice-Rector for Science, Ural Federal University named after the first President of Russia B. N. Yeltsin
- **Olga Mulina**, Senior Researcher, N.D. Zelinsky Institute of Organic Chemistry
- **Victoria Panova**, Vice Rector, National Research University Higher School of Economics; Scientific Supervisor, Expert Council for Preparation and Maintenance of the Russian BRICS Chairmanship
- **Irek Suleymanov**, International Cooperation Advisor, Joint Institute for Nuclear Research

- **Peter Zavialov**, Acting Deputy Director for Scientific and Organizational Work, Head of Laboratory, P.P. Shirshov Institute of Oceanology of the Russian Academy of Sciences

16:30–18:00

Sirius Science and Art Park
conference hall 7

Opportunities for the Decade of Science and Technology in Russia

Development of Science Centres in Russia

During the Year of the Teacher and Mentor, Russia has begun supporting science centres – institutions that aim to study, develop, and promote the history of science and technology based on experience and the involvement of young people in these activities. This issue is consistent with Russia's national development goals for the period until 2030 in terms of creating opportunities for self-realization and the development of talent. The goals and objectives facing science centres cannot be achieved without integration with the educational process, including adjustments to curricula, the emergence of new disciplines, as well as the development of disciplines related to the philosophy, methodology, and history of science. The activities of science centres should produce the following key effects: the involvement of students in research activities; greater interest in the history of the country, universities, and different scientific fields; the creation and development of a methodology for working with archival data; and the popularization and glorification of the names of scientists and teachers. What kind of work is being done with archival data and different types of sources, and what are some of the specific issues associated with working with archived scientific and technical documentation? What methods exist for storing and representing data? How can we identify the processes of scientific organization based on digitized data? Will science centres be able to ensure continuity in science across generations? What is the best way to get young people involved in working with archival data? How do we digitize data, where do we store it, and how should it be represented? How can we make names in science recognizable?

Moderator:

- **Inna Shevchenko**, Rector, Southern Federal University (SFedU)

Panellists:

- **Nadezhda Ashcheulova**, Director, St. Petersburg Branch of the S.I. Vavilov Institute of the History of Natural Science and Technology of the Russian Academy of Sciences
- **Evgeniya Dolgova**, Director, Center for the History of Russian Science and Scientific and Technological Development, Russian State University for the Humanities
- **Mikhail Lipkin**, Director, Institute of World History of the Russian Academy of Sciences
- **Svetlana Merkushina**, Head of the Directorate for the Development of Products for Young People, SberEducation
- **Alexey Paevsky**, Curator, Decade of Science and Technology

Front row participants:

- **Elena Dotsenko**, Chairman of the Board of the Alumni Association, Northern Arctic Federal University named after M.V. Lomonosov
- **Kirill Garev**, Head of the Department for Support of Work with Research and Development Data, Russian Center for Scientific Information
- **Irina Ilyina**, Director, Russian Research Institute of Economics, Politics and Law in Science and Technology
- **Vsevolod Koryanov**, Deputy Head of the Department for Scientific Work, Associate Professor of the Department of Dynamics and Flight Control of Rockets and Spacecraft, Bauman Moscow State Technical University FSBEI HE
- **Vladimir Shevchenko**, Rector, National Research Nuclear University MEPhI
- **Natalia Zaikina**, Press Secretary, Joint Institute for Nuclear Research

16:30–18:00

Sirius Science and Art Park
conference hall 8

Space for International Scientific and Technical Cooperation

Открытое заседание Экспертного совета по вопросам международного образовательного и научного сотрудничества Комитета Государственной Думы по науке и высшему образованию

Moderator:

- **Dmitry Repnikov**, Chairman of the Expert Council under the State Duma Committee on Science and Higher Education on international Educational and scientific cooperation and integration

Panellists:

- **Vitaly Gulyi**, Secretary of the Expert Council under the State Duma Committee on Science and Higher Education on International Educational and Scientific cooperation and Integration
- **Oleg Ivanov**, Deputy Director for Development, Lebedev Physical Institute of the Russian Academy of Sciences
- **Maria Karelina**, Vice-Rector, State University of Management
- **Igor Kashtanov**, Deputy Director, GUU Engineering Project Management Center

- **Dmitry Petrakov**, General Director, TMH Engineering
- **Mikhail Shvetsov**, Rector of the Mari State University
- **Vladimir Sipyagin**, First Deputy Chairman of the Committee of the State Duma of the Federal Assembly of the Russian Federation for Science and Higher Education
- **Ilya Sokolshchik**, Acting Rector, State Academic University for the Humanities
- **Denis Stolyarov**, Vice-Rector for Student Affairs, Skolkovo Institute of Science and Technology (Skoltech)
- **Vladimir Stroev**, Rector, State University of Management
- **Evgeny Vdovin**, Leader of the project "Digital services and tools for small and medium–sized businesses - National network of laboratories at universities"

16:30–18:00

Sirius Science and Art Park
Kurchatov Hall

The Russian Science Foundation School

Pitch session

Science in 10 minutes: Grant Recipients of the Russian Science Foundation Talk about Their Research

The leaders of 12 projects selected by the Russian Science Foundation's expert councils will tell their colleagues and media representatives about the results of their projects in laymen's terms.

Moderator:

- **Yulia Krasilnikova**, Deputy Head of Public Relations Department, Russian Science Foundation

Panellists:

- **Sergey Anikeev**, Senior Researcher, National Research Tomsk State University
- **Andrey Gnedenkov**, Leading Researcher, Institute of Chemistry of the Far Eastern Branch of the Russian Academy of Science
- **Mikhail Khachumov**, Senior Researcher, Federal Research Center for Informatics and Management of the Russian Academy of Sciences
- **Polina Rudakovskaya**, Researcher, Skolkovo Institute of Science and Technology (SkolTech)
- **Kseniya Stepanova**, Senior Researcher, Institute for the History of Material Culture of the Russian Academy of Sciences
- **Daria Vilkova**, Researcher, Cherepovets State University

16:30–18:00

Sirius Science and Art Park
Mendeleev Hall

ASI Pitch Session

16:30–17:30

Sirius Science and Art Park
Lomonosov Hall

Growth Opportunities: Lectures by Prominent Scientists and Business Representatives

Lecture

New Approaches in Cancer Diagnosis and Treatment

Oncological diseases currently represent a serious medical and social problem due to their high mortality rate and the high resistance of tumours to the treatment methods available to doctors. Molecular genetic approaches that have been developed in recent years have led to a breakthrough in the study of oncogenesis mechanisms, which has created new possibilities for the diagnosis and treatment of cancer. In his lecture, Russian Academy of Sciences academician Sergey Deyev will talk about advanced technologies in this area based on unique developments and ongoing research being conducted by his laboratory at the Shemyakin and Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Sciences.

Moderator:

- **Oleg Demidov**, Leading Researcher, Immunobiology and Biomedicine, Scientific Center for Genetics and Life Sciences, Sirius University of Science and Technology

Panellist:

- **Sergey Deev**, Professor, Chief Researcher, Academicians M.M. Shemyakin and Y.A. Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Sciences

16:30–18:00

Sirius Science and Art Park
conference hall 2

Development Tools

Medical Science for People

Medicine and healthcare today are one of the hot spots of innovative development and the use of

advanced technologies in various parts of the scientific and technological sector. With the pressure from sanctions and restrictions imposed by countries that are unfriendly to Russia, the approaches to the innovative development of medicine, like many other industries, need to be rethought and modified. Medicine is also an extremely sensitive sector, whose development concerns each and every person, and ensuring its technological sovereignty – from technological parity and import independence to technological superiority and advanced development – is a top priority today. What changes need to be made to the management principles of medical science, key metrics of success, and the goal setting of the key parties involved in the innovation process to solve these problems? What tools will help in altering the approaches to the management of medical science for all parties involved in the process? What Russian innovations have already been incorporated into medicine today and what might we see tomorrow?

Moderator:

- **Igor Korobko**, Head of Science and Innovative Development of Health Department, Ministry of Health of the Russian Federation

Panellists:

- **Vsevolod Belousov**, Director, Federal Center of Brain Research and Neurotechnologies of the Federal Medical Biological Agency
- **Valentina Kosenko**, General Director, Scientific Center for Expertise of Medicinal Products of the Ministry of the Ministry of Health of the Russian Federation
- **Dmitry Kudlay**, Deputy Chief Executive Officer, Generium
- **Tatyana Semenova**, Deputy Minister of Health of the Russian Federation
- **Pavel Starikov**, Director, Centre of Information Technologies and Systems for Executive Power Authorities (CIT&S)

Front row participants:

- **Anastasia Efimenko**, Head of the Laboratory of Tissue Repair and Regeneration, Institute of Regenerative Medicine, Medical Scientific and Educational Center, Lomonosov Moscow State University
- **Petr Shegay**
- **Kamila Zarubina**, Vice President, Executive Director of the Cluster of Biological and Medical Technologies, Skolkovo Foundation

16:30–18:00

Sirius Science and Art Park
Atom Hall

Development Tools

Reverse Knowledge Transfer: From Corporations to Universities

The modern world is undergoing fundamental changes due to the rapid development of technology and the transformation of the global economy. Continuous education and the internship-based training of young specialists are becoming integral components of a successful economic system. Cooperation between universities and corporations is a logical response to the challenges posed by the external environment, particularly given Russia's need to achieve technological sovereignty. What practices exist for transferring knowledge between universities and corporations? What are the strategic advantages of such exchanges? How can we quickly train young specialists to meet the needs of business and transform training based on current trends?

Moderator:

- **Irina Rudskaya**, Professor, Higher School of Engineering and Economics, Peter the Great St.Petersburg Polytechnic University; Head, Gazprom Neft Research and Education Centre for Information Technology and Business Analysis

Panellists:

- **Alexander Fertman**, Director of Science and Education Department, Skolkovo Foundation
- **Aleksandra Glazkova**, Deputy General Director, Director of Personnel and Social Policy, Uralchem; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Yulia Ilyinova**, Vice Rector for Academic Affairs, Saint-Petersburg State Chemical and Pharmaceutical University
- **Renat Kamenov**, Head of Research Department, Almetyevsk State Oil Institute
- **Alexander Loginov**, Vice President, Director of the Far Eastern Macroregional Branch, Rostelecom
- **Yury Marfin**, Rector, Pacific State University
- **Oleg Podolsky**, Advisor to the Rector, University National Technology Initiative 2035
- **Nikita Shaposhnikov**, Director, Scientific and Educational Center "Gazpromneft-Polytech"
- **Sergey Sukhantsev**, Deputy Director for Quality, Perm Scientific and Production Instrument-Making Company

- **Mikhail Varfolomeev**, Head of the Department of Petroleum Engineering, Kazan Federal University

16:30–18:00

Sirius Science and Art Park
Buran Hall

Opportunities for the Decade of Science and Technology in Russia

Science and Universities: A New Driver of Growth

One of the key focuses of developing science and technology in Russia is the national project 'Science and Universities', which aims to support fundamental research and applied developments, build scientific centres with the best working conditions, and create comfortable conditions for researchers and teachers. Since the launch of the project in 2018, significant changes have taken place in society, education, and scientific research. The autonomous non-commercial organization National Priorities will present an expert report at the Young Scientists Congress on the study and assessment of the implementation of the national project. What social impact have the research results had on Russian society over this time? What are the most prominent and successful cases? What kind of prospects should we expect for the development and relaunch of the national project? What role does the Year and Decade of Science and Technology play in this process?

Moderator:

- **Julia Gryaznova**, Head of Strategy, Analytics and Research Department, National Priorities

Panellists:

- **Alexey Fedorov**, "Quantum Information Technologies" Scientific Group Head, Russian Quantum Center; Director, Institute of Physics and Quantum Engineering, National University of Science and Technology "MISIS"
- **Leonid Gusev**, Vice-Rector, Lomonosov Moscow State University; Head of the Project Office of the Decade of Science and Technology
- **Vladimir Ivanov**, Deputy President, Russian Academy of Sciences
- **Sofia Malyavina**, General Director, National Priorities
- **Natalia Stepanova**, Head of the Scientific and Educational Program 'Floating University',Moscow Institute of Physics and Technology
- **Andrey Voronin**, Acting Vice-Rector for Education, University of Science and Technology MISIS; Deputy Chairman of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

16:30–18:00

Sirius Science and Art Park
conference hall 9

Big Challenges: Opportunities for Development

On the Role of Fundamental Scientific Research in the Scientific and Technological Development of the Country

The government, scientific community, business, and society as a whole need to focus on strengthening the importance of fundamental scientific research for Russia's scientific and technological development based on emerging demand for knowledge-intensive projects from the real sector of the economy, the growing importance of fundamental science in creating new technological solutions and the challenges it faces, the prospects for commercializing the results of fundamental research, and other factors. What are some of the key tasks and challenges for fundamental science today? What changes need to be made to legal instruments in order to effectively develop and use fundamental science to create new technological solutions?

Moderators:

- **Lilia Gumerova**, Chairman of the Committee on Science, Education and Culture of the Federation Council of the Federal Assembly of the Russian Federation; Chairman, Permanent Commission on Science and Education, Interparliamentary Assembly of Member Nations of the Commonwealth of Independent States
- **Stepan Kalmykov**, Vice-President, Russian Academy of Sciences

Panellists:

- **Sergey Chernyshev**, Vice President, Academician, Russian Academy of Sciences; Scientific Director, Professor N.E. Zhukovsky Central Aerohydrodynamic Institute
- **Viktor Ilgisonis**, Director of Scientific and Technical Research and Development, State Atomic Energy Corporation ROSATOM
- **Alexander Khlunov**, General Director, Russian Science Foundation
- **Nikita Marchenkov**, Chairman, Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Presidential Council of the Russian Federation for Science and Education; Head, Kurchatov Complex for Synchrotron-Neutron Research, National Research Center "Kurchatov Institute"
- **Andrey Travnikov**, Governor of Novosibirsk Region **(online)**

Front row participants:

- **Anzhela Asaturova**, Director, Federal Scientific Center for Biological Plant Protection; grant recipient, Russian Science Foundation
- **Yulia Gorbunova**, Vice President, D.I. Mendeleev Russian Chemical Society; Acting Dean, Faculty of Fundamental Physicochemical Engineering, Lomonosov Moscow State University (MSU)
- **Elena Khlestkina**, Director, Federal Research Center the N.I. Vavilov All-Russian Institute of Plant Genetic Resources
- **Olga Moskaluk**, Head of the Laboratory of Polymer and Composite Materials SmartTextiles, International Research Center "Coherent X-ray Optics for Megascience Facilities", Immanuel Kant Baltic Federal University
- **Grigory Trubnikov**, Director, Joint Institute for Nuclear Research

November 30, 2023

09:00–10:00

Sirius Science and Art Park
conference hall 2

Growth Opportunities: Lectures by Prominent Scientists and Business Representatives

Lecture

Current State and Future Prospects of Microelectronic Technologies

Panellist:

- **Gennady Krasnikov**, President, Russian Academy of Sciences

09:00–10:30

Sirius Science and Art Park
conference hall 3

Big Challenges: Opportunities for Development

Super Pathogens: A New Challenge to Civilization

Growing bacterial resistance to antibiotics could become one of the most serious threats to humanity. The number of local outbreaks of hospital-acquired infections is on the rise. By 2040, mortality from antibiotic-resistant pathogens is projected to exceed the total mortality from all other diseases. With this in mind, developing methods to prevent and overcome antibiotic resistance is one of the most important applied tasks we face today. What kind of problems exist with the spread and emergence of antibiotic resistance? How are new drugs being developed to overcome this problem?

Moderator:

- **Roman Ivanov**, Director of the Scientific Center for Translational Medicine, Vice-Rector for Scientific and Technological Development, Sirius University of Science and Technology

Panellists:

- **Andrey Aleshkin**, Deputy Director for Biotechnology, Moscow Research Institute of Epidemiology and Microbiology named after G.N. Gabrichevsky Rospotrebnadzor; Director of Biotechnology Development, Binnopharm Group
- **Andrey Dekhnich**, Deputy Director for Research, Smolensk State Medical University, Ministry of Health of the Russian Federation
- **Andrey Shchekotikhin**, Director, G.F. Gause Research Institute for the Search of New Antibiotics
- **Alexander Tikhomirov**, Head of Laboratory, Gause Institute of New Antibiotics
- **Nailya Zigangirova**, Chief Researcher, National Research Center for Epidemiology and Microbiology named after Honorary Academician N.F. Gamaleya of the Ministry of Health of the Russian Federation

09:00–10:30

Sirius Science and Art Park
conference hall 4

Space for International Scientific and Technical Cooperation

The Future of International Relations in an Era of Multipolarity: The View of Young Scientists from Non-Western Countries

In order for Russia to develop its scientific and technological potential, people must form their own view and reference point in matters concerning national identity and goal setting, and determine Russia's place and role in the modern world order, which is increasingly tending towards polycentricity. The Strategy for Russia's Scientific and Technological Development enshrines the role of scientific diplomacy as a key tool for developing international scientific cooperation and protecting the identity of the Russian scientific sector. The session will bring together leading young scientists from Russia and other countries in order to jointly figure out new approaches to the science of international relations, while overcoming Eurocentrism in the theory of international relations, and also outline specific aspects of joint research in this regard. Different national approaches to the theory of international relations and the practice of teaching it will be compared as part of the discussion, which will ultimately provide a more holistic view of the study of world politics, taking into account the civilizational features of various countries and regions, and bring us closer to establishing a multipolar world order. What does the concept of a multipolar world order mean for today's young scientists? How is this concept perceived in different countries? What are some of the main aspects of how non-Western countries perceive the scientific understanding of international relations? What kind of threats does neocolonialism pose in terms of its worldview and how can scientists respond to them? How is the modern theory of international relations changing as a multipolar world order emerges? What are the national approaches to the theory of international relations today? What are some of their common and unique features?

Moderators:

- **Andrey Baykov**, Vice Rector for Research and International Cooperation, Moscow State Institute of International Relations; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Vyacheslav Sutyrin**, Director of the Center for Scientific Diplomacy and Advanced Academic Initiatives of the Institute of International Studies, MGIMO University

Panellists:

- **Monojit Das**, Executive Editor, Indian Aerospace Defence News (IADN)
- **Narantsatsral Enkhbat**, Postgraduate Student, National University of Mongolia
- **Evelyn Fernandez Castillo**, Professor at the Faculty of Psychology at the Universidad Central de Las Villas "Martha Abreu"
- **Lucas Gualberto do Nascimento**, Doctoral Researcher, Federal University of Rio de Janeiro
- **Karin Kneissl**, Head, Center G.O.R.K.I. (Geopolitical Observatory on Key Issues in Russia); Minister of Foreign Affairs of the Republic of Austria (2017–2019)
- **John Mwangi Githigaro**, Research Fellow, Global Centre for Policy and Strategy **(online)**
- **Mohamad Hassan Soueidan**, Researcher in Strategic Studies, Consultative Center for Studies and Documentation

Front row participants:

- **Yaroslav Askov**, Chairman of the Scientific Student Society, Moscow State Institute of International Relations (University) of the Ministry of Foreign Affairs of the Russian Federation (MGIMO of Russia)
- **Nikita Lipunov**, Analyst at the Center for Scientific Diplomacy and Advanced Academic Initiatives, Institute of International Studies, Moscow State Institute of International Relations (University) of the Ministry of Foreign Affairs of the Russian Federation (MGIMO Ministry of Foreign Affairs of Russia)
- **Valery Zhuchkov**, Chairman of the African Club of Scientific Student Society, Moscow State Institute of International Relations (University) of the Ministry of Foreign Affairs of the Russian Federation (MGIMO of Russia)

09:00–10:30

Sirius Science and Art Park
conference hall 5

Big Challenges: Opportunities for Development

Genetics and Selection in Agribusiness: Challenges and Opportunities for Young Scientists

Genetic and breeding technologies ensure that the agribusiness industry can function in a highly efficient manner in a wide variety of agro-climatic conditions and help us preserve our planet's resources. For Russia, as one of the world's leading suppliers of agricultural products, the development of its own genetic and breeding technologies is particularly important. Unfortunately, Russian producers remain highly dependent on imported technologies, and in order to develop their own genetics, they need a class of specialists who are motivated to pursue a career in the agribusiness industry and ready to create critical solutions in this area. This problem could be quickly resolved with the help of agricultural universities, and also by establishing seamless interdisciplinary collaboration between research centres, business, and education. What are the prospects for research centres to support the development of domestic genetics? How will cooperation between business and universities help solve the problem of a lack of expertise in breeding and genetics? What is the best way to develop and introduce tools and training programmes in genetics and breeding? How can we attract young people to agricultural genetics and breeding, and retain them in the industry? How does business see its role in the development of agricultural education and training for genetics?

Moderator:

- **Vladimir Avdeenko**, Deputy Executive Director, Director of Agricultural Biotechnology, Innopraktika

Panellists:

- **Andrey Sanosyan**, Deputy Governor of Nizhny Novgorod Region
- **Alexey Sazonov**, Executive Director, Genetics and Life Sciences Research Centre, Sirius University of Science and Technology
- **Denis Tsesarenko**, Founder, Sporos
- **Alexey Zavarzin**, Deputy Director for Scientific and Organizational Work, Federal Research Center "All-Russian Institute of Plant Genetic Resources named after N.I. Vavilov (VIR)"

Front row participants:

- **Anna Gneush**, Head of the Department of Biotechnology, Biochemistry and Biophysics, I.T. Trubilin Kuban State Agrarian University; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Vladimir Khachumov**, Head of Molecular Laboratory, Progress Agro; Candidate of Biological Sciences

09:00–10:30

Sirius Science and Art Park
conference hall 6

Big Challenges: Opportunities for Development

Climate Research: A Chance to Save the Planet

On 26 October 2023, the Russian President approved an updated version of the Climate Doctrine of the Russian Federation, which is based on fundamental and applied scientific knowledge in climate and related disciplines. How important is it for the development of Russia's territories, and what role do science and education play in it?

Moderator:

- **Elena Shmeleva**, Chairman of the Board, Sirius Federal Territory; Head, Talent and Success Foundation

Panellists:

- **Nikolay Durmanov**, Special Representative of the Ministry of Science and Higher Education of the Russian Federation for Biological and Environmental Safety
- **Igor Kozhelin**, General Director, SR DATA
- **Elijah Nyakudya**, Dean of the Faculty of Agriculture and Food Systems, University of Zimbabwe
- **Olga Rebkovets**, Acting Rector, Vitus Bering Kamchatka State University; Founder, Total Dictation Foundation
- **Anna Romanovskaya**, Director, Yu.A. Izrael Institute of Global Climate and Ecology of the Russian Federal Service for Hydrometeorology and Environment Monitoring
- **Igor Semiletov**, Head of the Laboratory of Arctic Research, Pacific Oceanological Institute named after P.I. IN AND. Ilyichev of the Far Eastern Branch of the Russian Academy of Sciences; corresponding member of the Russian Academy of Sciences

09:00–10:30

Sirius Science and Art Park
conference hall 9

Big Challenges: Opportunities for Development

Public talk

Reality and Fiction: What Scientists Think about the Future of the Environment

The environmental and climate changes caused by human activities that we are seeing are global in nature, and many of them are already irreversible. Rising air temperatures, stronger storms and droughts, natural disasters, rising sea levels, melting glaciers, the extinction of plant and animal species, as well as food and water shortages are all some of the main consequences of climate change on the planet. While some scientists are sounding the alarm bell and warning about the dangers of ignoring these problems, others are highly sceptical. Which environmental changes are already irreversible, and which ones are greatly exaggerated? How does climate warming affect not only the Earth's surface, but also the processes that occur in the Earth's crust? What should we fear more: global warming or cooling? What are the consequences of slowing ocean currents? How are ecosystems changing today and what is threatening the planet's biological diversity?

Moderator:

- **Alexander Rasskazchikov**, Ambassador of the Tochka Junior Project; Student, National Research University Higher School of Economics

Panellists:

- **Daniil Laukhin**, Engineer, Bauman Moscow State Technical University FSBEI HE
- **Aleksandr Ryazantsev**, Leading Analyst, Bauman Moscow State Technical University FSBEI HE
- **Raif Vasilov**, Deputy Head of the NBICS Nature-like Technologies Complex, National Research Centre 'Kurchatov Institute'

09:00–10:30

Sirius Science and Art Park
Mendeleev Hall

Meeting of the Working Group on the Legal Regulation and Bioethics in the Field of Genetic Technologies

Scientific Research and Ethical and Legal Issues of Research Activities

Achievements in fundamental sciences have provided a powerful impetus for the development of applied scientific research, in particular in advanced biomedical and genetic technologies, as well as molecular biology. Finding a balance between scientific research and the ethical and legal regulation of research activities is an indispensable condition for achieving progress in high-tech scientific fields. Along with progress in key fields of science, the professional community has numerous ethical and legal questions about conducting applied research involving humans and introducing advanced treatment methods in healthcare practice. Ethical reviews of scientific research, as a tool for independent assessment, in this case aims to balance the set of legal norms and ethical principles in order to guarantee the scientific validity, value, and safety of research. Young scientists often have to conduct ethical reviews, but is their level of awareness, experience, and practice in this area of expertise sufficient, and what methodological and educational standards are applicable for the activities of independent ethical committees?

The session will feature the launch of the proactive School of Research Ethics non-commercial educational project, which aims to train researchers in the principles of research bioethics, study

international standards and rules for protecting the rights of research participants, and develop a high level of research culture.

Moderator:

- **Maria Vorontsova**, Member of the Presidium, Russian Association for the Promotion of Science

Panellists:

- **Valery Falkov**, Minister of Science and Higher Education of the Russian Federation
- **Vladimir Filippov**, President, RUDN University (Peoples' Friendship University of Russia) **(video message)**
- **Ramil Khabriev**, Academic Supervisor, N.A. Semashko National Research Institute of Public Health **(online)**
- **Alexander Khokhlov**, Rector, Yaroslavl State Medical University of the Ministry of Health of the Russian Federation
- **Mikhail Murashko**, Minister of Health of the Russian Federation
- **Elena Nechaeva**, Deputy Chief of the Presidential Directorate for Science and Education Policy
- **Elena Volskaya**, Chairman of the Interuniversity Ethics Committee, N.A. Semashko National Research Institute of Public Health **(online)**
- **Alexander Zudin**, Director, National Research Institute of Public Health **(online)**

10:30–11:30

Sirius Science and Art Park
conference hall 11

Commission for the Scientific and Technological Development of the Russian Federation together with the Science Commission of the State Council of the Russian Federation

11:15–12:45

Sirius Science and Art Park
conference hall 2

Big Challenges: Opportunities for Development

Humanitarian Sciences: Understanding Contemporary Problems and Processes

Understanding global processes and the modern world order, and preparing responses to the challenges facing humanity are among the key tasks that humanities and social sciences are attempting to tackle. How is the scientific community approaching their analysis?

Moderator:

- **Alexander Voronov**, Head of the Center for Innovative Design, Faculty of Public Administration, Chairman of the Council of Young Scientists, Lomonosov Moscow State University

Panellists:

- **Denis Fomin-Nilov**, Acting Rector, B.N. Yeltsin Kyrgyz-Russian Slavic University
- **Zinaida Rozhkova**, Head of the Department of Scientific Communication and Science Popularization, Institute of Philosophy, Russian Academy of Sciences
- **Antonina Selezneva**, Associate Professor, Department of Sociology and Psychology of Politics, Faculty of Political Science, Moscow State University named after M.V. Lomonosov
- **Tatyana Shvedchikova**, Senior Researcher, Department of Theory and Methodology, Institute of Archaeology, Russian Academy of Sciences

11:15–12:45

Sirius Science and Art Park
conference hall 4

Space for International Scientific and Technical Cooperation

Russian-African Network University for the Sustainable Development of African Nations

Training skilled professionals has been and remains a traditional focus of Russian-African relations. At present, almost 35,000 students from Africa study at Russian universities, and this number is growing each year. The quota for Africans to study at the expense of Russia's federal budget has increased two and a half times over the last three years and will amount to more than 4,700 people for the next academic year. Today, it is crucial to form new stable ties between universities and organizations in Russia and African countries and expand the areas in which personnel are trained for the sustainable development of African countries and priority sectors of their economy. Universities in the Russian-African Network University Consortium are not only intensifying educational cooperation with their African partners, but are also implementing major infrastructure projects involving industrial partners in various areas of sustainable development, for example, natural resource management, environmental protection, new natural resource management and protection systems, clean energy, the preservation of cultural heritage, and much more. How are major infrastructure projects developing in the current conditions? What experience has been gained from their implementation, and what are some promising areas for further cooperation?

Moderator:

- **Alla Mazina**, Deputy Head of the Department of International Education, Peter the Great St.Petersburg Polytechnic University

Panellists:

- **Andrey Bryksenkov**, Director of the Representative Office in Moscow - Plenipotentiary Representative of the Rector, Russian State Hydrometeorological University
- **Michael Mcoyi**, Postgraduate Student, Council of Scientific and Industrial Research
- **Philadelphia Ngobeni**, Researcher, Water Resources Research Group, Department of Civil Engineering, University of Cape Town
- **Elijah Nyakudya**, Dean, University of Zimbabwe
- **Tawanda Tinago**, Lecturer, Chinhoyi University of Technology (Republic of Zimbabwe)
- **Issa Togo**, Associate Professor, Higher School of Hydraulic and Energy Engineering, Peter the Great St. Petersburg Polytechnic University
- **Maksim Zalyvskiy**, Head of the Project Office of the Russian-African Network University, Peter the Great St.Petersburg Polytechnic University

11:15–12:45

Sirius Science and Art Park
conference hall 6

Development Tools

Modern Medical Science to Improve the Quality of Life in Russia

Boosting the quality and life expectancy of Russian citizens is one of the top priorities of state policy. How is academic medical science responding to this challenge today? What promising areas should young scientists be exploring today?

Moderator:

- **Kirill Zykov**, Corresponding Member, Russian Academy of Sciences; Deputy Director for Research and Innovation, Research Institute of Pulmonology, FMBA of Russia

Panellists:

- **Yulia Gorbunova**, Vice President, D.I. Mendeleev Russian Chemical Society; Acting Dean, Faculty of Fundamental Physicochemical Engineering, Lomonosov Moscow State University (MSU)
- **Ana Laura Añé Kouri**, Department of Clinical Trials, Center for Molecular Immunology; doctor of medicine
- **Andrey Naumov**, Head, Troitsk Branch of the P.N. Physical Institute Lebedev RAS; corresponding member, Russian Academy of Scienceses
- **Vladimir Shipelin**, Candidate of Medical Sciences; Member of the Bureau of the Council of Young Scientists, Russian Academy of Sciences; senior researcher at the Federal State Budgetary Institution "Federal Research Center for Nutrition and Biotechnology", leading researcher at the scientific school "Chemistry and Technology of Polymer Materials", Russian Economic University named after G.V. Plekhanov

Front row participants:

- **Evgeny Khomyakov**, Researcher, Department of Oncoproctology, A.N. Ryzhikh National Medical Research Center of Coloproctology of the Ministry of Health of Russia
- **Elena Maslenkova**, Chairman, Council of Young Scientists of Medical and Pharmaceutical Organizations of Higher Education and Science of the Ministry of Health of the Russian Federation
- **Petr Potapov**, Deputy Head of the Research Department, Military Innovation Technopolis "ERA"
- **Philip Turov**, Senior Researcher of the Scientific Department, V.F. Voino-Yasenetsky Scientific and Practical Center for Specialized Medical Care for Children of the Moscow Department of Health

11:15–12:45

Sirius Science and Art Park
conference hall 7

Development Tools

Mistakes: Scientists on How Scientific Failures Lead to Achievements

The story behind any discovery or scientific achievement is automatically perceived as a success story, but there are often failures on the path to this success. During the discussion, scientists from different spheres with different experiences will get together and have a unique opportunity in an open and constructive discussion to jointly analyse the causes of their mistakes and find ways to prevent them in the future. All the Congress participants will have a chance to share their stories of failures in scientific research by submitting an application to participate in the discussion in advance. The open discussion will be accompanied by a live broadcast on the online platforms of the Knowledge Society.

Moderator:

- **Mikhail Vaganov**, Geography Teacher of the Highest Category, Presidential Lyceum "Sirius"

Panellists:

- **Maria Gordenko**, Leading Expert, Institute of Statistical Research and Economics of Knowledge, National Research University Higher School of Economics
- **Denis Kasymov**, Head of the Laboratory for Modeling and Prediction of Disasters of the Faculty of Mechanics and Mathematics, National Research Tomsk State University
- **Irina Le-Daigen**, Associate Professor of the Department of Chemical Enzymology of the Faculty of Chemistry, Lomonosov Moscow State University
- **Polina Pokryshko**, Popularizer of Astronautics, Journalist, Presenter of Author's Lectures
- **Nikita Vostrov**, Founder, General Director, ADDITIVKA

11:15–12:45

Sirius Science and Art Park
conference hall 8

Big Challenges: Opportunities for Development

Nuclear Technologies for Medicine: A Driver of International Nuclear Cooperation

One of the most important and, perhaps, peaceful consequences of the evolution of the atom was the rapid development of nuclear technologies in medicine. Today, short-lived radionuclides, stable isotopes, and the use of ionizing radiation help to identify oncological, cardiological, neurological, and infectious diseases at an early stage. Nuclear technologies help to transition to fundamentally new methods of treating numerous diseases and are of great importance in terms of increasing the longevity and quality of life. This evolution in the use of nuclear technologies for medicine not only brings together doctors and nuclear physicists, but is also an important area of international scientific and technological cooperation. After all, there should be no borders in the desire to help people! What are the most recent trends in the use of nuclear technologies in medicine in different countries? How can we build mutually beneficial cooperation?

Moderators:

- **Alexander Blagov**, Vice President, Kurchatov Institute National Research Centre
- **Stepan Kalmykov**, Vice-President, Russian Academy of Sciences

Panellists:

- **Ali Biganeh**, Lecturer, Nuclear Science and Technology Research Institute (NSTRI)
- **Mohammad Hossein Choopan Dastjerdi**, Nuclear Science and Technology Research Institute, Head of the Isfahan Miniature Neutron Source Reactor (NSTRI)
- **Bita Dadpou**, Researcher, Atomic Energy Organization of Iran
- **Sergey Deev**, Professor, Chief Researcher, Academicians M.M. Shemyakin and Y.A. Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Sciences
- **Julia Dyakova**, First Deputy Director for Science, National Research Center "Kurchatov Institute"
- **Valery Karezin**, Director of Educational Programmes, Human Resources Management Department, Rosatom State Atomic Energy Corporation
- **Nafiseh Salek**, Isotopic Separation Department Manager of Nuclear Fuel Research School (NSTRI), Atomic Energy Organization of Iran
- **Vladimir Shevchenko**, Rector, National Research Nuclear University MEPhI
- **Sevda Shoja Yengejeh**, Head of Public Relations, Plasma Technology Development

11:15–12:45

Sirius Science and Art Park
conference hall 9

Opportunities for the Decade of Science and Technology in Russia

University for Young Kids: Development of the Scientific Playgrounds Project

Scientific playgrounds are an initiative of the Decade of Science and Technology, which aim to introduce children of preschool and primary school age to basic scientific principles, and parents to modern scientific trends and opportunities that a scientific career opens up for children. During the session, playgrounds that opened in 2023, as well as new projects, will be presented, while representatives of federal and regional agencies, industry experts, and members of the business community will recap the results of the implementation of the initiative over the last year, discuss prospects for the further development of the initiative, and share experience in implementing projects.

Moderator:

- **Daria Bessudnova**, Curator of the Science Playgrounds initiative of the Decade of Science and Technology

Panellists:

- **Natalia Altynnik**, Director, Small Technological University, V.G. Shukhov BSTU; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

- **Daria Bychkova**, Director, Bureau "Chekharda"
- **Ruslan Chaynikov**, Head of Department, Department of Construction and Housing Policy of the Yamalo-Nenets Autonomous Okrug
- **Tatyana Mamontova**, Advisor to the Director, Main Botanical Garden named after N.V. Tsitsin Russian Academy of Sciences
- **Sergey Privezentsev**, Head of Sales Department, Company for the production of children's play complexes "New Horizons"
- **Natalia Subbotina**, Director, Company for the Production of Children's Playgrounds "Smart Playgrounds"

11:15–12:45

Sirius Science and Art Park
Kurchatov Hall

The Russian Science Foundation School

Master Class on Promoting Scientific Knowledge

There have recently been more and more news items, videos, and various stories about science in the media. Journalists and the public are often interested in simplified and more understandable information, while scientists want to use more accurate and complex formulations to describe the world around us. The press service of the Russian Science Foundation has successfully been working to find this balance every day together with grant recipients. Press service specialists will talk about specific aspects of communication between science and society and the benefits of such communication for scientists, and will help teach us how to translate information from academic language into popular science.

Moderator:

- **Maria Mikhaleva**, Deputy Head of Programs and Projects Department, Russian Science Foundation; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Fields

Panellist:

- **Yulia Krasilnikova**, Deputy Head of Public Relations Department, Russian Science Foundation

11:15–12:45

Sirius Science and Art Park
Mendeleev Hall

Opportunities for the Decade of Science and Technology in Russia

Young People in Science: Generating Interest in Discoveries

The Decade of Science and Technology has presented major challenges that will determine development for many years: attracting young people to science, getting researchers and developers involved in solving problems that are crucial for the country, and increasing the availability of information about the achievements and prospects of Russian science for citizens. Young people are crucial to strengthening Russia's role as one of the leading powers. New ideas and new thoughts are what will help put Russia on a trajectory towards technological and economic growth. The Russian Federal Agency for Youth Affairs, along with its partners, actively supports young people in their scientific activities and assists in promoting scientific project initiatives. In an effort to foster interest in science with support measures provided by the state, the Federal Agency for Youth Affairs is creating a stimulating environment where young people are able to showcase their talent and potential. How can we convey information to young people about the new opportunities that are opening up for them today? How can we work systematically to involve young people in research activities? How can we change the image of a scientist in the minds of young people? How will the year-round competence centre in the priority area of 'Science' and the Mashuk Knowledge Centre be of interest to young people in 2024? Where can people obtain feedback and evaluations of their research projects? How can we thank volunteers who help young scientists?

Moderator:

- **Pavel Khlopin**, Advisor to the Director, Federal Agency for Youth Affairs (Rosmolodezh); Director, Youth Resource Center

Panellists:

- **Denis Ashirov**, Deputy Head, Federal Agency for Youth Affairs (Rosmolodezh)
- **Albina Bikbulatova**, Director of the Department for Work with Educational Organizations, Russian "Znanie" Society
- **Elena Dotsenko**, Chairman of the Board of the Alumni Association, Northern Arctic Federal University named after M.V. Lomonosov
- **Darya Kozyreva**, Head of the Department of Patriotic Projects, All-Russian Public-State Movement of Children and Youth Movement of the First
- **Tatyana Matveeva**, Editor-in-Chief, ANO Internet Development Institute (IRI)

Front row participants:

- **Oleg Bakhtadze-Karnaukhov**, Co-founder, Cyber Training
- **Viktor Kirpa**, Expert of the grant competition in the "Contribution to the Future" nomination

11:15–12:45

Sirius Science and Art Park
Atom Hall

Opportunities for the Decade of Science and Technology in Russia

From a Scientific Idea to National Pride

In partnership with the State Atomic Energy Corporation ROSATOM

Strengthening Russia's technological sovereignty is one of the key objectives outlined by President Vladimir Putin. To maintain the sustainability of the most essential industries, it is crucial to ensure a high degree of independence in the creation of technologies, developments, and engineering solutions in a short period of time, as well as master the production of almost all critical products. Scientists in Russia need to quickly create advanced products and developments that can ensure the country's technological sovereignty. Today, we are seeing high demand for specific products and solutions that are urgently needed right now. What opportunities do young people have today for professional and personal growth within large organizations? What role does the participation of young specialists in breakthrough scientific and technical federal programmes and projects play in their career advancement?

Moderator:

- **Andrey Sushentsov**, Dean of the Faculty of International Relations, MGIMO University

Panellists:

- **Alexander Fertman**, Director of Science and Education Department, Skolkovo Foundation
- **Pavel Karbolin**, General Director, Research Institute Research and Production Association Luch
- **Dmitry Petrakov**, General Director, TMH Engineering
- **Alexander Sergeev**, Scientific Supervisor, National Center for Physics and Mathematics (NCFM)
- **Konstantin Vernigorov**, General Director, Sibur Polylab; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

11:15–12:45

Sirius Science and Art Park
Buran Hall

The Country's Scale as a Space for Opportunities

Science and Art: Continuity, New Approaches to Training Talent, and Scientific Technologies for Creating Masterpieces

Scientific and methodological support is particularly crucial today in the training of creative personnel and the creation of works of art due to the need to establish and foster patriotism and values among the current younger generation. Creating, developing, and expanding of such works of art, which will help improve and preserve traditional Russian values in formats that are appealing to the modern generation, is a separate task. What are the main focuses of scientific support and the coordination of modern Russian culture as the foundation for the development of talent and Russia's greatest works?

Moderator:

- **Yury Zinchenko**, Dean of the Faculty of Psychology, Lomonosov Moscow State University

Panellists:

- **Elena Alimova**, Head of Document Management Department, State Academic Chapel of St. Petersburg
- **Andrey Fedyanin**, Vice-Rector, Head of Science Policy Department, Lomonosov Moscow State University
- **Svyatoslav Golubenko**, Vice-Rector for Academic and Educational Work, Gnesins Russian Academy of Music
- **Vladimir Ikonnikov**
- **Maxim Ksenzov**, Senior Managing Director, Sberbank; General Director, Military-Patriotic Cinema Support Fund
- **Vladimir Mashkov**, Artistic Director, Oleg Tabakov Theatre
- **Artemy Ponyavin**, Director of the Executive Committee, "National Delphic Council of Russia" All-Russian Public Organization

13:00–14:30

Sirius Science and Art Park
RTK Cup Russian Youth Robotics Contest

The Country's Scale as a Space for Opportunities

National System of Drone Engineering Competitions: Opportunities for the Rapid Testing of Young Scientists' Prototypes and Technological Solutions

A system of drone competitions will be launched in 2024 as part of the National Unmanned Aircraft System Project. The key focus of the project is engineering competitions to test technological solutions, such as specialized software, AI, drone subsystems, payload, and design solutions. The tests aim to highlight technological solutions that shape the appearance of the new generation drones. The

discussion participants will examine the architecture of incorporating the technological solutions of young scientists and engineering teams from universities and scientific organizations into their testing system and their integration into the chain of technological cooperation of companies working in the unmanned aircraft systems industry.

Moderator:

- **Evgeny Gribov**, Head of technological development of companies of the National Technology Initiative, National Technology Initiative Platform

Panellists:

- **Konstantin Amelin**, Director, Scientific and Educational Center "Mathematical Robotics and Artificial Intelligence," St. Petersburg State University
- **Oleg Churilov**, Director of the Department for the Development of Technological Entrepreneurship and Technology Transfer, Ministry of Science and Higher Education of the Russian Federation
- **Evgeniy Kosenko**, Deputy Director, Research Institute of Robotics and Control Processes, Southern Federal University
- **Roman Meshcheryakov**, Chief Researcher, Head of the Laboratory of Cyberphysical Systems, Federal State Budgetary Institution of Science Institute of Management Problems named after V. A. Trapeznikov of the Russian Academy of Sciences
- **Mozgaleva Polina**, Deputy Head of the Competence Center for UAS, University of the National Technology Initiative 2035
- **Sergey Sobolev**, Senior Architect for Information Security, Kaspersky Lab

13:00–14:00

Sirius Science and Art Park
Lomonosov Hall

Opportunities for the Decade of Science and Technology in Russia

Master Class
Science and Inventions for Life

Panellists:

- **Oleg Dyachenko**, Deputy Chairman of the Central Council of VOIR, member of the Council of the Chamber of Commerce and Industry of the Russian Federation on intellectual property, federal expert and lecturer of the ANO DPO "Export School of Russian Export Center"
- **Vladimir Kononov**, Deputy – curator of the Expert Council on Scientific and Technological Development and Intellectual Property, State Duma of the Federal Assembly of the Russian Federation; Chairman of the Central Council of VOIR
- **Oleg Neretin**, Director, Federal Institute of Industrial Property
- **Vladimir Timofeev**, Head of the regional organization VOIR Novgorod region

13:00–14:00

Sirius Science and Art Park
conference hall 11

Coordinating Committee for the Decade of Science and Technology in the Russian Federation

13:30–15:00

Sirius Science and Art Park
conference hall 1

The Country's Scale as a Space for Opportunities

Digital Innovations on the Financial Market: A Fresh Breeze or a Dizzying Whirlwind?

The session participants will find themselves immersed in the world of digital financial technologies and learn about the increasing use on the financial market, particularly for payments and settlements. The factors that prompt financial market regulators to take decisions on the introduction of central bank digital currencies will be examined. We will also talk about the legal aspect of introducing the digital rouble and find out how it will work in Russia. We will discuss the emergence of digital rights and the experience of Russia, which was one of the first to propose a legal framework for the digitalization of rights. How did the Bank of Russia reach the decision to introduce the digital rouble and how has had its legal status changed? What changes have been made to legislation due to the introduction of the digital rouble and how was the legislative framework prepared? How was the architecture of legal relations constructed when making payments in digital roubles? What benefits does the digital rouble provide to citizens, businesses, and the government? How does it work: what's under the hood of the digital rouble platform? How and when will it be possible to use the Bank of Russia's digital currency? What improvements can be made to the law on digital financial assets?

Panellists:

- **Andrey Borisenko**, Deputy Director of Legal Department, The Central Bank of the Russian Federation (Bank of Russia)
- **Mikhail Iontsev**, Head of the Center for Legal Support of Digitalization in the Financial Market, Legal Department, Central Bank of the Russian Federation (Bank of Russia)

- **Valeria Lepina**, Advisor to the Economic Center for Legal Support of Digitalization in the Financial Market, Legal Department, Central Bank of the Russian Federation
- **Andrey Ponomarev**, Advisor to the economic center for operations with digital ruble of the department of the national payment system, Central Bank of the Russian Federation (Bank of Russia)

13:30–15:00

Sirius Science and Art Park
conference hall 3

Opportunities for the Decade of Science and Technology in Russia

Scientific Volunteering: More or Better

The Decade of Science and Technology's 'Scientific Volunteering' initiative aims to get young people involved in research activities. It also has a number of key advantages for science and society as a whole, as it gives scientists access to additional resources and opportunities in collecting and processing research data, and volunteers a chance to familiarize themselves with scientific work in practice and make a feasible contribution to the development of new knowledge. This type of volunteer activity also has its own innovative potential, since volunteers can offer original approaches to solving scientific problems and a new perspective on problems that are important to society. As of late 2023, roughly 30,000 volunteers had already taken part in the initiative's projects, which provided a strong start for the initiative. Do the parties that are implementing the initiative have a full understanding of the essence of the concept of scientific volunteering? How can we evaluate the initial results of the projects that have been completed? How instrumental are they in implementing the strategic goals of the Decade of Science and Technology? What potential does volunteering for science have and how can we unleash it? What are the further focuses for the development of the initiative and what specific tasks have been set for the next period?

Moderator:

- **Konstantin Fursov**, Associate Professor, ITMO University; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

Panellists:

- **Pavel Khlopin**, Advisor to the Director, Federal Agency for Youth Affairs (Rosmolodezh); Director, Youth Resource Center
- **Darya Kozyreva**, Head of the Department of Patriotic Projects, All-Russian Public-State Movement of Children and Youth Movement of the First
- **Natalya Kravchenko**, Chair, Commission for the Development of Preschool, School, and Secondary Vocational Education and Educational Activities, Public Chamber of the Russian Federation
- **Ivan Smirnov**, Director, St. Basil the Great Gymnasium
- **Anton Yurmanov**, Director of the Youth Work Department, Russian Geographical Society

Front row participants:

- **Anastasia Novoselova**, Deputy Chairman of the Student Science Society
- **Svetlana Yudakina**, Deputy Director, School 1282 "Sokolniki"

13:30–15:00

Sirius Science and Art Park
conference hall 4

Big Challenges: Opportunities for Development

Evolution of Quantum Technologies – The Quantum Internet. Opportunities for Young Scientists in Quantum Technologies: The Quantum School

The new Concept of Technological Development of the Russian Federation until 2030 views quantum communications and computing as priority cross-cutting technologies. Quantum communications are unique due to the high degree of security of the transmitted information, which is particularly important in the context of cyberattacks and the creation of powerful quantum computers. At present, the quantum communications industry is essentially ready for practical application. The company Innopraktika estimates that the market had expanded by nine times as of the end of 2022 and was worth RUB 2.5 billion. The Inter-University Quantum Network based at Moscow State University's Quantum Technology Centre is in the process of launching a quantum communications project, which is being implemented with the support of Russian Railways (using Russian Railways backbone networks) and the Russian Ministry of Education and Science (access to the National Research Computer Network for data transmission). This makes it possible to conduct pilot projects to ensure the maximum protection of transmitted information, as well as the further development of quantum technologies. The development of quantum communications will help to create communication lines for the transfer of quantum states and, in doing so, will combine quantum computers with each other and with quantum sensors into a single information and communication infrastructure – the quantum Internet. The evolution of quantum technologies provides unique opportunities for developing the careers of young scientists. Several landmark events in this regard are planned for 2024: Moscow State University's traditional International Quantum School and a competition of quantum Internet projects. What are the prospects for the development of quantum technologies and the quantum Internet? What opportunities do participation in the quantum school and the quantum internet competition create for young scientists?

Moderator:

- **Alexey Odinokov**, Member of Board, NATT; Head of IP Management Department, Innopraktika

Panellists:

- **Sergey Kulik**, Professor, Supervisor, Quantum Technology Centre, Lomonosov Moscow State University
- **Alexey Moiseevskiy**, Founder, C-Quantum
- **Anton Naumenko**, Head of the Department, SFB Laboratory
- **Alexey Urivsky**, Deputy General Director, InfoTeKS
- **Vasily Velikhov**, Assistant to the President of the Center for Information Technology and Artificial Intelligence, "Kurchatov Institute" National Research Center

13:30–15:00

Sirius Science and Art Park
conference hall 6

Big Challenges: Opportunities for Development

An Inclusive Society: How Does Science Remove Obstacles?

Scientific support for the provision of social, psychological, and medical assistance to people with disabilities, including disabled children, is taking on particular importance and relevance. How are innovative scientific methods for diagnosis, correction, rehabilitation, and habilitation being used? What are the prospects and main focuses of the system for the development of an inclusive society using scientifically based approaches?

Moderator:

- **Yury Zinchenko**, Dean of the Faculty of Psychology, Lomonosov Moscow State University

Panellists:

- **Oleg Artyugin**, Executive Director, Head of the Centre for Development of Artificial Intelligence (AI) Technologies for the Social Good, Sberbank
- **Tatyana Batysheva**, Director, Scientific and Practical Center for Child Psychoneurology of the Moscow City Health Department; Chief Specialist in Pediatric Rehabilitation, Ministry of Health of the Russian Federation
- **Yulia Kuznetsova**, Acting Head of the Department “Autism Spectrum Disorders: Science and Practice”, Sirius University of Science and Technology
- **Tatyana Lototskaya**, Deputy Chairman for Social Block, State Fund "Defenders of the Fatherland"
- **Vladimir Mashkov**, Artistic Director, Oleg Tabakov Theatre

13:30–15:00

Sirius Science and Art Park
conference hall 7

Big Challenges: Opportunities for Development

AI Journey into the World of Artificial Intelligence

Leading Russian scientists and researchers will speak about the contribution of artificial intelligence technologies to Russia’s development and what benefits they bring to people. The session participants will learn about the latest trends and examples of the development and introduction of neural networks in various fields, and will also have a chance to discuss issues related to the development of generative artificial intelligence and AI for the benefit of society with the session’s speakers.

Panellists:

- **Aibek Alanov**, Research Associate, AIRI Institute of Artificial Intelligence; Research Associate, Center for Deep Learning and Bayesian Methods, National Research University Higher School of Economics
- **Albert Efimov**, Vice President – Director of Research and Innovation, Sberbank
- **Viktor Gombolevsky**, Leading Research Fellow, AIRI Institute of Artificial Intelligence; Head of the Committee on Artificial Intelligence in Radiation Diagnostics, Moscow Regional Branch of the Russian Society of Radiologists and Radiologists; Candidate of Mathematical Sciences, Radiologist
- **Olga Kardymon**, Research Fellow, Head of Bioinformatics Group, AIRI – Artificial Intelligence Research Institute
- **Maksim Novopoltsev**, Executive Director for Data Research, Center for the Development of AI Technologies for the Benefit of Society, Sberbank

13:30–15:00

Sirius Science and Art Park
conference hall 9

Opportunities for the Decade of Science and Technology in Russia

Createch: How High Technologies Dictate the Development of the Creative Economy

Creative industries are one of the fastest growing sectors today and are also becoming an area of high

technologies. Augmented reality, metaverses, Web 3.0, and artificial intelligence are already rather familiar artistic tools for creators who are launching numerous promising projects in art, culture, and the media. What role do high-tech solutions play in the development of creative industries today? Which sectors of the creative economy are most promising for scientific research and the use of technologies? And what's on the flip side of the coin: how do creative industries influence the development of science and technology?

Moderators:

- **Ksenia Kuznetsova**, Acting Head of the Department of Infocommunication Technologies, National University of Science and Technology "MISIS"
- **Maxim Volkov**, Ambassador of the Tochka Junior Project

Panellists:

- **Aleksandr Gofman**, Head of the Strategic Project, Director of the Center Createch, Bauman Moscow State Technical University FSBEI HE
- **Maxim Kiselev**, General Director, Human Capital Development
- **Larisa Lapidus**, Professor, Ph.D. in Economics; Director, Social and Economic Innovations Center (SEIC), Faculty of Economics, Lomonosov Moscow State University
- **Konstantin Negachev**, Winner of the Competition Leaders of Russia, "Internet communications" Direction; Co-founder, VRT Group of Companies

Front row participant:

- **Irina Belykh**, Co-founder, Program Director, FANK Contemporary Science Film Festival; Member of the Expert Council for Non-Fiction Films, Ministry of Culture of the Russian Federation; Member of the Board, European Academy of Science Films

13:30–15:00

Sirius Science and Art Park
Kurchatov Hall

The Russian Science Foundation School

Master Class on Promoting Scientific Knowledge

There have recently been more and more news items, videos, and various stories about science in the media. Journalists and the public are often interested in simplified and more understandable information, while scientists want to use more accurate and complex formulations to describe the world around us. The press service of the Russian Science Foundation has successfully been working to find this balance every day together with grant recipients. Press service specialists will talk about specific aspects of communication between science and society and the benefits of such communication for scientists, and will help teach us how to translate information from academic language into popular science.

Moderator:

- **Maria Mikhaleva**, Deputy Head of Programs and Projects Department, Russian Science Foundation; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Fields

Panellist:

- **Yulia Krasilnikova**, Deputy Head of Public Relations Department, Russian Science Foundation

13:30–15:00

Sirius Science and Art Park
Buran Hall

Space for International Scientific and Technical Cooperation

Developing Human Capital amidst Global Transformation to Achieve the 17 SDGs

There is a growing dangerous shortage of human capital amidst rapid global changes in technology, demographics, instability, and climate. In the current conditions, developing human potential and searching for new forms of strategy to engage in international scientific and educational cooperation is the key to technological independence, financial sovereignty, and ensuring the country's national security and sustainable development goals. At the same time, the changing nature of global political and economic competition raises a number of important questions for Russian political and business elites, as well as the academic community. Which countries and regions are becoming new poles of human capital development and generators of innovation? How can we build international scientific and technical cooperation in the face of new challenges, and what forms and tools of scientific and educational diplomacy are most needed today? What best practices of young scientists, company leaders, government officials, and experts in sustainable development could become a precedent for exchanging experience and replication?

Moderators:

- **Ekaterina Arapova**, Director, Center for Expertise of Sanctions Policy, MGIMO University
- **Alexander Marusin**, Head of the Patent Information Department, Associate Professor of the Transport Department, Engineering Academy of the Peoples' Friendship University of Russia

Panellists:

- **Vasily Anikin**, Associate Professor, Faculty of Social Sciences, National Research University Higher School of Economics
- **Oksana Barabitskaya**, Director, Integra
- **Andrey Barinov**, Chairman (Co-Chairman) of the Council of Young Scientists, Institute for African Studies of the Russian Academy of Sciences; Researcher, Centre for Global and Strategic Studies
- **Andrey Baykov**, Vice Rector for Research and International Cooperation, Moscow State Institute of International Relations; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Pavel Golosov**, Director, Institute of Social Sciences, Russian Academy of National Economy and Public Administration under the President of the Russian Federation (RANEPA)
- **Elena Kaverina**, Associate Professor, Department of Public Health, Healthcare and Hygiene, Medical Institute, Peoples' Friendship University of Russia
- **Nazih Yaser Rebouh**, Associate Professor, Senior Scientist of the Environmental Management Department, Institute of Environmental Engineering, Patrice Lumumba Peoples' Friendship University of Russia
- **Morteza Yousefi**, Associate Professor, Department of Veterinary Medicine, Peoples' Friendship University of Russia

Front row participants:

- **Alexey Marusin**, Chairman of the Council of Young Scientists, St. Petersburg State University of Architecture and Civil Engineering
- **Egor Sergeev**, Associate Professor, Department of World Economy, MGIMO University
- **Andrey Sushentsov**, Dean of the Faculty of International Relations, MGIMO University
- **Vyacheslav Sutyrin**, Director of the Center for Scientific Diplomacy and Advanced Academic Initiatives of the Institute of International Studies, MGIMO University
- **Olga Tarasova**, Director, Center for Development of Scientific and Educational Initiatives; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

15:30–17:00

Sirius Science and Art Park
plenary session hall

Plenary session

Science: A Space of Opportunities

What is a scientist in most people's minds? The image of a person in a white coat with a test tube in his hand and a bunch of papers in the background is a thing of the past. A young scientist in modern Russia is a successful, driven, motivated leader who is open to new opportunities and ambitious challenges. According to the Russian Public Opinion Research Centre, the prestige of scientific professions is growing every year. This is also due to support measures from the Russian government. Thanks to the space of opportunities, scientific work is not limited to reports today. The final discussion of the Congress's business programme will focus on various aspects of research and development and stories about the professional path of young scientists who work in different scientific fields and roles, but who have definitively achieved success in their activities. Based on their example, they will show us how different scientists can be, how you can become successful and in demand in your field, and how to use the space of opportunities that is available to those who decide to connect their life with science for the benefit of themselves and society.

Moderator:

- **Dmitry Chernyshenko**, Deputy Prime Minister of the Russian Federation

Panellists:

- **Irina Alekseenko**, Deputy Director, Moscow Center for Innovative Technologies in Healthcare; Head of the Gene Immunoncotherapy Group, Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Sciences
- **Pavel Ilyushin**, Director, Perm Scientific and Educational Center "Rational Subsoil Use"
- **Maxim Nikitin**, Leading Researcher, Head of the Laboratory Nanobiotechnology, The Moscow Institute of Physics and Technology; Member, Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education
- **Pavel Prozorov**, Winner of the International Mathematical Olympiad
- **Olga Tarasova**, Director, Center for Development of Scientific and Educational Initiatives; Member of the Coordination Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education

- **Konstantin Vernigorov**, General Director, Sibur Polylab; Member of the Coordinating Council for Youth Affairs in the Scientific and Educational Spheres of the Council under the President of the Russian Federation for Science and Education