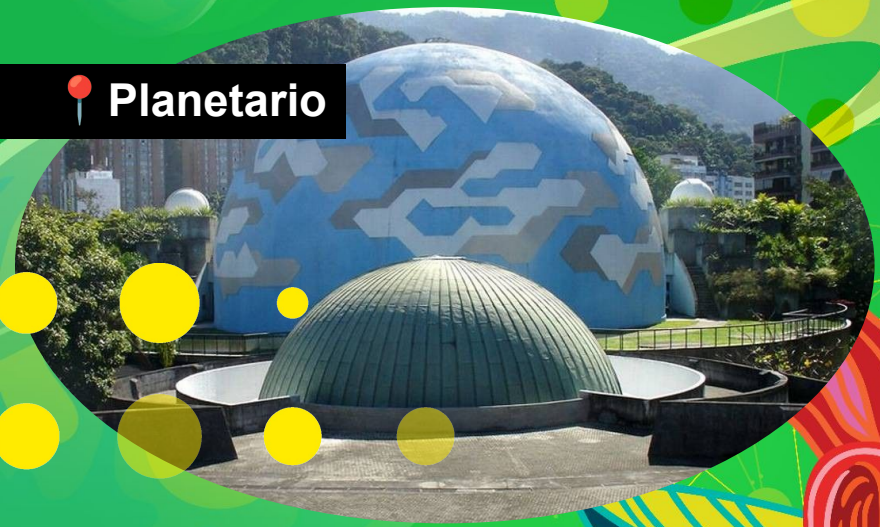
5 DE JULHO —— 6 DE JULHO

10:00 - 18:00

FESTIVAL INTERNACIONAL DE CIÊNCIA NAUKA 0+

ENTRADA GRATUITA



📍 Planetario

5th - 6th July

Experience the Science Festival
at Rio's Cutting-Edge Planetarium!

OUTDOOR EXHIBITION

11:00, 14:00, 17:00

Mikhail Golovin, Fail Gubaidulin

SCIENCE SHOW "NAUKA 0+"

What they don't show you in school - but you've always wanted to see, and even try some experiments yourself!

You'll witness experiments with liquid nitrogen - one of the coldest substances in the universe. A series of demonstrations will showcase its various properties, interaction with the environment, and spectacular experiments where nitrogen displays its power - yet remains completely safe even for our youngest audience members.

Prepare for dazzling demonstrations that will open the door to science for everyone. You'll see:

- A pencil lead glowing under electric current
- A broken incandescent bulb still functioning
- The chance to hold fire in your hand (safely!)
- And much more!

Guests will observe vibrant chemical reactions including:

- Chemiluminescence (cold light)
- A miniature geyser in a flask
- Hydrogen production and combustion
- The classic "elephant toothpaste" demonstration

The science behind fireworks - with live demonstrations!

5th - 6th July

10:00 – 18:00

BIG BANG ZONE & MEGA-SCIENCE ADVENTURES!

Giant Non-Newtonian Fluid Pool Demonstration

Prepare to witness physics defying its own rules! Our massive pool filled with mysterious non-Newtonian fluid will show you:

- Run across liquid - literally! Experience how this smart substance hardens under pressure.
- Plunge your hands into the magical oobleck and watch it instantly transform between solid and liquid states.
- Stage epic science battles - throw objects and see them bounce off the liquid surface!

Why It's Mind-Blowing?

This isn't just an experiment - it's physics turned into magic! The fluid that resists sudden impact but lets you slowly sink demonstrates how materials can be both solid and liquid.

Kid-Safe but Adult-Impressing!

The perfect way to explain complex scientific principles through play and wonder.

The whole day - Alexander Zaitsev and the team

5th - 6th July

11:00, 14:00, 17:00

Mikhail Golovin, Fail Gubaidulin

BECOME A LUNAR TEST SITE OPERATOR

… and embark on a real space adventure!

Meet the **BROVER space rover** – a robot built on the Rocker Bogie platform. Thanks to its unique design, all six wheels maintain constant ground contact while evenly distributing the rover's weight. This prevents tipping over – a crucial feature, because on the Moon or Venus, there'd be nobody to flip it back upright!

This rover was developed for student competitions in space robotics. During the demonstration, operators will showcase lunar surface navigation using the BROVER platform.

The whole day - Robotics Laboratory, Institute of Mechanics, Lomonosov Moscow State University

UNDERWATER ROBOTICS ADVENTURE

Dive into the Liquid Depths of Uranus or Neptune – Explore Solaris' Underwater World!
(Hands-on training with cutting-edge subsea tech)

YOUR MISSION INCLUDES:

- MUR Edu Underwater Robotics Kits – Build & program real submersibles
  Machine Vision, Robotic Control, C++ Programming: Depth/pitch/roll/yaw telemetry
- YOUR ROBOT'S SPECS:
  - Max depth: 5m | Thrusters: 4x | Cameras: 2x
  - Sensor payloads: 2 modular ports
  - Arctic-ready design for extreme conditions
- BONUS CHALLENGE:
  Compete in our Underwater Robot Grand Prix – Test your bot in:
  - Salvage operations
  - Pipeline inspection simulations
  - Alien ocean exploration scenarios

The whole day - Robotics Laboratory, Institute of Mechanics, Lomonosov Moscow State University

5th July

18:00 – 20:00

STARGAZING UNDER OPEN SKIES AT PLANETARIUM RIO!

Join our astronomers on the rooftop for an unforgettable cosmic experience!

Peer through professional telescopes at:

- Saturn's dazzling rings
- Craters of the Moon
- Jupiter's dancing moons
- Distant star clusters

Discover celestial secrets:

- The true stories behind zodiac constellations
- How ancient navigators used stars
- Modern astronomy's most amazing discoveries

Tonight's special sights (weather permitting):

- Mars' red surface
- International Space Station flyby
- Shooting stars from active meteor showers

Why our rooftop experience is unique:

- No dome obstruction - real sky viewing
- Expert astronomers explain what you're seeing
- Cozy blankets and hot drinks provided
- Perfect for Instagram-worthy cosmic photos

Perfect for:

- First dates with cosmic atmosphere
- Families with curious kids (8+)
- Photography enthusiasts
- Anyone who's ever looked up and wondered

5th - 6th July

Experience the Science Festival
at Rio's Cutting-Edge Planetarium!

INDOOR EXHIBITION

10:00 – 18:00

1. SCIENTIFIC WORKSHOPS FROM ZARYADYE PARK

GEOLOGY AND MINERALOGY

● **Ryzhkov Dmitrii-Fabian Konstantinovich**
Senior Methodologist at the Department of Scientific and Educational Activities of Zaryadye Park, science communicator, ecologist, and geographer. Laureate of the "Loyalty to Science" Award in 2022 as part of the Zaryadye team. Recipient of the Kemerovo Region medals of the Russian Federation: "For Faith and Kindness" and "Hope of Kuzbass."

Participants will have the opportunity to explore a collection of minerals and rocks representing the geological diversity of Russia and Brazil. Our goal is, on the one hand, to showcase the uniqueness and richness of Russia's mineral resources and, on the other, to draw parallels with Brazil. An additional objective is to spark young people's interest in geology, a foundational science for sustainable economic development. Proposed activities:

- Examination of rock and mineral samples brought from Russia using stereoscopic and digital microscopes;
- Rapid crystal-growing experiments and use of polarized light microscopy;
- Assembly of geological cross-section maps of Russia and Brazil, with references to mineral deposit regions;
- "Geological Memory" game, introducing minerals, rock types, and everyday objects made from them.

5th - 6th July

BIOTECHNOLOGY AND BOTANY

● **Radkevich Elena Viktorovna**

First-class Methodologist at the Department of Scientific and Educational Activities of Zaryadye Park, science communicator, and biotechnologist. Participant in the 4th BRICS Young Scientists Forum (November 6–8, 2019) and the 1st Meeting of Young Scientists of the Shanghai Cooperation Organization (SCO) — “Building Partnerships in Science, Technology and Innovation: Prospects for Young Scientists” (November 24–28, 2020). Laureate of the “Loyalty to Science” Award in 2022 as part of the Zaryadye team.

Participants will learn about modern approaches to the study and cultivation of plants. We will demonstrate that plants are fascinating research objects and that the results of such experiments form the foundation of food security strategies in partner countries.

Proposed activities:

- **In vitro technology / Plants in test tubes** – Participants will plant seeds and cuttings in disposable tubes containing nutrient medium, replacing soil. This showcases a lab-born technology now widely used in large-scale plant propagation;
- **Artificial seed production** – Another biotechnology technique used in research and intensive production. Participants will create their own artificial seeds to take home;
- **Hydroponics** – Exhibition of one of the most advanced methods of controlled plant cultivation. Through a working model, participants will learn how hydroponic systems function and the critical factors for efficient crop growth.

5th - 6th July

MEDICINE AND GENETICS

● **Koval Tatyana Igorevna**
Senior Manager at the Department of Scientific and Educational Activities of Zaryadye Park, science communicator, producer and presenter of events at science festivals. Laureate of the “Loyalty to Science” Award in 2022 as part of the Zaryadye team. Specialization: Biology, Biotechnology.

● **Vinogradov Nikita Sergeevich**
Head of the Department of Scientific and Educational Activities at Zaryadye Park, science communicator, molecular biologist. Laureate of the “Loyalty to Science” Award in 2022 as part of the Zaryadye team. Specialization: Genetics, Molecular Biology, Biotechnology, General Biology.

This broad thematic area is aimed at both children and adults and includes several workshops — from basic anatomy and microscopy to micropipette use and laparoscopic surgery simulations. Our goal is to show that essential skills for future healthcare professionals can be introduced in an accessible and engaging way to the general public.

Proposed activities:

- **Human anatomy** – Study of the human body using a detailed anatomical torso model;
- **Micropipette workshop** – Hands-on demonstration of one of the main tools used in molecular biology;
- **DNA study** – From observing prepared samples under a microscope to assembling DNA models and identifying genetic sequences;
- **Laparoscopic surgery simulator** – Participants can take on the role of a surgeon and practice using laparoscopic probes through targeted exercises.

5th - 6th July

10:00 – 18:00

2. ENGAGING SCIENCE OF BELARUS

Microorganisms: A Taste of the Invisible

At the stand we will learn about microorganisms and their properties. You will be able to "touch" and "smell" microbiology. You will learn about the processes of fermentation and decay. And you will be able to become a microbiologist scientist for 5 minutes

Antarctica: Touch the Edge of the World

Discover a unique collection of minerals brought from the coldest continent on the planet — Antarctica! Learn fascinating facts about scientific research conducted in the harsh conditions of the South Pole, examine real rock samples under a microscope, hold them in your hands, and bring home a piece of Antarctica as a special memento.

Electrical wonders: from theory to practice

Have you ever wondered how electricity works?
We invite you to learn the basics of electricity and conduct your first experiments!
What awaits you:

- Educational facts about the principles of electricity
- Practical classes on studying the basics of conductivity in solids and liquids
- The opportunity to assemble the simplest electrical circuits and a wind generator with your own hands.

Unusual physical phenomena

Physics is a fascinating and interesting science! At the master class, children and adults will not only be able to see and touch amazing phenomena. Explore non-Newtonian fluid and try to separate the interlocked books.
Come to the master class and discover the secrets of fascinating physics!

5th - 6th July

10:00 – 18:00

3. MECHANICS RESEARCH INSTITUTE – ROBOTS (ROVER, DOG ROBOT AND ROBOHEAD)

Шагающий робот MOPC для науки

Полная документация по всем системам робота.
Консультационная поддержка научных групп со стороны НИИ механики МГУ.
Библиотека статей по шагающим роботам
Исследование алгоритмов:

- Передвижение робота по разным поверхностям
- Скоростное и устойчивое передвижение
- Преодолевание препятствий
- Энергоэффективность

Настройка дополнительного оборудования для робота

Шагающий робот MOPC для образования

Образовательная программа и методические материалы для школьников и студентов.
Курс повышения квалификации для преподавателей на базе НИИ механики МГУ.

- Демонстрация возможностей шагающего робота
- Управление шагающим роботом
- Интеграция дополнительного оборудования робота
- Изучение управления моторами
- Школьные/студенческие проекты по модернизации робота

Роботизированная голова Bbrain 1.0

Роботизированная голова предназначена для взаимодействия робота с человеком. На устройстве размещены микрофонный массив, сенсорный экран, динамики, сервоприводы для поворота головы и ушей. Доступны пакеты для работы с ROS, взаимодействие с chatGPT.

Робот BRover-E4
GO2018-2

Платформа "BRover-E4" – это 6-колёсный робот оснащённый подвеской "Rocker-Bogie". Устройство работает под управлением Robot Operating System (ROS).

5th - 6th July

10:00 – 18:00

4. VR

Maksim Mironenko – Researcher, Department of Historical Informatics, Lomonosov Moscow State University; Interfaculty Center for Mathematical and Software Support of VR/AR Technologies (MSU VR Center)
Virtual Reconstructions of Lost Cultural Heritage:
3D Modeling and VR Technologies

Марсум

Вы хотели отправиться на другую планету и вырастить там картошку? С первым мы вам поможем! Вам нужно выполнить миссию на поверхности марса научиться пользоваться vr шлемом и после этого вы на шаг ближе к реальному космосу

Mendeleev

Первая сцена – выбор эксперимента, необходимо провзаимодействовать с красной (определение щелочных металлов) или синей (сборка молекулярных структур) капсулой для выбора следующей сцены.
Белый/черный куб – переключение режима управления. Белый режим – удерживание кнопок для захвата, черный режим – отпускание предмета по повторному нажатию
Определение щелочных металлов (красная капсула) – последовательно пипетка переносится к колбе (и выпускает индикатор в колбу), затем обратно, щипцы переносятся к металлам по порядку, после захвата металла щипцами – к колбе. При попадании образца металла в колбу происходит реакция. Если добавления индикатора из пипетки не было пропущено – жидкость в колбе окрашивается в фиолетовый, если было – не окрашивается. Повторять три раза с каждым из металлов – конец эксперимента
Сборка молекулярных структур (синяя капсула) – перед пользователем находится машина Теслы, спустя несколько секунд после начала на ней появляется молекулярная структура из цветных шариков. Справа на столе книга, где написано, какое соединение нужно собрать и какая его формула. Слева на столе лежат элементы, которые можно брать и помещать в молекулярную структуру посередине, если элемент помещен правильно, он заменит собой цветной шарик и раздастся звук. Взятый элемент заменяется новым, количество свободно летающий элементов ограничено. Необходимо собрать три формулы по книге и эксперимент закончен.
«Секретные» активности. Шахматы – шахматные фигуры на доске слева можно двигать. Нужно правильно поставить мат конем и слоном, последовательно перемещая белые фигуры на правильные клетки. При корректном перемещении будет раздаваться звук. Падение черного короля означает успешный мат. Если взять диссертацию Д. И. Менделеева о спиртах и принести ее к картине Куинджи, картина сменится на портрет Менделеева. Контекст – Куинджи – друг Менделеева, само собой, портрет Менделеева не мог висеть в его кабинете, Дмитрий Иванович не обладал столь раздутым эго.

5th - 6th July

10:00 – 18:00

5. ELECTRICITY AROUND US

6. JOINT INSTITUTE FOR NUCLEAR RESEARCH

7. SPACE EXPLORATION (CHEMISTRY)

8. PHOTOGRAPHY EXHIBITION “EARTH VIEWED FROM SPACE”

O ESPAÇO CONECTA A TODOS
PARA CADA CAMPO DO CONHECIMENTO, AINDA EXISTEM MUITOS PROBLEMAS QUE PRECISAM SER RESOLVIDOS.
QUASE TODAS AS PROFISSÃOES CONTRIBUEM PARA O ENTENDIMENTO E DESENVOLVIMENTO DO ESPAÇO.

9. EXHIBITION “SCIENCE THROUGH FACES”

RETRATOS DOS PRINCIPAIS JOVENS CIENTISTAS DA RÚSSIA: LAUREADOS COM O PRÊMIO DO PRESIDENTE DA FEDERAÇÃO RUSSA, PRÊMIO DO GOVERNO DA RÚSSIA E MOSCOU, PRÊMIOS SBER E DESAFIO, PARTICIPANTES DE CONGRESSOS E COLABORADORES DA UNIVERSIDADE SIRIUS. ELES TORNAM NOSSA VIDA MELHOR E FORTALECEM SEU PAÍS.

10. EXHIBITION “BIG BANG: BIRTH OF EARTH”

5th July

Experience the Science Festival
at Rio's Cutting-Edge Planetarium!

PREMIERE SCREENING OF "THE CHALLENGE"
(AGE 6+)
Lectorium - 2nd floor

10:00 – 14:00

PREMIERE SCREENING OF "THE CHALLENGE"

Meet the Real Space Heroes Behind the Movie!

Special Guests:

- Oleg Novitsky - Roscosmos Cosmonaut; Hero of the Russian Federation; Veteran of 3 space missions (ISS Expeditions 47/48, 65/66, MS-18)
- Marina Vasilevskaya - First Female Cosmonaut of Belarus; Hero of Belarus; Crew member of Soyuz MS-25 (2024) to ISS; Represents the National Academy of Sciences of Belarus

Event Highlights:

- Exclusive Q&A about real spaceflight vs. movie drama
- Autograph session with the astronauts
- Behind-the-scenes stories from the first feature film shot in space

About "The Challenge":

- The groundbreaking Russian film (2023) about a cardiac surgeon's emergency mission to the ISS, featuring actual footage filmed aboard the station.

5th July

Experience the Science Festival
at Rio's Cutting-Edge Planetarium!

STEM LECTURE SERIES FOR YOUNG SCIENTISTS (AGE 6+)
Lectorium - 2nd floor

14:00 – 14:30

- **Anna Bareiko**

Research Associate, Institute of Microbiology of the National Academy of Sciences of Belarus

Microworld of the home

Do you know all the inhabitants of your home? How many are there? Two, three, five, maybe ten? How about several hundred thousand?
That's how many microorganisms live in our homes, according to the most conservative estimates. Some of them create a beneficial microbiome, but some can pose a real threat to our health!
At the lecture, we will learn which microbes living with us are dangerous and why, as well as which place in our homes is the "dirtiest" and what a dishwasher and hot springs in Iceland have in common.

5th July

14:30 – 15:00

- **Anna Doroshenko**

Research Associate, Institute of General and Inorganic Chemistry of the National Academy of Sciences of Belarus

Biomechanics and Materials:
How Ideal Implants Are Created

Why has titanium remained the "gold standard" in bone grafting for over 50 years? How do modern technologies enable the creation of implants that the body accepts as "its own"?

This lecture will reveal the secrets of titanium's remarkable properties — from its unique ability to fuse with bone to the latest breakthroughs in personalized medicine, including 3D-printed implants.

You will learn how materials are selected for different clinical cases, what osseointegration looks like at the molecular level, and what revolutionary biomaterials may replace titanium in the future.

15:30 – 16:00

- **Nikolay Nikitin**

Professor, Department of Virology, Faculty of Biology, Lomonosov Moscow State University

"Viruses: Our Enemies or Friends?"

We’re accustomed to thinking of viruses as the cause of serious diseases. Yet scientists have long harnessed viruses and learned to wield them for humanity’s benefit. Today, viruses are used to develop safe vaccines, treat bacterial infections, combat cancer, and even correct genetic defects.

5th July

16:00 – 16:30

- **Alexander Zaitsev**

Head of the Innovation Commercialization Department, Center for System Analysis and Strategic Research of the National Academy of Sciences of Belarus

Neural Networks: Magic Beyond Hogwarts

Were you expecting a letter from Hogwarts, but got ChatGPT?
Congratulations: magic has arrived after all, just in the form of neural networks. In this lecture, you will learn how artificial intelligence works, what it has already learned, and why programmers and scientists create real miracles.

16:30 – 17:00

- **Anastasia Khabarova**

Research Associate, A.V. Lykov Institute of Heat and Mass Transfer of the National Academy of Sciences of Belarus

Nanoworld: How Atoms Create the Future

The nanoworld is a level that we cannot touch with our hands or see with our eyes. It is a world that is 1,000,000 times smaller than the thickness of a human hair. The amazing results that are obtained in the study of nanostructures always amaze scientists. Understanding that this knowledge helps to create new promising materials inspires us to plan new approaches to studying their properties.
You will learn about how the nanoworld affects the world as a whole, get acquainted with the unique microstructures that surround us, and with the equipment that can "see" and "touch" them.

17:00 – 18:00

- **Maria Kudrevich**

Institute of Nature Management of the National Academy of Sciences of Belarus

Quiz - Popular Science

6th July

10:00 – 10:30

- **Tarasov Alexey Borisovich**

PhD in Chemistry, Head of Laboratory of New Materials for Solar Energy, Faculty of Materials Science, Lomonosov Moscow State University

All About Solar Energy

There are four generations of solar cells: silicon-based, semiconductor-based, organic, and perovskite. While silicon solar panels dominate today's market, the production of pure silicon remains complex and costly. This makes semiconductor solar cells using gallium arsenide (GaAs) more efficient, with some achieving over 45% conversion efficiency. In 1991, chemists Michael Grätzel and Brian O'Regan pioneered a new type of low-cost solar cell now widely used in e-readers, EV charging stations, and other applications. However, organic solar cells have shown dramatic efficiency improvements in the last five years, suggesting they may soon become the most viable option.

10:30 – 11:00

- **Lidiya Soprun Aleksandrovna**

MD, PhD, Associate Professor at SPbSU, Highest Category Epidemiologist, Deputy Director for International Partnerships and Public Relations at SPbSU Medical Institute

Digitalization in Medical Practice

The healthcare industry is flourishing expeditiously. We believe that no other area in healthcare has as much potential for enhancing effectiveness and elevating medical standards and quality, as digitalization does.

6th July

11:00 – 11:30

- **Nikita Sergeevich Vinogradov**

Head of the Department of Scientific and Educational Activities at Zaryadye Park, science communicator, molecular biologist. Laureate of the “Loyalty to Science” Award in 2022 as part of the Zaryadye team. Specialization: Genetics, Molecular Biology, Biotechnology, General Biology.

Genetic Engineering: Building the Future

This overview lecture covers genetic editing methods used for modifying bacteria, plants, and animals. Discover how cunning bacteria trick plants into producing "sweets" for them, and how resourceful scientists exploit this mechanism to create GMOs. We'll explore what serves as "bullets" for genetic guns and whether viruses can be transformed into medicines.

12:00 – 12:30

- **Elena Radkevich**

First-class Methodologist at the Department of Scientific and Educational Activities of Zaryadye Park, science communicator, and biotechnologist. Participant in the 4th BRICS Young Scientists Forum (November 6–8, 2019) and the 1st Meeting of Young Scientists of the Shanghai Cooperation Organization (SCO) — “Building Partnerships in Science, Technology and Innovation: Prospects for Young Scientists” (November 24–28, 2020). Laureate of the “Loyalty to Science” Award in 2022 as part of the Zaryadye team.

Aquaponics: A Trendy Approach in Agronomy and Aquaculture

This lecture addresses the global food problem and discusses a solution through a unique natural ecosystem called "aquaponics." We will talk about the symbiotic relationships behind the concept of aquaponics, its pioneers, and the scientific research leading to its effective application not only in science but also in commercial use.
We will answer whether aquaponics is the agricultural technology of the future and whether it can simultaneously feed the world both plant and animal protein.

6th July

13:00 – 14:00

- **Nikita Sergeevich Vinogradov**

Head of the Department of Scientific and Educational Activities at Zaryadye Park, science communicator, molecular biologist. Laureate of the “Loyalty to Science” Award in 2022 as part of the Zaryadye team. Specialization: Genetics, Molecular Biology, Biotechnology, General Biology.

Biotechnology of plants: in lab, at school and even at home

This lecture explores the technologies used for plant cloning and modification, and whether an ordinary school student can learn to work with plant cell cultures. We share practical experience in applying laboratory techniques for education and scientific outreach – from petri dishes to biotechnology classrooms.

5th - 6th July

Experience the Science Festival
at Rio's Cutting-Edge Planetarium!

CÚPULA GALILEO GALILEI
(Lectures and pop-science moves)

11:00 – 11:15

FESTIVAL OF CONTEMPORARY SCIENTIFIC CINEMA

● **Научно-популярный фильм «Квантовая запутанность»**
короткометражный фильм (2023, Россия, 10 минут, режиссёр — Юлия Шульгина) из программы Фестиваля актуального научного кино ФАНК.

Сюжет: фильм о сложных концепциях квантовой физики с интересными квантовыми эффектами, рассказывает о печалях и радостях учёных, занимающихся этим направлением науки.

11:15 – 12:00

● **Yerdauletov Meir**
Ph.D. in Physics and Mathematics, Joint Institute for Nuclear Research (JINR) – Researcher at the Laboratory of Neutron Physics, Institute of Nuclear Physics (Almaty, Kazakhstan) – Senior Researcher

Reactor and Applied Research at the Laboratory

5th July

12:00 – 12:15

FESTIVAL OF CONTEMPORARY SCIENTIFIC CINEMA

● **Научно-популярный фильм «DAO — этика блокчейн-технологий»**
короткометражный фильм (2023, Россия, 10 минут, режиссёр — Никита Севастьянов) Фестиваля актуального научного кино ФАНК.

Сюжет: фильм рассказывает о развитии блокчейн-технологий, их влиянии на экономическую, политическую и социальную жизнь, о цифровой карме и о том, что ждёт людей в будущем. Режиссёр делает вывод, что технология блокчейн сделает многие процессы более прозрачными, а историю цифровых действий — неизменяемой.

12:15 – 13:00

● **Maksim Mironenko**
Researcher, Department of Historical Informatics, Lomonosov Moscow State University; Interfaculty Center for Mathematical and Software Support of VR/AR Technologies (MSU VR Center)

Virtual Reconstructions of Lost Cultural Heritage: 3D Modeling and VR Technologies

5th July

13:00 – 13:15

FESTIVAL OF CONTEMPORARY SCIENTIFIC CINEMA

● **Научно-популярный фильм «СИГНАЛ/ШУМ»** короткометражный фильм (2023, Россия, 10 минут, Режиссёр - Ян Надольский, камера - Ян Надольский, в кадре - Алексей Седов, Анна Гамалея, Валерий Кузнецов) Фестиваля актуального научного кино ФАНК.

Сюжет: история о человеке, который мечтает станцевать с дочерью на её свадьбе, и о врачах и ученых, помогающих ему с помощью DBS (Deep Brain Stimulation) — процедуры, облегчающей симптомы людей, страдающих болезнью Паркинсона.

Фильм вышел при поддержке научного центра «ИДЕЯ».

Картина вошла в шорт-лист премии SmallRig Awards в Китае (первая в мире премия в области благотворительных кинокартин, которая направлена на поддержку режиссёров, освещающих социальные проблемы).

13:15 – 14:00

● **Zykov Kirill Alekseevich**
Corresponding Member of the Russian Academy of Sciences (RAS), Deputy Director for Research and Innovation, Federal State Budgetary Institution "Research Institute of Pulmonology" of FMBA of Russia

Modern Anti-Inflammatory Therapy for Respiratory Diseases

This lecture will examine key aspects of inflammatory processes pathogenesis in the respiratory system and their impact on the development of chronic and acute respiratory diseases. Special attention will be given to modern therapeutic approaches, including biological drugs and novel molecules targeting specific inflammatory pathways.

5th July

14:00 – 14:15

FESTIVAL OF CONTEMPORARY SCIENTIFIC CINEMA

● **Научно-популярный фильм «Мурка»**
из альманаха «ФАНК. Идеи и технологии, меняющие мир»

Создан Лабораторией научного кино ФАНК

Всего за 11 минут вы узнаете, как кошачье мурчание и вибротерапия подсказали учёным замену обезболивающих препаратов. Вместо них можно использовать инновационные приборы с анестетическим и спазмолитическим эффектами, но без побочных эффектов, рассказывают автор фильма Дарья Карпова и режиссер Варвара Волкова.

14:15 – 15:00

● **Utochnikova Valentina Vladimirovna**
PhD in Chemistry, Professor of the Lomonosov Moscow State University, laureat of the Shuvalov Prize, L'Oreal-UNESCO Prize, Moscow Government Prize

Covert Luminescence & Molecular Reconnaissance: Bioinspired Innovations from Firefly Chemistry

5th July

5th July

Experience the Science Festival
at Rio's Cutting-Edge Planetarium!

CÚPULA CARL SAGAN
(Fulldome Planetarium Shows & Top Scientists Lectures)

Fulldome Planetarium Shows

10:00 – 10:15

● **Научно-популярный фильм «Мурка»**
из альманаха «ФАНК. Идеи и технологии, меняющие мир»

Создан Лабораторией научного кино ФАНК

Всего за 11 минут вы узнаете, как кошачье мурчание и вибротерапия подсказали учёным замену обезболивающих препаратов. Вместо них можно использовать инновационные приборы с анестетическим и спазмолитическим эффектами, но без побочных эффектов, рассказывают автор фильма Дарья Карпова и режиссер Варвара Волкова.

10:15 – 11:00

● **Utochnikova Valentina Vladimirovna**
PhD in Chemistry, Professor of the Lomonosov Moscow State University, laureat of the Shuvalov Prize, L'Oreal-UNESCO Prize, Moscow Government Prize

Covert Luminescence & Molecular Reconnaissance: Bioinspired Innovations from Firefly Chemistry

5th July

15:00 – 16:00

- **Journey to the Centre of the Milky Way Short Fulldome Planetarium Show**

Professor, Department of Virology, Faculty of Biology, Lomonosov Moscow State University

"A World Without Viruses"

16:00 – 17:00

- **Zykov Kirill Alekseevich**

Corresponding Member of the Russian Academy of Sciences (RAS), Deputy Director for Research and Innovation, Federal State Budgetary Institution "Research Institute of Pulmonology" of FMBA of Russia

"Modern Anti-Inflammatory Therapy for Respiratory Diseases"

This lecture will examine key aspects of inflammatory processes pathogenesis in the respiratory system and their impact on the development of chronic and acute respiratory diseases. Special attention will be given to modern therapeutic approaches, including biological drugs and novel molecules targeting specific inflammatory pathways. We will discuss the mechanisms of action of these medications, their efficacy and safety profiles, as well as prospects for developing new therapeutic strategies. The lecture will also cover personalized treatment approaches and the role of genetic and environmental factors in treatment response. Participants will have the opportunity to discuss clinical cases and ask questions, facilitating deeper understanding of current trends in pulmonology.

5th July

17:00 – 18:00

- **Naumov Andrey Vitalievich**
  Corresponding Member of RAS (Physical Sciences Division, Lebedev Physical Institute, Moscow Pedagogical State University)

The Future is Here: Quantum Technologies

The year 2025 has been declared the International Year of Quantum Science and Technology by the United Nations, commemorating the 100th anniversary of quantum mechanics. From the early hypotheses and theories proposing that matter and energy behave in astonishing, classically inexplicable ways at microscopic scales (individual atoms, electrons, photons), quantum science has now achieved remarkable breakthroughs.

Most modern technologies and everyday devices rely on quantum principles: lasers (quantum light generators), satellite navigation (GLONASS, GPS), telecommunications equipment, light sources and detectors, microelectronics, computers, robotics, energy systems, and advanced medical technologies. Groundbreaking contributions to quantum science have been recognized with a constellation of Nobel Prizes, including celebrated work by Russian scientists from the Russian Academy of Sciences.

Even more transformative prospects lie ahead: quantum computing, quantum communications and cryptography, and quantum sensing. These cutting-edge developments will be explored in the public lecture “Quantum Technologies: The Future is Now”.

6th July

10:00 – 11:00

SCIENCE AS ART. SOUNDS OF SCIENCE

Immerse yourself in the world of science and technology through the compositions of the Monoleak music studio. The sounds of the greatest scientific objects (*MLM ISS Module, NICA, Carbon Test Sites, BAIKAL-GVD Telescope, CRISPR/Cas9, SKIF Synchrotron, COVIVAC, T-15 MD Tokamak, Research Vessels*) are woven into a musical piece, conveying the sensations, feelings, and emotions evoked by a neutrino telescope, a Covid-19 vaccine, a toroidal chamber with magnetic coils, or a synchrotron.

11:00 – 12:00

- **Utochnikova Valentina Vladimirovna**

PhD in Chemistry, Professor of the Lomonosov Moscow State University, laureat of the Shuvalov Prize, L'Oreal-UNESCO Prize, Moscow Government Prize

Smart Light for Smart Science: Designing the Future in MSU