



## ROSATOM TECHNICAL ACADEMY | DIGEST 2024



TECHNICAL  
ACADEMY  
ROSATOM



Made  
in Russia

**Human Resources  
for Future Technologies:**  
Towards the Dream



# Training Competencies to Support ROSATOM's New Business Areas



**LAND-BASED  
AND FLOATING  
SMR**



**TWO-  
COMPONENT  
NUCLEAR POWER**



**CENTRES FOR  
NUCLEAR SCIENCE  
AND TECHNOLOGIES**



**ROBOTIC  
SYSTEMS**



**NUCLEAR  
MEDICINE**



**WIND ENERGY**



**ECOLOGY**



**THERMAL ENERGY**



**DIGITAL  
PRODUCTS**



TECHNICAL  
ACADEMY  
ROSATOM

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## ON THE VERGE OF A NEW ERA OF NUCLEAR TECHNOLOGIES

Modern training sites and simulator complexes, experienced trainers and a pool of new-generation instructors, developed training materials allow Rosatom Technical Academy not only to confidently provide proactive training for the personnel of nuclear power plants constructed by ROSATOM abroad, but also to be ready to develop and implement new training programmes to support the strategic development of the industry. Yuri Seleznev, Rector of Rosatom Technical Academy, spoke about the tasks that the international nuclear knowledge centre is currently working on and the projects it has planned for the future.

### Industrywide Training

In 2024, more than 23,000 specialists from Power Engineering, Engineering, Fuel, Scientific, and other divisions of the industry were trained at Rosatom Technical Academy. The share of online learning was 48%. 18 new training programmes were developed in the areas of physical protection, information security, and asset protection. 7 divisional and industry events on psychological support of professional reliability of personnel and safety culture and leadership were held. A notable event held at the Academy was the first scientific and practical seminar "Radiopharmaceuticals: Production, Quality, Safety". This event brought together representatives from domestic organizations, enterprises, universities, research institutions,

clinical centres, ministries, and departments. In 2025, the event will have an international status. The participants will discuss tasks related to the development of new radiopharmaceuticals, their introduction into clinical practice, as well as personnel training for nuclear medicine. This includes training for the largest radiopharmaceutical plant currently under construction on the territory of the Karpov Institute of Physical Chemistry in Obninsk.

In addition, as part of the agreement with Sirius University of Science and Technology, it is planned to hold a large-scale interdisciplinary School on Nuclear Medicine, which will be headed by the country's leading oncologist, Academician Andrei Kaprin. Based on the results of the School's work, it is planned to develop unique additional education programs for young specialists working in the field of nuclear medicine and related fields.

### Foreign NPP Personnel Training

More than one and a half thousand specialists of Russian-design nuclear power plants under construction in Turkey, Bangladesh, Egypt, Hungary and China were trained at Rosatom Technical Academy in 2024. In order to effectively train the personnel of the El-Dabaa NPP at the customer's site, the Academy has begun to establish a branch in Egypt.

Training of representatives of the nuclear industry of Uzbekistan will begin in 2026 within the framework of first-in-the-world export contract for the construction of a small nuclear power plant. The concept of creating an international personnel training centre for land-based small nuclear reactors based on the Moscow branch of the Academy has already been developed.

In addition to training operating personnel, the Academy has developed and conducts courses

on physical protection adapted to the conditions of future operation of nuclear power plants built by ROSATOM abroad. As part of the training, specialists from the Akkuyu and Rooppur nuclear power plants learned about the organization of physical protection for nuclear facilities and the operational control of the complex of engineering and physical means.

### International Cooperation

The highlight of the year was the signing of an agreement between the International Atomic Energy Agency and Rosatom Technical Academy for cooperation in the field of small modular reactors and medical physics. This document prolongs and expands the Academy's previous arrangements with three Departments of the IAEA: Nuclear Energy, Nuclear Safety and Security, Nuclear Sciences and Applications. Among 78 Collaborating Centres in 39 countries, the Academy has become the first IAEA Centre of Excellence for nuclear knowledge management and human resources development in five areas.

In 2024, 275 trainees from 45 countries participated in joint training events with the IAEA and courses for faculty members from foreign universities: Nigeria, Ghana, Turkey, Egypt, Kenya, Brazil and others. Courses and seminars on deploying small modular reactor technologies were among the most popular. Another 291 trainees have been trained in nuclear security programmes. Over the years of cooperation with the IAEA, approximately 5,000 specialists from 95 countries have received training.

### New Nuclear Power

Our country offers a range of small plants, varying in power and purpose. In addition to being environmentally friendly and reliable, floating nuclear

In **2024**,  
the Academy  
trained **23,420**  
specialists

power units can provide energy independence from bulk power grids, as well as protection from market volatility.

The management of Rosatomflot has requested us to consider establishing a training centre to train personnel for modernized floating nuclear power units with RITM-200S reactors, which will provide electricity for the Baim Mining and Processing Plant in Chukotka. The St. Petersburg Branch of the Academy will be chosen as its location.

The specialists of the Academy have been accumulating experience in the field of training small NPP personnel since 2012. At that time, at the St. Petersburg Branch, experienced nuclear fleet operators were trained in instructor skills. A significant project in 2015 was the training of the first employees for the floating nuclear power plant Akademik Lomonosov. Since 2021, the Academy has been organizing seminars and training courses on SMR technologies for faculty members of foreign universities and representatives of the IAEA.

In addition, Rosatom Technical Academy is the only centre in the world that provides retraining for nuclear specialists in the field of two-component nuclear power. To date, five continuing professional education courses have been developed and are successfully conducted. As part of the training in 2024, over 300 industry specialists were able to learn about the technological



Over the years of collaboration with the IAEA, the Academy has trained about **5 thousand** specialists from **95** different countries

features of the BREST-OD-300 reactor plant, production of mixed uranium-plutonium nitride fuel, and reprocessing of spent nuclear fuel. A series of off-site training sessions was held for 80 employees of Siberian Chemical Combine. Training support is also provided in such areas of the Proryv Project as new generation codes and industrial robotics.

## Industrywide and Social Initiatives

In 2024, Rosatom Technical Academy hosted 95 industry-specific events, which is five times more than the previous year. Based on the results of the conference activities, the Academy sites in Obninsk, Moscow, and St. Petersburg, as well as the Mayak Academy in Nizhny Novgorod and the Atom Museum at the Exhibition of Achievements of National Economy were identified as key venues for future industrywide events.

Social projects, activities to improve the urban environment, interaction with professional communities, and youth initiatives are reaching a growing number of people. The “Family Traditions of Nuclear Cities” project brought together 64 families from 11 cities where ROSATOM operates. ATOM-LIVE 2024 – a festival of creativity and volunteering dedicated to the Nuclear Industry Workers Day and the anniversary of World’s First NPP – attracted 6,000 in-person guests and 78,000 viewers online. II International Youth Nuclear Forum “Obninsk NEW” brought together 900 delegates from over 100 countries. An “Atomic Lesson” was organized for 300 pupils from Obninsk schools, and 70 high school students took part in the business game “IAEA Model”. In 2025, events for schoolchildren will be held to commemorate the 80th anniversary of the nuclear industry and will expand their reach.

To mark the 70th anniversary of the peaceful atom, the SOVA Square was inaugurated at the Academy. “SOVA” is an acronym for the “Training System for Highly Qualified Nuclear Specialists” in Russian. The square is dedicated to the

history of the nuclear industry and the city as a whole. Today, it has become a popular place of recreation for residents and visitors of Obninsk and a comfortable summer venue for events.

## Centre for Capacity Building for Russian NPPs

One of the key goals for 2025 will be the development of the Rosatom Technical Academy Development Programme for 2026–2030. The strategy is based on a clear vision of the Academy’s goals for the future. It outlines where Rosatom Tech wants to be by 2030 and how it sees itself in 2042. The milestone for this vision has been defined by a Government Decree that approved the General Plan for the Location of Electric Power Industry Facilities in Russia until 2042. As part of increasing the energy generation capacity, 38 nuclear facilities will require staffing. According to estimates of Rosenergoatom, the operator of Russian nuclear power plants, the recruitment needs will amount to 42,000 people by 2030. It is not feasible to address this challenge by simply accumulating a specialized pool of employees from operating nuclear power plants. In this regard, it is essential to establish a comprehensive training system that includes both theoretical and practical components. This should involve the creation of training centres, training of instructors, and development of training materials. Rosatom Technical Academy has already implemented this concept during training of personnel for NPPs constructed by ROSATOM abroad, and is ready to become a centre for staffing and personnel training for Russian nuclear power plants.



The agreement was signed by Yuri Seleznev, Rector of Rosatom Technical Academy, and Deputy Directors General of the IAEA: Mikhail Chudakov, Head of the Department of Nuclear Energy; Lydie Evrard, Head of the Department of Nuclear Safety and Security; and Najat Mokhtar, Head of the Department of Nuclear Sciences and Applications.

## IAEA COLLABORATING CENTRE: ACHIEVING FIVE-FOLD PARTNER STATUS



### Yuri Seleznev, Rector of Rosatom Technical Academy:

“The expansion of programmatic areas of cooperation with the IAEA is, first of all, recognition of Russia’s expertise in the development, design, and construction of small modular reactors, and the development of medical physics. Secondly, this is another confirmation of the IAEA’s trust in the programmes implemented by Rosatom Technical Academy in the field of knowledge management and human resources development.”



The International Atomic Energy Agency and Rosatom Technical Academy have signed an agreement to extend the Academy’s status as an IAEA Collaborating Centre in the areas of Nuclear Knowledge Management and Human Resources Development, as well as to expand the programmatic areas of the Academy’s cooperation with the Agency. The signing took place on the sidelines of the first International Conference on Small Modular Reactors and Their Applications in Vienna, Austria.

According to the agreement, Rosatom Technical Academy has become the first IAEA Collaborating Centre to conduct training across five areas: Nuclear Energy, Nuclear Security, Nuclear Sciences and Applications, Small Modular Reactors, and Medical Physics and Radiopharmaceuticals.

In addition, as part of the Practical Arrangements between the organizations, the Academy provides assistance to the Agency in training personnel in the field of Safeguards.



# SIRIUS UNIVERSITY AND ROSATOM TECHNICAL ACADEMY TO COLLABORATE ON TRAINING SPECIALISTS IN NUCLEAR MEDICINE



To advance nuclear medicine in Russia, Sirius University of Science and Technology together with Rosatom Technical Academy have launched a large-scale scientific, educational, cross-sectoral, and interdisciplinary project called “Nuclear Medicine School.” The initiative will bring together leading medical, research, and educational centres working in nuclear medicine, oncology, cardiology, medical isotopes, development and production of radiopharmaceuticals.

Within the framework of the School, unique training programs will be developed for continuing training of young professionals across several fields including medical chemistry, radiochemistry and radiopharmacy, medical physics, radionuclide diagnostics and therapy, pharmaceutical regulation.

*The agreement on long-term cooperation in educational, research, medical, and pharmaceutical activities was signed by Anton Gusev, Director of Sirius University of Science and Technology, and Yuri Seleznev, Rector of Rosatom Technical Academy.*

Additionally, experts from Rosatom Technical Academy will participate in advanced Master's degree programs of Sirius University, specifically “Applied Robotics” and “Mathematical Robotics and Artificial Intelligence.” The collaboration also includes setting up joint scientific and educational laboratories and involvement in the scientific and technological project educational programme “Grand Challenges” aimed at schoolchildren.

## **Anton Gusev,** **Director of Sirius University of Science and Technology:**

“Russia has great potential in the field of nuclear medicine. We have talented doctors, world-class solutions, and leading scientific teams. This new direction at Sirius lays the foundation for long-term collaboration with top national centres and companies to train researchers and engineers capable of creating new technological solutions to address major challenges in nuclear medicine.”







## Within the framework of the XIII International Forum “ATOMEXPO-2024”, a cooperation agreement was signed between Rosatom Technical Academy and Proryv JSC

The agreement provides for the implementation of joint projects involving the participation of Proryv's experts in international events organized by the International Atomic Energy Agency in cooperation with Rosatom Technical Academy. To improve the qualifications of specialists of the Proryv Project, the Academy's experts will organize training webinars as part of the ROSATOM's industry-specific training programme for personnel working in international organizations. This programme is implemented by the Centre for International Cooperation of Rosatom Technical Academy.



The document was signed by Yuri Seleznev, Rector of Rosatom Technical Academy, and Sergey Kashlev, Director General of Proryv JSC

## Rosatom Technical Academy and the Nuclear Safety Institute of the Russian Academy of Sciences (IBRAE) will develop joint training programs for the analysis of safety of nuclear energy use



The document was signed by Yuri Seleznev, Rector of Rosatom Technical Academy, and Leonid Matveev, Acting Director of IBRAE.

As part of the cooperation agreement signed at ATOMEXPO-2024, the organizations plan to create opportunities for continuing training of users of modern software, which is necessary for analysing and predicting the consequences of radiation accidents, as well as for calculation of radiation protection and other tasks.

The parties will also hold joint meetings and seminars. They will invite representatives of development organizations to deliver lectures and conduct practical sessions on educational platforms.

## GENERATION IV: PROACTIVE TRAINING AS THE DRIVER FOR SUSTAINABLE DEVELOPMENT

The participants of the meeting got acquainted with the demonstration robotic complex of the Proryv Project and discussed methods of training future engineers.

### Khammar Mrabit, former head of the Moroccan Agency for Nuclear and Radiological Safety and Security:

“People are the key to everything. You may have the best regulation, the best legislation and integrated systems management, but unless you have sufficiently trained and efficient personnel, it is impossible to operate the nuclear infrastructure.”



The participants of the session “Advanced Training for Generation IV NPP Personnel: Driver for Sustainable Development” at the XIII International Forum ATOMEXPO-2024 in Sochi discussed ways of solving the problems of training qualified personnel for new nuclear power facilities.

The event brought together representatives of the IAEA, top managers of ROSATOM, Rosenergoatom, Rosatom Technical Academy, leading Russian universities, representatives of authorities and new businesses, and experts from partner countries.

### Alexander Lokshin, First Deputy Director General for the Development of New Nuclear Power Products of ROSATOM:

“Fourth-generation technologies are one of the untrodden paths that need to be mastered by competent specialists capable of gaining experience directly in the process of developing and perfecting new technologies. By 2030, ROSATOM will need about 350,000 employees, including skilled workers. This task requires non-standard solutions, given the shortage of human resources that is felt in all industries in Russia today. And the State Corporation has such solutions.”



The participants agreed that the development of Generation IV nuclear technologies requires long-term commitment based on the establishment of a sustainable nuclear infrastructure. This implies proactive training of personnel.





**Topan Setiadipura,**  
**Head of the Research Centre for Nuclear**  
**Reactor Technology of Indonesia:**

"One of the stages of personnel training for the nuclear industry of the Republic of Indonesia was participation in the training programmes of Russia and the IAEA. We have been interacting with ROSATOM since 2017, and from this experience we have learned the importance of the systematic approach, and building the training with an individual strategic plan for each specialist. New technologies open up new opportunities for us, and we will continue our cooperation so that our young people can receive a good education."



**Polina Kovaleva,**  
**Director for Advanced Nuclear Technologies**  
**at Rosatom Technical Academy, Head of**  
**ROSATOM's project "Generation 4: Next**  
**Kurchatovs":**

"One of the tasks of the project is to popularise innovative technologies among young people, to work with students, to develop new programmes, to create training centres on the basis of the best universities together with the specialists of the Proryv Project, covering dozens of training areas. Such a task cannot be solved single-handedly, it can only be tackled in the form of network cooperation."



## IAEA CENTRE OF EXCELLENCE

- » Development of Nuclear Infrastructure
- » Competencies for Small-Scale Power Generation
- » Physical Protection of Nuclear Facilities



**About 600 participants from 110 countries attended the IAEA International Conference on Nuclear Knowledge Management and Human Resources Development.**

During the conference, representatives of nuclear industry enterprises, research institutes, higher education institutions, and corporate universities learned about global practices and solutions to support safe and sustainable nuclear energy programmes.



*Egor Bologov, Director of the Department of Industrywide Training of Rosatom Technical Academy, spoke about the experience in organizing training events within the framework of the IAEA Technical Cooperation Programme and practice-oriented training of foreign specialists in nuclear security.*

*The Academy's specialists Natalia Naumchenko and Daria Artemova presented a poster report on the topic "Activities of Rosatom Technical Academy for the Development, Implementation and Methodological Support of Critical Knowledge Preservation in the Nuclear Industry."*



**Tatiana Terentyeva, Deputy Director General for Human Resources of ROSATOM:**

"Russian nuclear industry impacts the people's lives not only in our country, but also in 60 countries with which we cooperate in the area of nuclear and related technologies. The scale and geography of this work require us to pay special attention to the quality of project management and the transfer of knowledge to our partners. We don't just construct nuclear power plants – we create entire industries, building the necessary infrastructure for education, scientific research, development and leisure for people working there. As a result, our partners gain access to a new level of technology, culture and quality of life in general."



**Employees of the Academy joined the Russian delegation attending the IAEA's Ministerial Conference on Nuclear Science, Technology and Applications and the Technical Cooperation Programme.**

The conference brought together more than 1,400 participants from 143 countries. Experts discussed the role of non-energy applications of nuclear technologies in addressing global challenges such as healthcare, food security, water resource management, and climate change.

On the sidelines of the conference, a side event was held presenting the results of joint efforts between Rosatom Technical Academy and the IAEA in terms of the training of personnel from the IAEA Member States. Representatives sharing their experience of cooperation with Rosatom Tech included Jing Zhang, Section Head of the IAEA's Department of Technical Cooperation; Pedro Porras, Head of Nuclear Knowledge Management Section; Liliya Dulinets, Head of Nuclear Infrastructure Development Section; Mikhail Lankin, expert of the Department of Nuclear Safety and Security; and Malinda Ranavera, employee of Sri Lanka Atomic Energy Board.

**More than 2,000 experts from all over the world gathered at the ICONS-2024 conference to discuss ways to strengthen global nuclear safety and address the challenges associated with technological advancements, new risks, and threats.**

Academy's representatives participated in the event as part of the delegation of ROSATOM. An international youth delegation was formed during the conference. The Russian Federation was represented in the delegation by Zhanna Asulyan, a specialist of the International Training and Methodological Centre for Security and Safeguards of Rosatom Technical Academy. Росатома Жанна Асулян.



*At the plenary session of the Ministerial Conference, Victor Mazepov, Director of the Centre for International Cooperation of Rosatom Technical Academy, talked about the Academy's activities aimed at proactive personnel training for two-component nuclear power systems and small nuclear power plants.*



*Information about the Academy's projects "Virtual Classroom" and "Cyber Testing Area" was displayed at the exhibition showcasing achievements in the area of physical protection of nuclear facilities.*





# IMPLEMENTING THE IAEA TECHNICAL COOPERATION PROGRAMME

Representatives from the Republic of Turkey were introduced to the Russian education system, training infrastructure, and training programs for specialists in the nuclear field.

As part of their scientific visit, the participants visited the sites of Rosatom Technical Academy in St. Petersburg, Moscow, and Obninsk, National Research Nuclear University MEPhI, St. Petersburg Electrotechnical University "LETI", the Atomic Energy Information Centre and World's First NPP.

The guests also attended the International Youth Nuclear Forum "Obninsk NEW" and had the opportunity to ask questions about human capacity building in newcomer countries to Mikhail Chudakov, Deputy Director General of the IAEA, and Andrea Borio, Head of the Agency's Research Reactor Section in the Department of Nuclear Energy.



**Mikhail Chudakov,**  
*Deputy Director General of the IAEA and Head of the Department of Nuclear Energy:*



"By 2050, the demand for personnel in the global nuclear energy industry will increase four-fold compared to the current level and reach 8 million professionals with deep knowledge, expertise, and a strong safety culture. For this reason, the IAEA, together with educational organisations, conducts international schools for countries developing nuclear technologies, and scholarship programmes have been set up for Master's courses in nuclear disciplines."



## Representatives from 11 countries participated in the IAEA Research Reactor School

In addition to lectures by leading experts from ROSATOM enterprises, the School's participants visited leading scientific, educational, and industrial facilities of Russia. The participants also attended the campus of the National Research Nuclear University MEPhI, where they saw a research reactor used for experiments in physics and engineering. Specialists of Kaluga Scientific and Technical Enterprise "KORAD" demonstrated technologies for irradiation of food and non-food products. At

### **Frederick Chui, Zambia:**

"The Regional School of ROSATOM and the IAEA provides a comprehensive understanding of the resources that a country needs if it participates in the IAEA's nuclear programme and wants to create its own research infrastructure. The knowledge and experience gained will help successfully plan the stages of development and production of research reactors, as well as attract qualified personnel to participate in scientific projects."



the A.F. Tsyb Medical Radiological Research Centre, the School participants got acquainted with a proton accelerator used for targeted tumour treatment and with production of radiopharmaceuticals based on radionuclides for cancer therapy.

Additionally, the participants visited the Joint Institute for Nuclear Research in Dubna, where they discussed issues related to application of modern neutron sources in nuclear reactor physics and explored the site of the NICA accelerator complex.







**Representatives from 16 countries participated in the IAEA Workshop on Key Considerations regarding Infrastructure Development to Support Small Modular Reactors and Microreactors Deployment.**

During the training, the participants learned about the Russia's experience in constructing and operating small modular reactors, both land-based and floating. They studied issues related to nuclear infrastructure for small nuclear power plants – from site selection to the establishment of state institutions responsible for supervision of nuclear facilities. At the Workshop, the participants took a virtual technical tour of the floating nuclear power plant *Akademik Lomonosov* and learned about the construction of surface ships with nuclear power installations.



**Edwin Ndoli,**  
representative of Rwanda Atomic Energy Board:

"Before participating in this Workshop, I was curious to learn about the use of small modular reactors and their differences from large-scale nuclear power plants. The instructors explained that SMRs offer more flexible and cost-effective solutions compared to traditional NPPs, and that they can be deployed in remote areas where it is impossible to build larger nuclear power plants. Additionally, we were informed about financial and legal aspects associated with implementing nuclear programmes. This knowledge will help me better assess the current state of our country's nuclear programme and provide relevant recommendations to my management."



**Leading Russian and international experts presented the IAEA requirements and guidelines regarding design and safety assessment of NPPs, including SMRs, to specialists from 13 countries around the world.**

In practical sessions, trainees conducted probabilistic safety assessments of the plant and developed approaches for identifying equipment failure scenarios under normal and emergency conditions. To demonstrate innovative energy solutions, virtual tours of the Leningrad NPP and floating nuclear power plant *Akademik Lomonosov* were organized for the participants of the course.

**Participants of the Interregional Workshop on Basic Principles of Circular Economy to Close the Lifecycle of SMRs learned about the two-component nuclear power programme and its approaches to RW management.**

**Christophe Xerri,**  
former Director of the  
Division of Nuclear Fuel  
Cycle and Waste Technology  
at the IAEA's Department of  
Nuclear Energy:

"The potential of small modular reactors cannot be realized without a carefully planned strategy for waste management. Circular economy allows us to create a system that is not only environmentally friendly but also economically viable."



**The course on cost-effective radioactive waste management solutions for small modular reactors and decommissioning was attended by 29 specialists from 18 countries in Asia, Africa and Latin America.**

The IAEA specialists and leading Russian experts discussed various aspects of handling wastes generated by small modular reactors, including issues of cost reduction and safety improvement. Additionally, the participants gained insight into the complete construction process of icebreaker ships powered by "RITM-200" reactor units.



Joint courses of the IAEA and Rosatom Technical Academy provide access to best practices and advanced technologies in nuclear energy, making it possible to tailor the training materials to meet the specific needs of countries that are developing their nuclear infrastructure.





**The Russia-IAEA Nuclear Energy Management School for Managers introduced participants to the fundamentals of nuclear energy and the best practices of Russian and international experts in assisting newcomer countries in developing their own nuclear power programmes.**

Over the course of the week, 27 delegates from 13 countries in East Asia, Africa, and Latin America learned about various nuclear infrastructure issues and took part in lively panel discussions. OKBM Afrikantov experts shared their experience regarding such topics as the design and operation of land-based and floating small modular reactors, as well as the full process of constructing nuclear icebreakers.



*During the technical tour of Rosatom Emergency Response Centre, the School's participants learned about the advanced technologies and emergency response procedures in the nuclear industry.*

**Victor Mazepov,**  
**Director for International Cooperation of**  
**Rosatom Technical Academy:**

"Embarking on a nuclear power programme is a significant undertaking that requires careful planning, preparation, financial resources, and human capital. In drawing up the programme together with the IAEA, we tried to cover all 19 nuclear infrastructure issues, including the creation of a legal and regulatory framework, human resource development, radiation protection, emergency planning, environmental protection, and the radioactive waste management system."



**A wide range of issues related to nuclear knowledge management was discussed by participants from Asia, Africa, Latin America, and CIS countries at the Russia-IAEA International School.**

The main topics included methods for preserving critical information, developing a training system for the nuclear industry, introducing innovative approaches to knowledge management, and strengthening international cooperation. Leading experts from the IAEA and Russia presented practical experience in preserving and sharing knowledge.

**The IAEA Training Course on Human Resource Development for New and Expanding Nuclear Energy Programmes brought together specialists from 16 countries at the Moscow Branch of Rosatom Technical Academy.**

During the course, experts from the IAEA, Turkey and Egypt shared their insights on personnel development. Specialists from key Russian nuclear industry enterprises told the participants about the practical experience of training personnel for nuclear infrastructure. In addition, the trainees had the opportunity to apply their knowledge in real-life scenarios.

**Anıl Bölme,**  
**Head of Nuclear Installations Department at**  
**Nuclear Regulatory Authority of Turkey:**

"The implementation of a nuclear power programme takes several decades and is a significant achievement for a country. Therefore, training courses for specialists from newcomer countries are an essential tool for the establishment of human resource infrastructure."





## Experts from 18 countries trained at the IAEA international course on practical operation of physical protection systems at nuclear facilities

The course was attended by 30 specialists from Algeria, Argentina, Bangladesh, Belarus, Brazil, Congo, Egypt, Indonesia, Jordan, Libya, Nigeria, Pakistan, South Africa, Tajikistan, Thailand, Turkey, Uzbekistan, and Vietnam.

Group work allowed to assess the effectiveness and sufficiency of existing nuclear security measures at a hypothetical nuclear facility called "Hippotron" and propose conceptual solutions for improving its security in accordance with international conventions and recommendations of the IAEA.

### **Luis Otávio De Oliveira,** expert of Brazil's National Nuclear Energy Commission:

"Brazil has quite an extensive experience in developing nuclear energy. But it is important for us to learn new things from other countries and to share ideas. During the courses in Russia, we had many discussions with representatives from Turkey and Egypt. We will be able to apply useful knowledge gained from the instructors at our facilities. I work at a research reactor. Once I get home, I'll make a presentation summarizing everything that I've learned here. I am completely confident that we will launch the process of improvement."



During seven days, leading IAEA experts, Rostechndzor's specialists and instructors from the Global Nuclear Safety and Security Institute of Rosatom Technical Academy introduced the trainees to the main international documents in the field of nuclear security, the principles of design basis

threat, graded approach to nuclear security and other basic principles reflecting the world's best practices. In the course of practical training, foreign specialists were introduced to the operation of engineering and technical means of physical protection installed at nuclear facilities.

### **Vivian Ojibo,** operator of Nigeria Atomic Energy Commission:

"In the Republic of Nigeria, a multipurpose research reactor is used to carry out work in various fields, including medicine and agriculture. Radioisotope analysis is conducted for diagnosis and treatment of oncological diseases. Construction of the country's first nuclear power plant is also planned. It is very important for us to continuously improve nuclear security. An international IAEA IPPAS mission recommended additional training for Nigerian specialists in the field of physical protection. This is how I became a participant of this course in Russia, and now the important points related to nuclear security and the principles of organizing physical protection systems are clear to me."



## An international training course on inspecting physical protection systems for nuclear facilities is a unique joint development of the IAEA and Rosatom Technical Academy.

In 2024, 28 specialists from regulatory agencies, ministries, and other organizations from 20 countries participated in the course. At practical sessions in laboratories and outdoor training areas of Rosatom Technical Academy, participants learned about the features of physical protection equipment and how to control its operability and efficiency under conditions close to those of real nuclear facilities.





Training of faculty members of foreign universities in the “Train-the-Trainers” format is conducted by Rosatom Technical Academy within the framework of ROSATOM’s project “International Cooperation in Nuclear Education.” The courses facilitate the transfer of educational competencies to partner countries and cover a wide range of topics from the production of electricity at large and small nuclear power plants to the irradiation of medical materials and agricultural products.



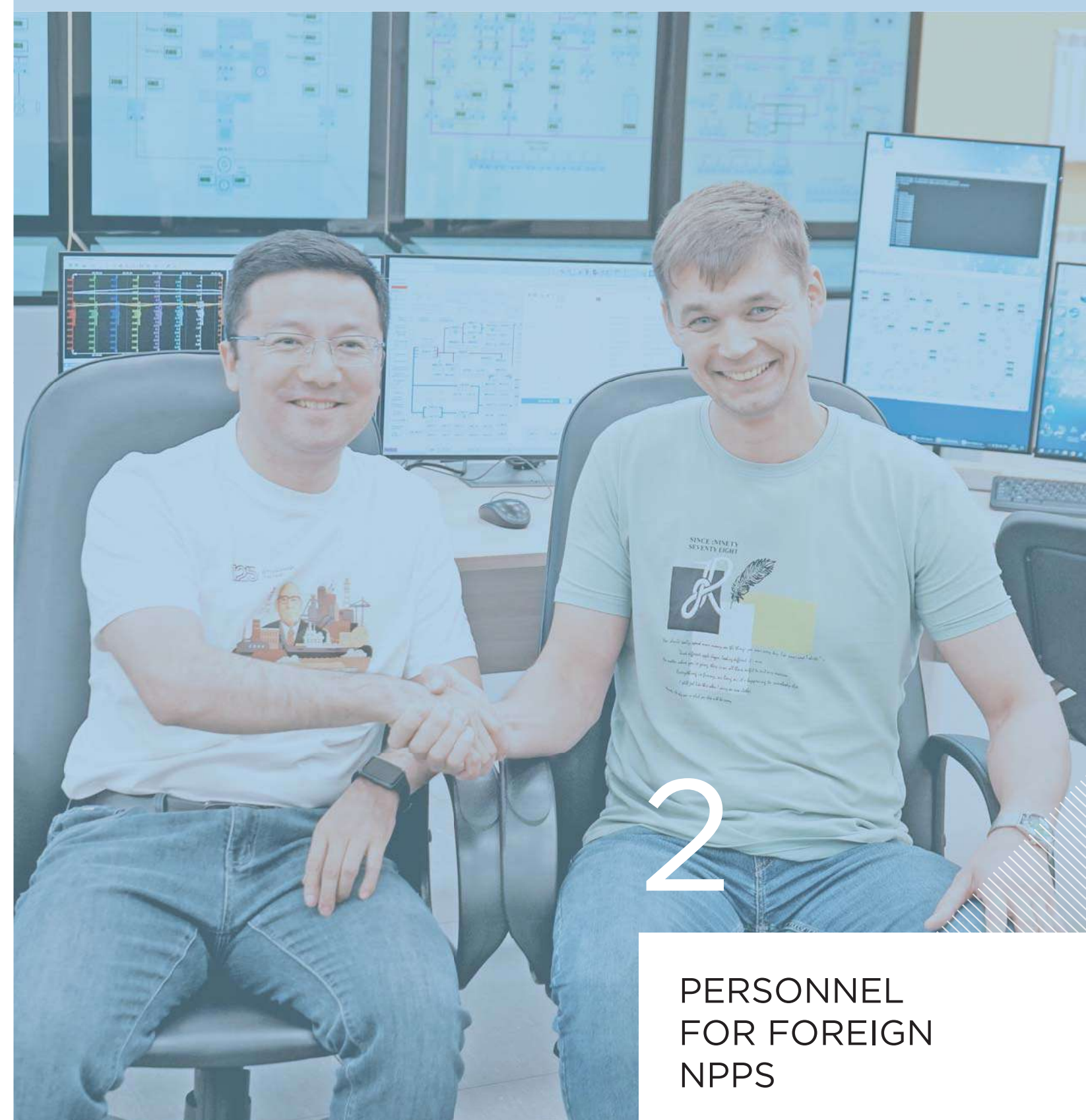
**Anton Dyachenko,**  
Director of the Centre for Advanced Nuclear  
Technologies of Rosatom Technical Academy:

“At the moment, interest in SMR NPPs is rapidly shifting from the stage of analytical awareness of their advantages to the stage of taking concrete steps towards their design and construction. To date, *Akademik Lomonosov* floating nuclear power plant is already operating in Russia, and work is underway to build a small land-based nuclear power plant in Yakutia. A number of countries are making requests to vendors for the possible construction of such plants at their sites.”



**45 foreign lecturers, postgraduates, and specialists in nuclear power engineering from 18 countries participated in the course “NPPs with SMR: Main Aspects and Life Cycle.”**

The course was developed by Rosatom Technical Academy in collaboration with the Nizhny Novgorod State Technical University n.a. R.E. Alekseev and OKBM Afrikantov, key organizations with expertise in the development of small nuclear power plant technologies and training personnel in this field. Support was also provided through the state program “Priority 2030” of the Ministry of Science and Higher Education of the Russian Federation.



## PERSONNEL FOR FOREIGN NPPS

**The online course on strategic planning of energy systems was attended by lecturers, postgraduates, and students from 14 countries around the world.**

Experts from Rosatom Technical Academy introduced the participants to the main aspects and features of shaping the national position on energy planning, the history of development of small nuclear power plants with

Russian-designed reactors, and the standard general layout and equipment for small nuclear plants with RITM-200N reactor.

Galina Fesenko, an international expert, presented modern software tools used by the IAEA for modelling nuclear energy systems. During the practical training, the participants were able to make calculations for modelling energy systems and prepared presentations on energy policy in their countries.



- » Simulator Training
- » Personnel for the First Export SMR
- » Competencies of Security Personnel



## FOREIGN NPP PERSONNEL TRAINING



**2006**

**Tianwan NPP**

1 Power Unit, China  
452 specialists



**2013**

**Kudankulam NPP**

1 Power Unit, India  
182 specialists



**2020**

**Belarusian NPP**

1 Power Unit, Belarus  
621 specialists



**2025**

**Akkuyu NPP**

Turkey  
1311 specialists



**2025**

**Rooppur NPP**

Bangladesh  
1424 specialists



**2028**

**El-Dabaa NPP**

Egypt  
1712 specialists



**2030**

**Paks II NPP**

Hungary  
50 instructors



## PERSONNEL FOR THE FIRST EXPORT SMR

**The delegation from the Republic of Uzbekistan, headed by Ergash Saliev, the Hokim of the Jizzakh Region, visited Rosatom Technical Academy to learn about its capacities of training personnel for the nuclear industry. The delegation also included heads of districts and business representatives from the region.**

*Vladimir Aspidov, First Vice-Rector for Principal Activities of Rosatom Technical Academy, told the guests about the stages of personnel training for SMR NPPs.*



*The guests were also introduced to modern equipment used for initial and continuing training of nuclear industry professionals, including a multifunctional simulator of VVER-1200 and a model of a hypothetical nuclear facility.*

The contract for the construction of a SMR nuclear power plant by ROSATOM in the Jizzakh Region of Uzbekistan is the world's first export contract for the construction of such a plant. The document provides for the construction of six RITM-200 reactors with a total capacity of 330 MW.



*As part of the visit, a book about Jizzakh Region was presented to Rosatom Academy, which was the first publication presented in Russia by the guests from Uzbekistan.*



TECHNICAL  
ACADEMY  
ROSATOM



**In 2024, Rosatom Technical Academy trained over 1,500 specialists from Bangladesh, Turkey, Egypt, Hungary, and China. Theoretical training, simulator training, and on-the-job training at operating Russian NPPs and the NPPs constructed abroad will help foreign nuclear specialists safely and efficiently operate Russian-designed VVER-1200 reactors, which are currently being built by ROSATOM in partner countries.**

Pre-license training of specialists from the first power unit of the Rooppur NPP, who will have to obtain licenses from the Bangladesh Atomic Energy Regulatory Authority (BAERA), was completed at the Rooppur NPP Training Centre (Bangladesh). Forty-eight Bengali nuclear specialists were admitted to the main examination for obtaining the license to work in the field of nuclear energy use: operating personnel of the main control room, chief engineer and deputy chief engineer.



**Sergey Lyulin,**  
*Project Director, Rosatom Technical Academy:*

“After completing theoretical and practical training at the Academy’s branches and on-the-job training at the Novovoronezh NPP, the Bengali trainees study at the Training Centre on-site for six months. After that, they proceed to pre-license training. At each stage of training, knowledge is assessed based on more than 10 criteria. Recommendations for preliminary assignment to position are given. In addition, using special psychodiagnostic techniques, specialists from the Centre for Safety Culture and Human Factor Reliability at Rosatom Technical Academy conduct assessment of professionally important personal qualities and psychophysiological characteristics of employees.”



After completing their studies in Russia, specialists from AKKUYU NÜKLEER completed the Design Features course at the site in Turkey and trained on the Akkuyu NPP full-scope simulator. Photo by AKKUYU NÜKLEER

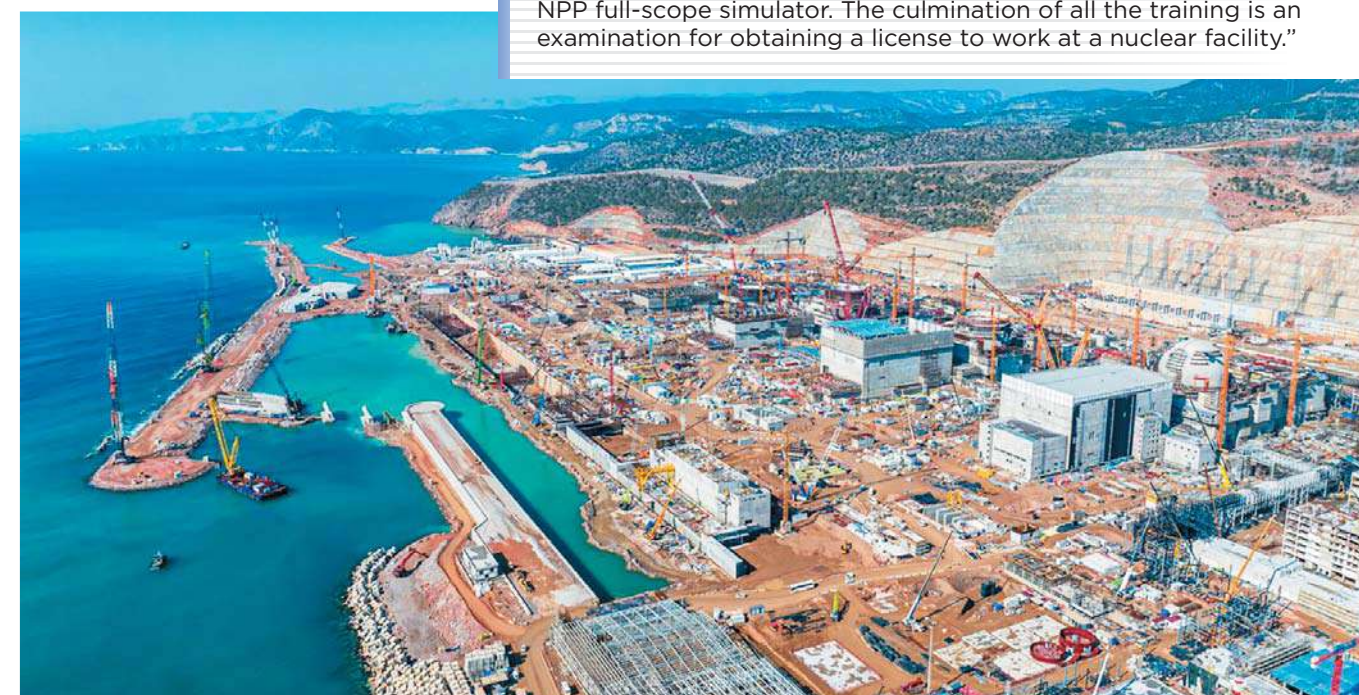
**1578** specialists from foreign nuclear power plants were trained in **2024**



The training of personnel for foreign nuclear power plants is conducted by experienced Russian experts. Photo by Novovoronezh NPP

**Natalia Shulepova,**  
*Director of Akkuyu NPP Personnel Training Project, Rosatom Technical Academy*

“The training program for the specialists of AKKUYU NÜKLEER included a theoretical course based on the operating experience of the reference NPP and practical training on the full-scope simulator at Rosatom Technical Academy. Following that, the trainees completed on-the-job training at operating Power Units 6 and 7 of Novovoronezh NPP, Design Features Course at the site in Turkey and trained on the Akkuyu NPP full-scope simulator. The culmination of all the training is an examination for obtaining a license to work at a nuclear facility.”







**Alexander Kvasha,**  
HR Director at AKKUYU NÜKLEER:

“Rosatom Technical Academy has always been and remains a leader in the field of education and training of qualified specialists. Today, AKKUYU NÜKLEER is developing a wide range of training programmes, including those aimed at the labour market of the Turkish Republic. The Academy can help us train personnel hired on the territory of Turkey. In addition, we have high hopes for career tracks of Turkish specialists who previously underwent training at the Institute for Nuclear Power Engineering of the National Research Nuclear University MEPhI. We also have interesting programmes for interaction with schoolchildren. The Academy carries out extensive work in career guidance, and we want to adopt this experience.”



**Training of personnel to be licensed and the establishment of training centres for nuclear power plants under construction in Russia and abroad were discussed at the Akkuyu NPP site by representatives of Rosenergoatom, Rusatom Service, Rosatom Technical Academy, and AKKUYU NÜKLEER.**

The participants studied the experience of personnel training and certification at operating NPPs and NPPs under construction, reviewed the issues of development of methodological materials and training programs taking into account international standards and practices. Special attention was paid to equipping training centres with full-scope simulators, which reproduce NPP operating conditions as closely as possible, allowing operators and engineers to obtain practical skills in conditions as close as possible to the real ones.

During their visit to Obninsk, the delegation from AKKUYU NÜKLEER got acquainted with the Academy's experience in interacting with secondary general education institutions in the city and integrating them into the industry-wide personnel training system “kindergarten-school-university”. The guests visited specialized laboratories and training facilities of the Academy, a multifunctional simulator, and a model of a hypothetical nuclear facility.



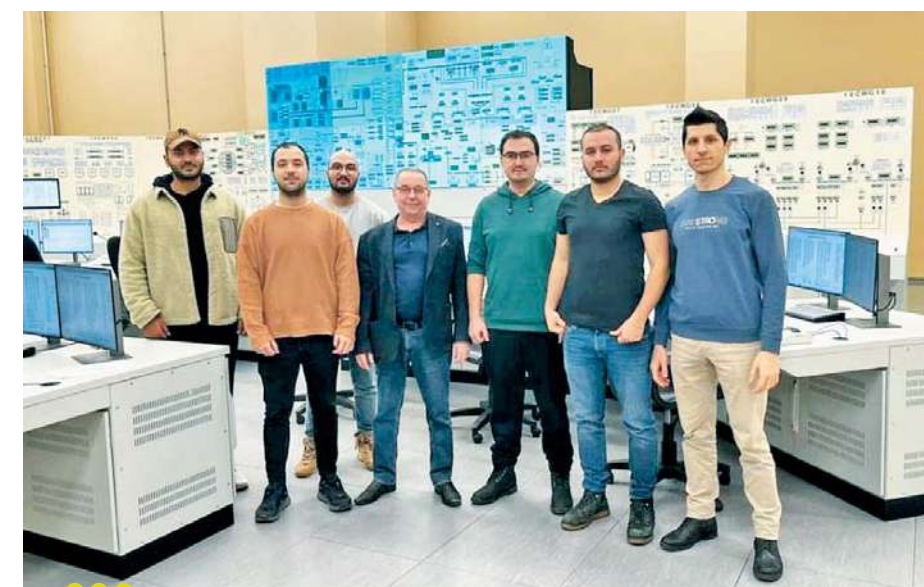
**YAKUP PINARBAŞI:**

**“I AM CLOSELY CONNECTED TO RUSSIA”**

*At the beginning of the year, specialists from the Turbine Island of the Akkuyu NPP successfully passed an exam on the course “Control of operational states and modes of the reactor plant during normal operation.”*

For Yakup Pınarbaşı, his journey into nuclear energy and, simultaneously, to Russia, began with his studies at MEPhI. In Turkey, he successfully passed the selection process and took exams. Everything appealed to the young man: the vast city of Moscow, kind-hearted friends, Russian culture, and Russian cuisine. He says everything just fell into place. The only thing he couldn't adjust to was the climate – it wasn't the cold, but rather the lack of sun compared to his home in southern Turkey.

After completing his studies in the Nuclear Power Plants Design and Operation Department, Yakup Pınarbaşı decided to pursue further education in the



*Group of specialists from the Turbine Island of the Akkuyu NPP.*





Yakup Pinarbaşı  
with his wife and son.



nuclear field. That's why the Turkish student came to Rosatom Technical Academy. By then, not only his chosen profession connected him closely to Russia, but also his Russian wife and later their son Dimir.

"My plans are to continue climbing up the career ladder. If I'm lucky, I'll rise as far as Chief Engineer. I'm ready to take full responsibility," Yakup says.

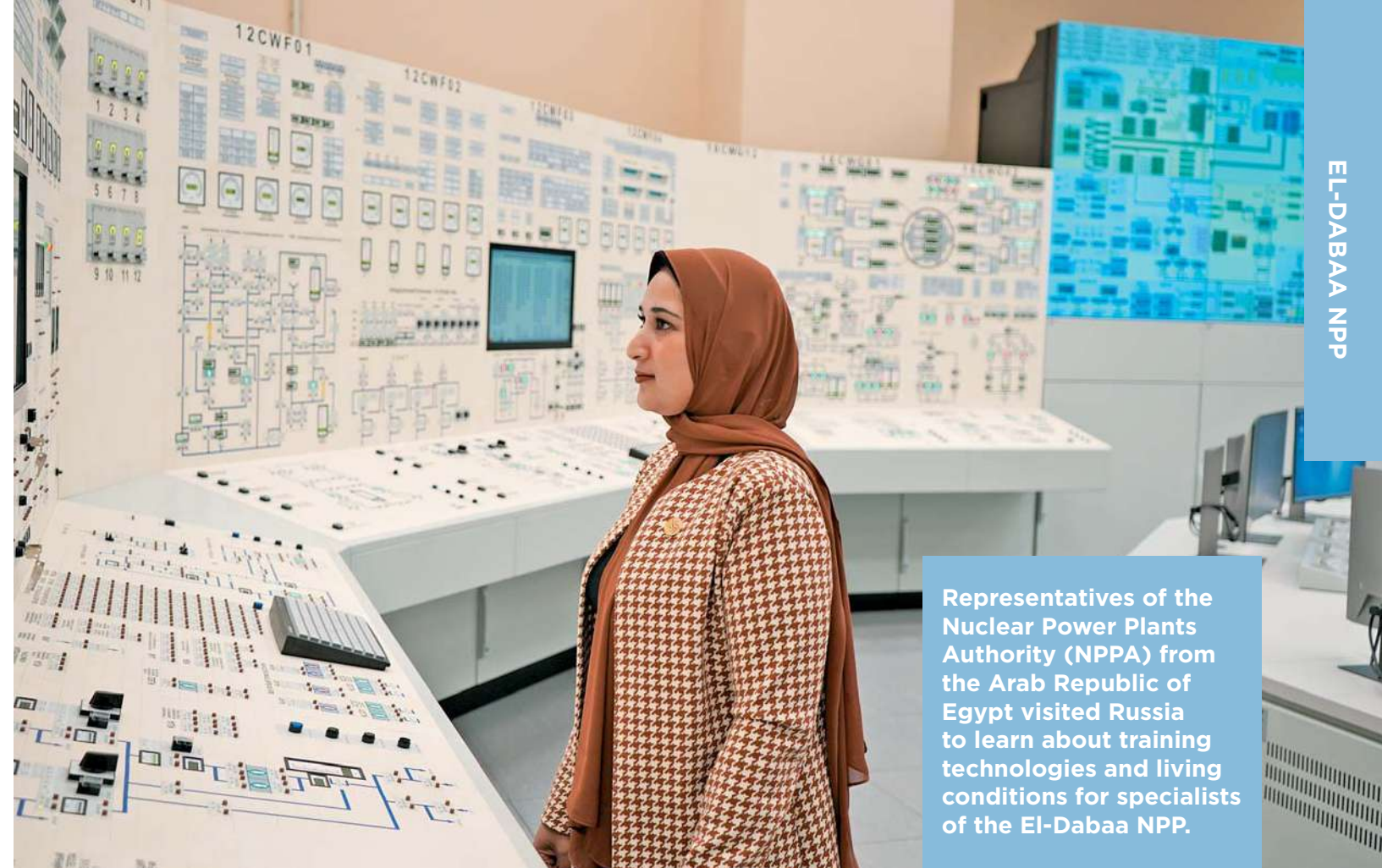
Yakup Pinarbaşı has been studying at the Academy for nine months. Part of the course was held in Obninsk and part at the Academy Branches in St. Petersburg and Novovoronezh.

"This is an excellent educational institution for nuclear industry professionals. It has highly qualified instructors. As a lead specialist of the Turbine Island, I need to know everything, starting from the fundamentals. From your instructors, I receive important information, practice skills on simulators, and then our group has on-the-job training at Units 6 and 7 of the Novovoronezh NPP"

Yakup Pinarbaşı doesn't face any communication problems; he speaks and writes Russian fluently. His one-and-a-half-year-old son already starts communicating with his parents in two languages. Nowadays, Russian and Turkish experts working at the Akkuyu NPP site understand each other perfectly well.

"While housing construction continues in Turkey, we're living near the NPP in rented accommodation," explains the nuclear expert. "Both Russians and Turks communicate very well here. My wife cooks dressed herring, soups, and borscht. I love all these dishes too. On New Year's Eve table, there's roasted turkey with apples and plenty of fruits. However, this year, I won't be able to celebrate the holiday with my family. I'm finishing my studies at Rosatom Tech and will be working at the Akkuyu NPP on New Year's Day, while my wife and little boy have decided to stay with the parents in Moscow for now. After the holidays, we'll be together again. However, I'll return to Russia to study modern nuclear technologies."

Oxana Tupitsyna



**Representatives of the Nuclear Power Plants Authority (NPPA) from the Arab Republic of Egypt visited Russia to learn about training technologies and living conditions for specialists of the El-Dabaa NPP.**

The delegation, led by Hossam Ali, Deputy Head of the El-Dabaa NPP Project, visited Rosatom Technical Academy's sites in St. Petersburg, Obninsk, and Novovoronezh. During their visit, NPPA representatives learned about the training methods for foreign specialists and the technical training aids used. They saw the simulator facilities at the Academy's branches and got acquainted with the Practical Training Centre in Novovoronezh. Special attention was paid to accommodation arrangements for the Egyptian trainees, and a meeting was organized with the trainees at the request of the delegation.

**Andrey Shaykin,  
Chief Expert of the Novovoronezh Branch  
of Rosatom Technical Academy:**



"In the classrooms and workshops of the Novovoronezh Branch, training is provided for shift supervisors of the electrical and reactor departments by using simulators and mock-ups. Future senior managers of the nuclear power plant under construction, the Director and Chief Engineer, receive practical training here. Additionally, the Branch provides training for maintenance and repair personnel and develops training materials."





# WITH SPECIAL AFFECTION FOR RUSSIA

**Instructors from the Xudapu Nuclear Power Plant have received certificates after completing a course on VVER-1200 reactor operation.**

Training of the Chinese specialists was conducted using the multifunctional simulator at the Novovoronezh Branch of Rosatom Technical Academy. During their studies, the participants studied normal

and abnormal operation modes, including accidents, and gained professional instructor skills necessary to train personnel at the workplace.

The group included lead engineers with knowledge and experience in operating VVER-type reactors. Some of them already had experience working as instructors at a full-scope VVER-1000 simulator in China. As the trainees themselves admitted, they came to Russia to learn about advanced energy technologies.

In addition to the intensive studies, the guests were also interested in learning more about Russian life and culture. Accompanied by a Russian specialist, the colleagues visited the Voronezh Regional Museum, where they learned about local history and archaeological exhibits. They also saw exhibitions "Voronezh Architects" and "History of the Russian Fleet," products from Voronezh factories, and local flora and fauna.

**Maxim Talabanov,**  
**Head of Foreign NPP Personnel Training Project Development at Rosatom Technical Academy:**

"The foreign colleagues had practical training to conduct acceptance tests and work at the VVER-1200 simulator for two months. The simulator of the Russian Generation 3+ reactor will be installed at the Xudapu Nuclear Power Plant by GET LAB LLC. The instructors from China have a lot of professional experience. For some aspects of training, they even didn't need an interpreter."



**Liao Jianglong,**  
**engineer with twenty years of experience in the nuclear industry:**

"Initially, 90 specialists are planned to be trained for the new units of the Xudapu NPP. The training process will be similar to that used at Rosatom Technical Academy, combining theoretical study with hands-on practice on simulators. By June next year, the operators will need to pass exams. Therefore, training is a very important process for us."



**Wu Yuanzhu, group leader:**

"I've always been interested in Russian history. I've read many books about Peter the Great and other rulers. In 2022, I spent nine months working and living in Saint Petersburg – visiting museums, attending exhibitions, and watching historical series. I appreciate that Russians value and respect their culture and traditions. They are strong-willed, courageous, decisive, and kind people. I know about the Siege of Leningrad and saw your Victory Day. My heart holds a special affection for Russia."



**Nikolay Evseyev,**  
**Personnel Training Engineer at Rosatom Technical Academy:**

"Education for modern Chinese people is not just a pathway to career success, but rather a mentality. Chinese experts are educated and technically competent. It was interesting to work with them. The experience with VVER-1000 made it possible to create lessons based on a comparison with the innovative system."







**Experts from Russia, Belarus, Armenia, and China shared their experience in simulator training for NPP personnel.**

The meeting took place at Rosatom Technical Academy's site in Novovoronezh as part of cooperation with Moscow Centre of the World Association of Nuclear Operators (WANO).

Over three days, representatives of Rosenergoatom NPPs, Rosatom Technical Academy, VNIIAES, Atomflot, and foreign partners shared their best practices in simulator-based training. The participants learned about the methods to improve the efficiency of operator training at Tianwan NPP, the joint use of simulators

for training Belarusian nuclear specialists, the application of systematic approach to training in different countries, and the assessment of operator reliability by using modern digital technologies at Russian nuclear power plants. As a result of the event, a draft memorandum was prepared regarding simulator-based training for the NPP personnel.

**Managers and specialists from Kazakhstan completed a course titled "Analytical Work and Internal Inspection in Physical Protection Systems."**



**Altynbek Galym, Lead Manager of the Security Department of LLP "Mining Company "ORTALYK":**



"The course clearly demonstrates the organisation of work on conducting a vulnerability analysis of a nuclear facility: what stages it consists of, what documents should be referred to, what difficulties may arise during the analysis and how to solve them. The knowledge gained complements our experience in nuclear security, and we will apply it in our work."

The participants learned about the international documents and principles governing the physical protection regime within a country, along with the IAEA recommendations for analytical activities in this field. Practical demonstrations focused particularly on testing the functionality of engineering and technical means of physical protection systems.

To consolidate the knowledge gained, the specialists under the guidance of experts from the Global Nuclear Safety and Security Institute assessed the sufficiency of the available protection measures for the hypothetical nuclear facility "Hypotron" and developed a list of compensatory measures in accordance with international conventions and the IAEA recommendations.



**Andrey Solntsev, Vice-Rector, Director of the Novovoronezh Branch of Rosatom Technical Academy:**

"We understand that safety of nuclear power plants primarily depends on the personnel qualification. Therefore, during the training, we constantly enhance not only the methodologies but also simulator-based training. Independent expert opinion from the Moscow Centre of WANO allowed for a comprehensive evaluation of simulator-based training in the nuclear industry, sharing best practices and identifying areas for improvement."



The participants learned about the simulator facilities and other modern equipment for practical training available at the Novovoronezh Branch of Rosatom Technical Academy.





Instructors from the Global Nuclear Safety and Security Institute of Rosatom Technical Academy have completed the third cycle of training courses for physical protection personnel of the Akkuyu NPP being constructed by ROSATOM in Turkey.

In **2024**, **122** specialists from the Akkuyu NPP took part in nuclear security courses.



The training was attended by security personnel, information system operators, and heads of physical protection subdivisions. The participants showed great interest in the topic

"Identification of Information Security Threats." Many questions were asked about access control procedures at nuclear facilities and working with international documents.



A series of nuclear security training courses for the personnel and managers of the Security Service of the Akkuyu NPP has been adapted to the operating conditions of the NPP under construction in Turkey. The training is conducted as part of the comprehensive plan for nuclear security training of NPP physical protection specialists, scheduled to last until 2027.

The physical protection personnel of the Rooppur NPP (the Republic of Bangladesh) completed a three-week training on the special course "Administration of Automated Physical Protection Systems" developed by the Global Nuclear Safety and Security Institute of Rosatom Technical Academy.



The training took place in a specially equipped laboratory of the data collection and processing system. The classroom is equipped with 10 workplaces for trainees, training stands with the means of intrusion detection, CCTV and access control systems. Special software that is to be implemented at the Rooppur NPP is set up in the training classroom.

In the framework of the course, the trainees gained knowledge in the organization of physical protection of nuclear facilities, management of physical protection and the complex of engineering and technical means. An important area of training was learning about the capabilities of special software, tasks and peculiarities of development of a physical protection system at NPPs.



**Ripon Kumar,**  
Rooppur NPP Engineer:

"The course we have studied builds the competencies required for professional activities in the field of physical protection at the site of the Rooppur NPP. Experienced instructors introduced us to the operation principle of a large amount of equipment and software related to physical protection, including various types of intrusion detection sensors and CCTV cameras. We learned how to operate this equipment, how to act in emergency situations and respond to alarms. This information will help us to ensure reliable security of our nuclear plant in the future."







The experts of the Global Nuclear Safety and Security Institute conducted a three-week training on the special course “Organization of Personnel Training for the Automated Physical Protection System” for the instructors of the Rooppur NPP (Bangladesh).

**Mahmud Arafat, Head of Physical Protection and Nuclear Security Department of the Rooppur NPP:**

“Our country is just starting to develop nuclear energy, and this course lays a solid ground of competencies required for training physical protection personnel of the Rooppur NPP. First of all, we were trained in instructor skills and mastered the theoretical knowledge necessary for professional activities in the area of physical protection assurance. The key point was learning about the equipment that will be used at the plant in Bangladesh. It was important for us to understand how to operate, control and maintain it. We got a lot of important information about this here.”



During the training, the trainees learned the principles of the systematic approach to training. They discussed the instructor's role, methods, specifics and stages of the training process, developed and conducted a lesson under the supervision

of experts, and mastered the skills of preparing an effective presentation and practical exercises. The knowledge gained was consolidated by presenting the final work in the form of a training session on a topic related to physical protection assurance.



IN THE CONTEXT  
OF GENERATION IV

- Proactive Training Experience
- In Support for Small NPPs
- 900 Expert Reviews for the Proryv Project





## ROSATOM LEADS THE WAY IN RETRAINING SPECIALISTS FOR NEXT-GENERATION REACTORS

**Supporting the capacity building for the new technological platform in nuclear energy, Rosatom Technical Academy initiated a series of continuing training courses focusing on two-component nuclear energy systems.**

These courses create a unified understanding of the full-scale implementation of the closed nuclear fuel cycle and the commissioning of innovative Generation IV nuclear reactors. The course programme was developed over a period of more than one and a half year in cooperation with key experts from the Proryv Project with the support of the Department of Scientific and Technical Programmes of ROSATOM.

The first courses covering the fundamentals of two-component nuclear energy and introducing the innovative lead-cooled reactor BREST-OD-300 were attended by representatives from leading Russian nuclear industry enterprises who are actively engaged in various activities within the Proryv Project. A series of off-site training sessions was held for the employees of Siberian Chemical Plant.

In 2024, over 300 industry experts were able to learn about the technological features of the BREST-OD-300 reactor plant, production of mixed uranium-plutonium nitride fuel, and reprocessing of spent nuclear fuel.



**Dmitry Evlanov,**  
*Director General of Proryv JSC:*

"It would be a major oversight to develop new technologies without considering who and how will implement them in practice. The long-term programme for human capacity building in the field of new nuclear energy includes both retraining employees already working in the nuclear industry and training young highly qualified specialists at ROSATOM's flagship universities. On our part, we are working on a system to quickly integrate new specialists into project tasks and create conditions that will encourage them to stay with the project for a long time."



**Polina Kovaleva,**  
*Director for Advanced Nuclear Technologies at Rosatom Technical Academy:*

"For innovative nuclear power facilities such as BREST-OD-300, it is essential to start retraining the personnel involved in construction and subsequent operation as early as possible. Such programmes require instructors with extensive experience in NPP personnel training and a deep understanding of the new technology, along with training materials prepared ahead of schedule based on technical documentation. Within the framework of the Proryv Project, instructor personnel and training materials have been prepared, and work continues on creating training materials for other technologies."



**In 2024, the range of courses offered by Rosatom Technical Academy in the field of related technologies of two-component nuclear energy was expanded to include industrial robotics and next-generation codes.**

A pilot practice-oriented training course for industry engineers aimed at training personnel of robotic manufacturing facilities was conducted in collaboration with experts from Proryv JSC and with the participation of faculty members from ITMO University and specialists from Diakont JSC, the developer of robotic systems. The course included both theoretical and practical components.

The participants were current employees of the nuclear industry, including operating, design, and expert organizations. They acquired new knowledge, studied the design of industrial robots, and practised the skills of managing and maintaining robotic systems designed for nuclear fuel management.



*Through training on a unique experimental base unlike any other in the world, nuclear industry professionals gain the necessary skills to work effectively in future nuclear energy applications.*







Professionals from the Nuclear Safety Institute of the Russian Academy of Sciences (IBRAE) and Rosatom Technical Academy, with the support of ROSATOM, conducted a scientific and practical workshop school on computational and predictive systems.

The event brought together over 70 representatives from 25 organizations at Rosatom Technical Academy. The participants learned about the features of calculation codes, such as GeRa, KORIDA, FENIA, RELTRAN, MOUSE, and EKORAD, which are designed for the assessment and justification of safety of nuclear facilities at the final stages of their life cycle. During lectures and practical sessions, theoretical foundations and functional capabilities of these codes were discussed, including numerical modelling, calculations, and result analysis both for test cases and real-world objects.



**Igor Linge, IBRAE Advisor,  
Doctor of Science in Engineering:**

"The developed domestic calculation codes are crucial for sustainable development of the nuclear industry. They cover almost all tasks related to the final stages of the life cycle. Practice has shown that the most effective way to learn how to work with these codes is through a workshop school, where participants can ask questions directly to developers and get immediate answers, while developers gain valuable feedback and suggestions from highly qualified specialists."



# TEN YEARS ANNIVERSARY OF THE CENTRE FOR SCIENTIFIC AND TECHNICAL EXPERTISE OF ROSATOM TECHNICAL ACADEMY

It has been ten years since the activity aimed at organizing scientific and technical expert reviews started at the Moscow Branch of Rosatom Technical Academy. Under the supervision of the Department of Scientific and Technical Programmes and Projects of ROSATOM, an industry-wide system of scientific and technical expertise was established, defining unified requirements for the organization, objects, and participants. The function of the industry-wide operator of scientific and technical expertise was singled out, Rosatom Technical Academy has been performing this function since 2016. The Centre's responsibilities include organizing expert reviews, monitoring and developing expertise, and developing expert networks.

Only in 2024, the Centre organized more than 600 expert reviews within the framework of the integrated programme "Development of Engineering, Technologies and Scientific Research in the Use of Nuclear Energy in the Russian Federation until 2024."

**Vadim Gorbatov,  
Head of the Department of  
Machinery, Equipment, and Intangible  
Assets Appraisal at Russian Appraisal:**



"We have been cooperating with Rosatom Technical Academy since 2021. During our collaboration, we completed four annual cost reviews for the ITER state contract project. For each review, we engage our top-tier, highly qualified specialists. Annual reviews ensure proper monitoring of the expenses incurred by companies participating in the project. With every passing year, there is a reduction in the number of unsubstantiated costs presented in the reviewed estimates, leading to closer alignment with market data."

Scientific and technical expert review is a powerful mechanism for supporting the implementation of R&D initiatives and making informed investment decisions on projects and programmes. It also provides reliable state-level protection concerning intellectual property rights.



Customers of expert reviews include such organizations as Proryv (Breakthrough), Science and Innovations, and Quantum Technologies. Last year, 260 scientific and technical expert reviews were performed for them. The ITER project successfully passed an expense validity evaluation in terms of the Russian contribution in 2025.

Experts listed in the nuclear industry expert database are highly qualified scientists, engineers, patent specialists, economists, and managers. They possess both theoretical knowledge and practical experience required to address challenges in research, development, intellectual property protection, assess risks of investment projects in terms of scientific and technical issues, evaluate economic feasibility of R&D spending, and conduct expert reviews of scientific and technical documents on key issues of development of the nuclear industry's scientific and technological sector.

With the participation of employees from the Moscow Branch of Rosatom Technical Academy, the digital platform called "Complex of Digital Services "Digital Science" was created based on domestic software solutions.

The platform was developed as part of the industrial IT project "Development of a Complex of Digital Services "Digital Science", support for automation of scientific and technical activities of ROSATOM. The project was launched to create a common information space that collects a "digital footprint" of scientific and technical developments and competencies, allowing to preserve all the shifts of scientific thought and track progress along various stages of technological readiness.

This platform incorporates 10 services, 25 modules, three kinds of databases, and six digital instruments. Integration of Digital Science with national and industrial systems has been achieved.



The "Certificate of Expertise" is a recognition of the high professional status of an expert in the nuclear industry. Since 2018, more than 140 certificates have been issued.

**Maria Grigorieva,**  
**Chief Specialist of the Expertise Department of Proryv JSC:**

"The implementation of such an ambitious project as Proryv (Breakthrough) requires objective scientific and technical expertise, which will ensure an increase in the efficiency of scientific, technical and analytical activities and justification for decision-making in the field of research and development of technologies and equipment. The Academy has been the operator of the expertise of R&D results in the Proryv area since 2016. Over the past years, about 1,000 reviews have been organized. In cooperation with Rosatom Technical Academy, the issues of organizing the expert review process are being solved very effectively."



**Rosatom Technical Academy expands cooperation with training centres in the Far East Region in the field of personnel training for small nuclear power facilities**

A delegation from Rosatom Technical Academy visited the Far Eastern Maritime Training Centre of the Admiral Nevelskoy Maritime State University. The Centre is one of the best equipped in the world. The guests learned about the unique facilities of the Centre, including the simulator that has been used since 2023 to train naval engineers (naval mechanics and electromechanics) in the operation of naval nuclear reactors.

**Yuri Seleznev,**  
**Rector of Rosatom Technical Academy:**

"The Far East holds great potential for the deployment of small nuclear power facilities. To prepare qualified personnel in this field, it is essential now to enhance bilateral cooperation with the training centres in the Far East. The collaboration with Admiral Nevelskoy Maritime State University makes it possible to integrate the accumulated experience in the training of NPP operating personnel and ship crews, and establish a solid platform for the training of personnel for new nuclear facilities in the Asia-Pacific region, floating NPPs and ships with nuclear reactors."



Experts from the Academy conducted continuing training for the faculty members at Admiral Nevelskoy Maritime State University in naval nuclear energy programmes.





# LOOKING TO THE FUTURE

Maria Khaletskaya, Director of the Moscow Branch of Rosatom Technical Academy, explains how a multi-level personnel training system is being built in the context of transitioning to the new technological platform for nuclear energy



**- According to experts' estimates, creating a fourth-generation technology landscape will require hundreds of thousands of specialists with new levels of competencies. How do you train personnel for systems that are still under development? Does the Academy have solutions?**

We often use the term "proactive training," which implies training personnel ahead of time before the commissioning of the facility. This model has proven effective – Rosatom Technical Academy already uses this approach to train personnel for NPPs abroad. When we talk about Generation IV power systems, it's important not only to train personnel on time for work at construction sites, but also to train engineers who design and develop new equipment and to train technologists involved in its production. All these activities must be carried out simultaneously with the advancement of technologies, new regulatory frameworks, and principles of work.

Such tasks can only be solved through cooperation with development centres, specialized universities, and training centres at enterprises. When developing educational programmes, we attach great importance to involvement of frontline scientific and engineering professionals in the development of programmes and expert reviews.

Our role as an industry-wide centre for continuing education and training is to ensure that new knowledge quickly translates into training materials tailored to different technical levels depending on target audiences – from students to operating personnel of nuclear power

plants. We integrate training materials into the curricula of specialized universities and provide them to training centres at NPPs.

These principles are the basis for the system of proactive personnel training for ROSATOM's new nuclear power industry, and we are a part of it. For example, for the first Generation IV energy complex currently under construction in Seversk, the Academy, supported by ROSATOM's Department of Scientific and Technical Programmes, has already developed two types of programmes: a series of short-term basic courses covering two-component nuclear energy technologies aimed at broad audiences, including students, and initial training programmes for the operating personnel of BREST reactor. Additionally, we're participating in the development of simulator training programmes.

**- Small modular reactors represent one of the most promising areas in nuclear energy today. Land-based SMR and floating power units with RITM reactors are already under construction. Does the Academy plan to create training programmes for the personnel of such facilities? Are there any other training programmes related to small modular reactors?**

To ensure the necessary manpower for SMR construction projects both in Russia and abroad, the Academy is establishing an Industrywide Centre of Excellence dedicated to training personnel for such facilities. The Centre has several objectives, from defining competency framework

for Russian and foreign SMR personnel – including the personnel working in commissioning and M&R – to conducting industrywide and international events focused on sharing experience in the field of SMR technologies. First and foremost, this involves training operating personnel for the NPP in Uzbekistan and SMR NPP in Yakutia.

We've gradually expanded our capabilities towards achieving the status of an industrywide centre since 2012. At that time, at the St. Petersburg Branch, experienced nuclear fleet operators were trained in instructor skills. A significant project in 2015 was the training of the first employees for the floating nuclear power plant Akademik Lomonosov. Since 2021, the Academy has been organizing seminars and training courses on SMR NPP technologies for faculty members of foreign universities and representatives of the IAEA member states. International recognition came last year in Vienna during the International Conference on Small Modular Reactors and their Applications when an agreement was signed between the IAEA and Rosatom Technical Academy for cooperation in the field of small modular reactors and nuclear medicine. This document prolongs and expands the Academy's previous arrangements with three Departments of the IAEA: Nuclear Energy Department, Nuclear Safety and Security Department, Nuclear Sciences and Applications Department.

In 2024, we initiated the development of the training conception and training materials for small nuclear power plants based on the RITM-200 reactor. A short version of the basic course on this technology will become available to trainees in Russian and English languages in 2025. Individual modules of the course will be presented as part of the training programme "NPPs with SMR: Main Aspects and Life Cycle," planned by ROSATOM for faculty members, scientists, and professionals in the field of nuclear energy from around the world.

Within the framework of Rosatom Technical Academy Development Programme until 2030, the Moscow Branch will host one of the key projects – the establishment of the Industry-wide Centre of Excellence for SMR Personnel Training.



*ROSATOM's experience in designing and operating small nuclear power plants was presented at the IAEA International Conference in Vienna in October 2024. Photo by Rosatom – International Network*

**– It is clear that the Academy actively participates in addressing practical challenges in the industry. What are your plans for the future?**

Our primary goals and development projects are outlined in the Rosatom Technical Academy Development Programme until 2030. One of the biggest challenges facing the entire industry is implementing the General Plan for the construction of NPPs up to 2042, approved by the Government of Russia in December last year. Here, our contribution is evident – we train operating personnel for nuclear power plants. Another challenge is training personnel for foreign NPPs. Although a solid foundation was laid through the investment project “Development of Rosatom Technical Academy,” implemented from 2018 to 2022, the number of foreign NPP projects is growing, requiring further adjustments to existing personnel training mechanisms.

Equally important is the enhancement of the system of industrywide additional professional education in the field of safe use of nuclear energy and national security. This includes introducing new training programmes aimed at ensuring technological sovereignty, improving training quality through advanced methodologies and training technologies, and expanding the range of training services.

**– What projects does Rosatom Technical Academy plan to implement under the Development Programme?**

There are many projects, I will name the main ones. These include the establishment



of industrywide centres of excellence for training the personnel of small nuclear power plants, nuclear medicine facilities, and nuclear infrastructure, the creation of a cognitive and neuropsychological research laboratory, opening career centres at flagship universities to attract top graduates to work at Rosenergoatom's enterprises. Additional initiatives included in the Development Programme aim to address the challenges of training of specialists for the nuclear industry. However, all of them cannot be covered in this interview. Follow our news to learn more.

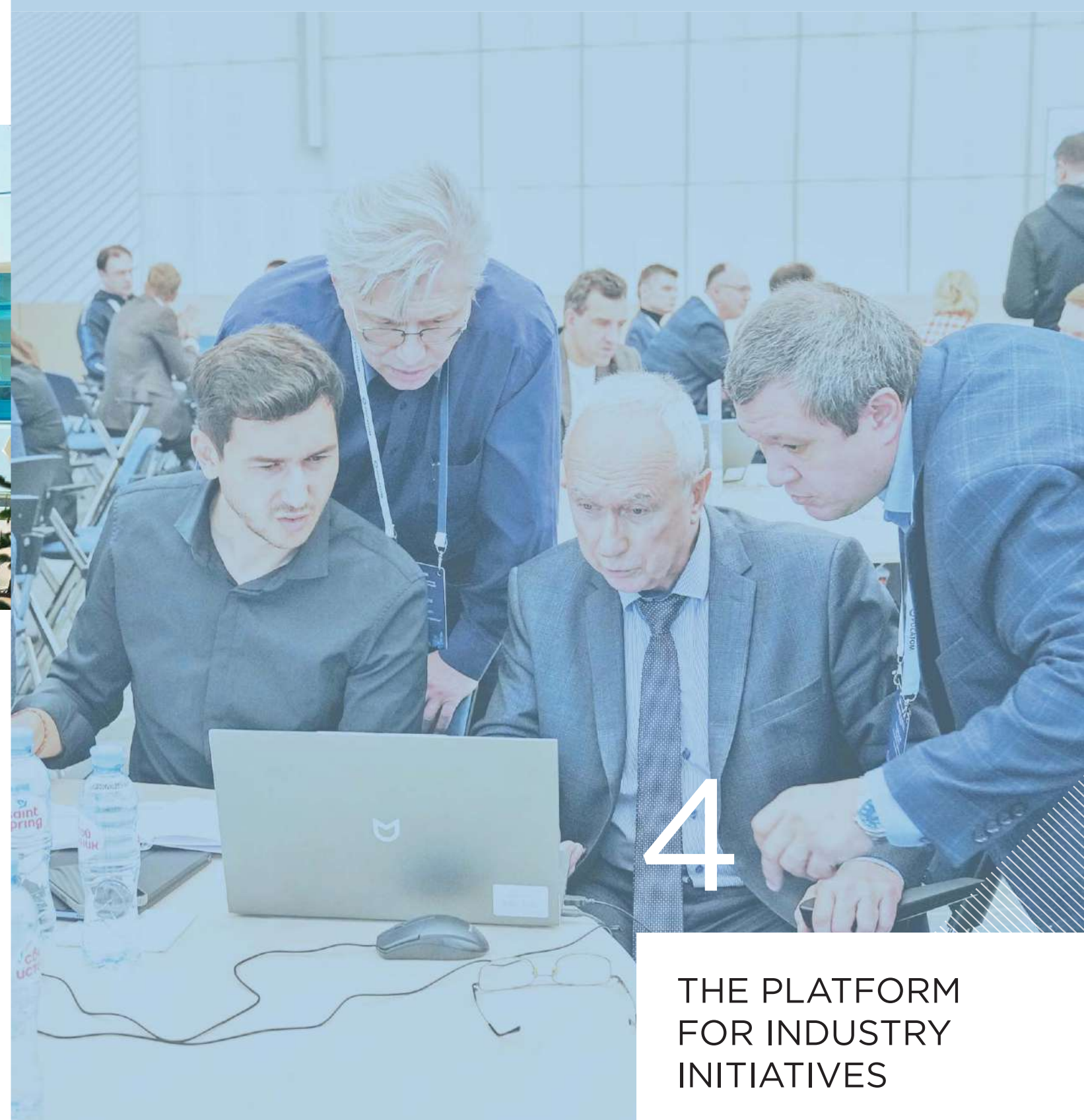
**– What role will the Moscow Branch play in implementing the Rosatom Technical Academy Development Programme?**

The Moscow Branch will assume a crucial role in the successful implementation of the Programme. To start with, the Branch is a project office that draws up the Development Programme, a methodological centre for the formation of this document, and it will be responsible in the future for ensuring the timely implementation of the Development Programme across

all sites of Rosatom Technical Academy. The Moscow Branch will also host one of the key projects envisaged in the Development Programme – the establishment of the Industry-wide Centre of Excellence for SMR Personnel Training.

Furthermore, the Moscow Branch acts as the hub for the international activities of the Academy. Building on its extensive experience of collaboration with the IAEA and accumulated expertise in international activities, it will be implementing the educational aspects of nuclear infrastructure personnel training. The relevance of this task has grown significantly due to the planned construction of new NPPs in countries with no prior experience in operating nuclear facilities.

A new function of the Branch will be to supply organizations within Rosenergoatom's Power Engineering Division with university graduates. A pilot project for career centres at regional universities has already been developed. Therefore, the Moscow Branch plays an important role in the implementation of the Academy's development strategy.



4

## THE PLATFORM FOR INDUSTRY INITIATIVES

- » Personnel for Nuclear Medicine
- » In the Paradigm of Safety
- » 55th Anniversary of the St. Petersburg Branch





### Leading Russian Experts Discuss Challenges and Tasks of Nuclear Medicine

The scientific and practical seminar “Radiopharmaceuticals: Production, Quality, Safety – 2024” brought together specialists from organizations, enterprises, research institutes of the Russian Academy of Sciences, Ministry of Health of Russia, Federal Medical Biological Agency, Ministry of Education, Ministry of Industry and Trade, Rosstandart, Roszdravnadzor, ROSATOM, as well as representatives of leading Russian universities at Rosatom Technical Academy.

The participants discussed challenges and tasks of the nuclear medicine associated with production technologies and quality control of advanced radiopharmaceuticals for diagnosis and therapy of various diseases.



*Valery Krylov, Doctor of Medical Science, Head of the Department of Radiosurgical Treatment with Open Radionuclides at A. Tsyb Medical Radiological Research Centre, told the seminar's participants about the modern reality of radionuclide therapy.*



Growth of the Russian nuclear medicine market by 2030 will necessitate the training of highly qualified specialists.

The seminar's participants noted an acute shortage of medical physicists and engineers, including radiation safety specialists, in Russia. About 70 students graduate annually through higher education programmes. However, graduates must undergo initial and continuing training to work at enterprises.

According to the seminar's organizers, Rosatom Technical Academy in cooperation with leading universities, medical centres and nuclear industry enterprises can play a key role in postgraduate education of nuclear medicine specialists. For the purpose of a systematic approach to the organization of continuing training in this area, the Academy's specialists develop and implement training programmes in the field of non-power application of nuclear technologies in radiation safety, radiation monitoring, and regulatory support in the production of radiopharmaceuticals.

### **Oksana Aleksandrova, Lead Expert of the Training and Methodological Centre “Nuclear and Radiation Safety” of Rosatom Technical Academy:**



“Today it is crucial to combine efforts of all concerned parties for effective development and implementation of new radiopharmaceuticals and medical technologies of their application. Establishing an information and educational platform would contribute to the joint solution of pressing administrative and regulatory problems hindering the growth of nuclear medicine.”



*The participants explored opportunities for continuing training and retraining in the field of dosimetry support and radiation monitoring on the basis of the Training and Practice Centre for Radiation Measurement Technologies at Rosatom Technical Academy.*

Rosatom Technical Academy participated in the BRICS International Forum on Nuclear Medicine.

BRICS 20  
RUSSIA 24



The Forum was organized by the Ministry of Health of the Russian Federation and ROSATOM. Among attendees were senior officials from health ministries and relevant agencies of BRICS countries, leading experts from scientific institutions, developers and manufacturers of radiopharmaceuticals.

A review of best practices in nuclear medicine within BRICS nations presented at the Forum is planned for dissemination via United Nations, World Health Organization, International Atomic Energy Agency, and International Agency for Research on Cancer.



### Over 500 Information Security Specialists Gathered at the Conference “ROSATOM/Information Security 2024”

The conference united managers and specialists from the information security departments of 137 enterprises of ROSATOM along with the representatives from 55 Russian companies engaged in development and production of information security tools. They got acquainted with the current solutions in the field of cybersecurity, discussed emerging information threats and optimal ways to counteract them. The conference was organized by the training and methodological centre “Secure Information Technologies” of the Global Nuclear Safety and Security Institute of Rosatom Technical Academy.



### Egor Bologov, Director of the Department of Industrywide Training of Rosatom Technical Academy:

“Information security stands out as one of the most rapidly evolving fields today. New threats emerge daily, presenting us with fresh challenges regarding data and system security. The conference events take place in six different classrooms, so everyone can find something interesting for themselves. Vendors bring ready-made solutions for study and evaluation, while technical experts are present to answer complex questions and provide guidance. This conference is an ideal platform for any company that produces information security software and wants to offer its products to ROSATOM enterprises.”



### Evgeny Abakumov, Director of Information Infrastructure at ROSATOM:

“A key challenge facing today’s IT industry lies in achieving technological independence while maintaining infrastructure resilience at acceptable levels. Given the increased heterogeneity of our technological environment, managing this diversity has become crucial. To begin with, we need to address compatibility issues between hardware and software components. We hope that the proactive approaches taken by ROSATOM and other organizations towards technological sovereignty will drive growth in domestic hardware and software markets.”



### Lev Nikolaev, Head of the Training and Methodological Centre “Secure Information Technologies” at Rosatom Technical Academy:

“The conference provided an opportunity for the participants to discuss the user experience and identify directions for future IT projects. We would like the conference to be held annually and become a platform for IT specialists to share their experience, showcase the achievements of the industry and vendors, and, most importantly, create a professional community.”



### IT Specialists from Various Industrial Sectors Discussed Domestic Developments at the Conference “Modern Technologies (RoST-2024)”

Held at Rosatom Technical Academy, the event attracted over 250 practising specialists from 80 companies in the nuclear industry and other related fields. In addition to plenary sessions, there were technological demonstrations and speeches by speakers on highly specialized IT topics, and an exhibition of developments in the field of information and telecommunication technologies.





**The tasks of import substitution and certification of special software were discussed by the participants of the XIV Conference “Issues of Information Protection in Automated Systems of Physical Protection.”**

Over 100 representatives of different ROSATOM’s divisions and developers of hardware and software for automated physical protection systems attended the event organised by the Global Nuclear Safety and Security Institute of Rosatom Technical Academy.



The participants shared practical experience of the implementation of regulatory requirements and interaction with regulators. Developers of various solutions for automated physical protection systems were able to demonstrate their products at the exhibition.



In **2024**, **49** foreign participants from **29** countries joined the Code. In total – over **860** signatories.

**Rosatom Technical Academy signed onto the Code of Ethics in Artificial Intelligence.**

Comprising 33 points, the code consolidates the foundational principles for living in a world where humans coexist with robots.

The document is signed during the annual international online conference AI Journey and forms part of the federal project “Artificial Intelligence” and the Strategy for the Development of the Information Society for 2017–2030.



**Annual Meeting-Seminar “Export Control at ROSATOM: Challenges, Ways of Development” was held for the tenth time at Rosatom Technical Academy.**

The participants included representatives from Russia’s Ministry of Foreign Affairs, Federal Customs Service, Federal Service for Technical and Export Control, Federal Service for Military-Technical Cooperation, as well as managers and specialists from the industry departments and organizations. Over three days, the participants studied the changes to export control legislation, exchanged opinions and practices on decision-making in the present-day realities of international relations development, discussed implementation of new technologies and rules.

**Alexander Smolsky, Advisor for Special Competencies to the Rector of Rosatom Technical Academy:**

“The seminar is a unique platform for interaction between novice and experienced specialists, representatives of regulatory and supervisory bodies. Here you can obtain new information and answers to your questions, as well as expand your network of useful contacts for solving important tasks.”



**Gennady Klochko, Head of the Sectoral Export Control Laboratory at the Institute for Physics and Power Engineering:**

“With support from ROSATOM, our work on improving knowledge in the field of export control continues to develop successfully. It is important to emphasize that seminars on export control help implement and disseminate an employee certification system in this area.”



**The III Scientific and Practical Seminar “Topical Issues of Archiving in the Nuclear Industry” brought together more than 100 archivists from ROSATOM’s organizations and enterprises in Yekaterinburg.**

The event was organized by the training and methodological centre “Protection of State Secrets” of Rosatom Technical Academy jointly with Tsentratomarkhiv and the Documentation Support Department of ROSATOM. The participants discussed issues related to the implementation of a project aimed at creating a unified industrywide system called “Centralized Electronic Archive,” ensuring information security, plans and prospects for developing archive-keeping in the industry.





**In 2024, the St. Petersburg Branch of Rosatom Technical Academy celebrated its 55th anniversary. It is one of the oldest training centres in the unique system for personnel training that has evolved from Ministry of Medium Machine Building to Minatom and now ROSATOM.**

Founded on April 28, 1969, initially focused on training managers and specialists in capital construction, trade, and public catering services, over subsequent decades the Branch underwent multiple changes in names, priorities, and areas



Managers of the construction complex of the Ministry of Medium Machine Building at the Leningrad Branch of CICE&T, 1989.

of work as it adapted to new challenges and trends.

In 2010, returning to the structure of revived CICE&T (renamed as Rosatom Technical Academy since 2017), the Branch became an integral part of a unified centre for the development of nuclear competencies both in Russia and at the international level.

Today, the Branch hosts training programmes for specialists of nuclear power plants being constructed by ROSATOM abroad – in Bangladesh, Turkey, Egypt, Hungary – and conducts schools, courses, and scientific visits within the IAEA's Technical Cooperation Programme. It also carries out professional retraining of managers and

specialists in the Russian nuclear power engineering and industry, as well as certification of the personnel. The Branch organizes annual industrywide, national, and international conferences and forums. Additionally, the Centre for Regional Training provides retraining opportunities for military pensioners, young mothers, and unemployed citizens in promising high-demand professions.

All these activities are provided by years of dedicated work by highly qualified instructors and specialists, whose contributions into preservation and transfer of critical knowledge were particularly recognized during the gala anniversary event by Maxim Gordeev, Director of the St. Petersburg Branch.

### **St. Petersburg Branch of Rosatom Technical Academy hosted a scientific and practical conference marking the 30th anniversary of Rosatom Emergency Response Centre.**

The participants of the Conference presented reports sharing their experience in organizing emergency preparedness and response systems at nuclear facilities both in Russia and abroad. Since its establishment, Rosatom Emergency Response Centre (ERC) has closely collaborated with the Academy in personnel training for emergency response teams. The Centre's employees are involved in delivering lectures at the Academy and use technical equipment for practical exercises.



During the Conference, employees of ERC received awards from ROSATOM and EMERCOM of Russia.



### **Sergey Natkha, Head of the Training and Methodological Centre "Emergency Preparedness and Civil Protection" at Rosatom Technical Academy:**



"Rosatom Emergency Response Centre is a unique high-mobility enterprise equipped with modern emergency rescue equipment and performing a wide range of tasks across various stages of emergencies. In 2018, Rosatom Technical Academy, ERC, and the IAEA signed Trilateral Practical Agreements for capacity building in the areas of nuclear safety, radiation protection, and emergency response. The Arrangements resulted in the establishment of the joint Capacity Building Centre within the framework of the international network INET-EPR. Starting from 2021, under a memorandum signed by the organizations with the Peter the Great St. Petersburg Polytechnic University, foreign students have been trained through a standardized Master's programme in emergency preparedness and response coordinated with the IAEA."







**Representatives of ROSATOM companies, certification bodies, testing laboratories, and supplier enterprises discussed ways to address technical regulation issues in order to achieve strategic goals set by ROSATOM.**

The main task of the meeting was to develop mechanisms that could help the industry progress in production, construction, and operation amid the current challenges while complying with regulatory requirements. Presentations were made by specialists from Atomstroyexport, TVEL, TENEX, Atomenergoproekt, Atomstandart, Russian Register, RusAtomEkspertiza, Control & Diagnostics, Rosenergoatom, Rosatom Technical Academy, and other organizations. Based on the proposals generated during the session, the Department of Technical Regulation of ROSATOM developed action plans for standardization and conformity assessment.

**Denis Pavlov,**  
*Director of the Department of Technical Regulation of ROSATOM:*

“During the discussion, the participants addressed issues regarding the unification of requirements for interaction with the industry, direct dialogue possibilities to clearly convey equipment specifications to manufacturers, hear their responses, and reach consensus not just via protocols but directly through standards. Mandatory standards for equipment and systems will allow the industry to enhance efficiency both in Russia and overseas.”



**Egor Bologov,**  
*Director of the Department of Industrywide Training at Rosatom Technical Academy:*

“The activity of the Department of Technical Regulation is one of the key areas of focus for ROSATOM, and the Academy provides more than just training support in this area. Besides training personnel through specialized training and methodological centres in the fields of safety of nuclear facilities, national security, and quality of nuclear technologies, the Academy has established a Conformity Assessment Centre and a Testing Laboratory. Last year, together with the Department of Technical Regulation, we developed accreditation programmes for testing laboratories and conformity assessment centres. These programmes have already been successfully implemented this year, and we continue to create new programmes and prepare additional training events in various formats. We always welcome industry professionals both as trainees and experts, providing opportunities for training, communication, and knowledge exchange in the field of technical regulation.”



*Discussions took place in the format of expert groups in the fields of standardization and conformity assessment.*

**170 industrywide specialists, along with representatives from Rostekhnadzor, Ministry of Natural Resources and Ecology of Kaluga Region, Russian Railways, City Expertise Centre, SRC StaDyO, and Vertical LLC participated in the annual industrywide scientific and technical seminar on industrial safety and safety of hydraulic structures.**



The event was organized by the General Inspectorate of ROSATOM in collaboration with the Central Institute for Continuing Education and Training of Rosatom Technical Academy. The participants learned about legislative developments and new approaches to legal regulation in the field of industrial safety and specific hazardous production facilities, updates to rules governing hoisting

machinery operations and pressure vessels. Common errors identified during approval procedures for calculating potential harm in case of accidents at hydraulic structures were also discussed. Following the seminar, recommendations were submitted for improving organizational methodologies to ensure that mandatory industrial safety requirements are met.





**‘Metrological Week,’ as it is known among specialists, refers to the annual scientific and technical seminar “Ensuring Unity of Measurement in the Field of Nuclear Energy Use. Legal and Applied Metrology.”**

In 2024, this event organized by Rosatom Technical Academy brought together 148 Chief Metrologists, leading industry experts, and top managers of the national metrology authority. Over the course of a week, the participants discussed key issues related to measurement accuracy in nuclear technologies, recent methodological developments, and the current state and future prospects of the regulatory framework.



**Alexander Karpenko,**  
*Chief Expert of the Training and Methodological Centre  
“Nuclear and Radiation Safety”  
of Rosatom Technical Academy:*



“Developing modern technology for producing ultra-pure germanium crystals, which are essential for creating detectors within the framework of import substitution, is a critical factor for Russia’s technological independence in nuclear instrumentation. We can produce the detectors themselves, the system, and software, but we lack the main component – the crystals. The concept of domestic crystal semiconductor production, developed during the seminar, has been submitted for consideration to the Scientific and Technical Council of ROSATOM. It includes a list of organizations ready to participate in the production, the project roadmap, and a plan for necessary research work.”

The seminar also included a competition on solving a measurement task in the field of nuclear materials, along with computer-based testing of knowledge in metrology. The best results were demonstrated by Alexei Vinogradov, Chief Metrologist at NovaWind, Pyotr Voskoboynikov, Head of Group at Akkuyu Nükleer, and Denis Afanassenko, Deputy Chief Metrologist at Mayak PA.

This event, hosted by Rosatom Technical Academy, attracted around 200 spectrometry specialists, scientists, developers of spectrometer systems, and representatives from 68 organizations across the nuclear industry and related fields. During the seminar, 52 presentations were delivered covering various aspects of current challenges in spectrometry.



The participants of the XXX Scientific and Technical Seminar “Spectrometric Analysis. Equipment and Data Processing” discussed the creation of a modern technology for producing ultra-pure germanium crystals needed for spectrometric equipment used to detect gamma radiation in nuclear instrumentation.

**200 Chief Accountants from the nuclear industry gathered at the annual workshop school to discuss tax reforms implemented in 2025.**

The speakers included heads of departments from federal ministries and renowned auditors from major audit companies and members of the Chamber of Tax Consultants.

According to the participants, the workshop school is the only platform where all accounting



department managers from the industry can meet and communicate in a professional and informal atmosphere.

As part of the school, a continuing training programme titled “Special Course on Changes in Legislation” was also conducted. At the conclusion of the event, the participants received certificates confirming completion of continuing training and diplomas issued by the Institute of Professional Accountants of Russia.





## XIII International School on Safety Culture

# “GLOBAL DEVELOPMENT OF THE NUCLEAR INDUSTRY. SAFETY. RELIABILITY. LEADERSHIP”



The School was attended by more than 150 specialists and managers from the Russian nuclear industry, as well as representatives from other industrial sectors and major international organizations.

Experts from the IAEA, WANO, Office of the Inspector General of ROSATOM, Rosenergoatom, Atomstroyexport, Gazprom Neft, Rosseti, WANO-MC, TVEL, Minskenergo and others shared their experience.

Over three days, the participants discussed safety culture development, analysed the methodologies of the IAEA and other foreign entities, and exchanged best practices in the field of occupational safety. Leadership was the main focus of the event, as the speakers, together with the participants, discussed the impact of leaders on safety culture development.



## **Sergey Adamchik,** *Inspector General of ROSATOM:*



“Safety relies heavily on effective management by top and line managers, their competence and responsibility for rigorous compliance with safety requirements in the use of atomic energy. Through their leadership and example, managers instil core principles of safety culture into every team member. As global nuclear power expands and use of nuclear technology grows worldwide, it becomes crucial that managers maintain high standards of safety in this field.”

## **Elena Chernetskaya,** *Director of the Centre for Safety Culture and Human Factor Reliability:*



“We change the School’s topics each year, introduce new reports, speakers, and find innovative ways to interact with audiences such as master classes, games, quizzes and contests. More and more participants from various divisions of ROSATOM and other organizations share their experience and implement our personnel management methods to enhance the safety culture level at their enterprises.”

*Interactive sessions and master classes allow the participants to try out simple tools for promoting safety culture, so they can immediately apply them at their organizations*

## **Vladimir Aspidov,** *First Vice-Rector for Principal Activities of Rosatom Technical Academy:*



“This year’s topic is particularly relevant because the geography of the nuclear energy continues to expand, with more countries embarking on nuclear power programmes. ROSATOM is the technology leader in this field. The specialists of Rosatom Technical Academy are always ready to provide necessary assistance and support in the development of safety culture at production facilities.”



In 2024, two key documents were approved: Unified Industrywide Methodological Guidelines for the Formation and Development of Safety Culture in the Organizations of ROSATOM, and Unified Industrywide Methodological Guidelines for the Organization and Conduct of Self-Assessment and Independent Assessment of the State of Safety Culture in the Organizations of ROSATOM, both developed by the Academy’s experts together with the General Inspectorate.





**Professionals from Russian and Belarusian nuclear industries exchanged their experience in safety culture and occupational safety.**

The meeting was organized as part of a visit by the managers and Deputy Chief Engineers responsible for human resources from regional energy utilities in Belarus and the Training Centre of Belenergo to Rosenergoatom and Rosatom Technical Academy.

The delegates learned about ROSATOM's approaches to the assessment and development

of safety culture in operating organisations, the role of the human factor in safety assurance, tools for preventing personnel errors, and ways to develop leadership for safety.

They also gained insights into the personnel training practices of Rosenergoatom in the field of safety culture, its comprehensive programme for the prevention of workplace injuries, and practical implementation of occupational hazard management strategies. The guests visited a stress relief room equipped with modern devices.

**Vadim Sarantsev,  
Director of the Branch "Training  
Centre" of Minskenenergo:**

"In 2024, the training centres established under Oblenergo in six regions of Belarus celebrated their 60th anniversary. One of our current goals is to create a Centre for Safety Culture based at the Belarusian NPP Training Centre and then disseminate the methodological findings to all the training centres of Belenergo. In the nuclear power industry, Russia was the first to focus on safety culture issues, and it is important for us to discuss opportunities for collaboration with ROSATOM regarding the creation of training programmes and methodological guidelines in this area."



Instructors from the training departments of nuclear power plants have enhanced their professional skills during a seminar "The New Perspective: Effective Methods for NPP Personnel Training" organized by Rosatom Technical Academy.



**Tatyana Melnitskaya,  
Chief Expert at the Centre for Safety Culture and  
Human Factor Reliability of Rosatom Technical  
Academy, Doctor of Science (Psychology),  
Professor:**

"The task of enhancing personnel performance is not unique to ROSATOM. In addition to professional and work-related stress, there are many other factors that contribute to employee burnout. Few people are raised with an understanding that one must continuously take care not only of their appearance and intellectual abilities but also monitor emotional states, in order to remain efficient, happy, healthy, and successful."



**Olga Toisteva,  
Chief Expert at the Centre for Safety  
Culture and Human Factor Reliability of  
Rosatom Technical Academy, Candidate of  
Science in Pedagogics:**

"Instructors in the training departments play a crucial role in training personnel for nuclear power plants. Through the systematic approach, they ensure high level of training among NPP employees and foster a conscious commitment to safety."



Over three days, the participants gained insight into modern psychological and pedagogical approaches, as well as effective training techniques for individual and group studies. They also studied secrets of successful communication between instructors and representatives of different generations, methods of motivating employees towards continuous training, causes and prevention strategies for occupational burnout among workers, and others.





In today's challenging environment characterized by resource constraints, increased workloads, multitasking, and emotional stress, NPP personnel face fatigue and burnout, affecting their reliability.



The experts and managers from psychophysiological support laboratories of nuclear power plants, along with representatives of the Federal Medical and Biological Agency of Russia, discussed effective recruitment tactics and existing

practices across various stages of psychophysiological examinations. The meeting allowed the participants to share experience and best practices, enhancing their professional knowledge. The training seminar on the evaluation of psychological

reliability of personnel was conducted by the experts from Rosatom Technical Academy. Representatives from Russian Railways and Lomonosov Moscow State University presented tools for maintaining and enhancing personnel reliability.



150 representatives from various organizations, including ROSATOM, Federal Medical and Biological Agency of Russia, scientific institutes, security agencies, and potentially hazardous production enterprises participated in the seventh industrywide scientific and practical conference "Psychophysiological Support for Professional Reliability of Personnel." The specialists addressed issues related to psychophysiological examination and evaluation of candidates for critical positions, psychological support and training of industry workers, creating a favourable socio-psychological climate within teams, and preventing incorrect actions by personnel.

**Elena Chernetskaya,**  
*Director of the Centre for Safety Culture and Human Factor Reliability:*

"The working conditions and events experienced by employees influence how they act in specific situations. The norms, values, and rules established within work collectives represent spontaneous regulations that relate both to human internal and external factors indirectly influencing behaviour. In the near future, the industry will require even more qualified professionals. Our goal is to determine whether individual psychological characteristics match job requirements so that tasks can be completed reliably."



Speakers representing industry divisions, Atom-Okhrana (Atom-Security), Federal Medical and Biological Agency of Russia, Institute of Psychology of the Russian Academy of Sciences, and Lomonosov Moscow State University spoke about professionally important qualities of the nuclear industry employees, ensuring the reliable and safe operation. They shared experience from their psychology services operation and highlighted existing problem areas.







The participants attending the seminar of senior managers of psychophysiological support laboratories, along with representatives from St. Petersburg Metro, Institute of Biomedical Problems of the Russian Academy of Sciences, Neuropsychology Center, Lomonosov Moscow State University, Higher School of Economics and other organizations discussed the contemporary methods of psychodiagnostics of NPP personnel. During the event, psychologists discussed the development of the system for psychophysiological examination of NPP personnel, psychological and neuropsychological diagnostics, as well as methodological support for the activities of psychophysiological support laboratories.



**Maria Kalinina,**  
**Director of Socially Significant Projects at ROSATOM:**



“ROSATOM, in collaboration with the Federal Medical and Biological Agency of Russia, is working on a programme for occupational medicine development. Occupational medical centres have already been opened in Desnogorsk, Dimitrovgrad, Sarov, Zheleznogorsk, with preparations underway for opening eleven additional centres. Working conditions at these centres have significantly changed: automated processes and new technologies allow all types of medical check-ups, preventive examinations, consultations, and access to psychophysiological support services.”



Today, the psychological service of the nuclear industry unites five divisions (Power Engineering Division, Mechanical Engineering Division, Nuclear Weapons Division, Fuel Company TVEL, Rosatom Science), 27 laboratories, 122 psychologists, and Rosatom Technical Academy.

**Elena Leonova,**  
**Chief Expert of the Centre for Safety Culture and Human Factor Reliability of Rosatom Technical Academy:**



“What does an ideal model of psychophysiological examination look like? Firstly, it involves precise evaluation of personally important qualities. Secondly, the quality of methodologies used for evaluating personnel and their uniformity across all nuclear power plants. Thirdly, error-free evaluations. When assessing professionally important qualities, it's crucial to move beyond statics toward procedural and contextual approaches – understanding what qualities may lead to errors or success in certain situations.”



## SAFETY REPRESENTATIVES

The safety culture and occupational safety representatives are a community of dedicated industry employees. Their primary role is to engage personnel in enhancing safety. The ultimate goal for them is achieving zero accidents at production facilities. Twice a year, safety culture and occupational safety representatives of the nuclear industry gather at Rosatom Technical Academy to refine skills and acquire knowledge about new tools and practices relevant to their job.

**Sergey Adamchik,**  
**Inspector General of ROSATOM:**



“Thanks to the coordinated efforts of our safety culture representatives institution, we have gained confidence that over time, safety level not only will be maintained but it will also continue to improve at the facilities. There is an observed trend toward fewer violations of operation, particularly regarding the floating nuclear power plant and research reactors. However, there remain rare cases where decisions made do not prioritize safety concerns.”







**Andrei Mozhginsky,**  
*Director of Occupational Safety and Personnel  
Protection Department at Rosenergoatom:*



“Currently, the focus areas of Rosenergoatom’s occupational safety work include NPP Director internships focused on occupational safety issues, development of occupational hazard management competencies, establishing communication between managers and workers, as well as implementing new initiatives related to psychological factors influencing unsafe behaviour patterns.”

In 2024, around 200 specialists participated in industrywide schools and the meeting organized by Rosatom Technical Academy together with the General Inspectorate of ROSATOM. These included experts from Power Engineering, Mechanical Engineering, Engineering and Nuclear Weapons Divisions, fuel company TVEL, Rosatom Smart Utilities, and Gazprom Neft. The events were

also attended by representatives of AKKUYU NÜKLEER.

During these events, the participants discussed specific challenges faced by safety representatives, the role of leaders in fostering safety culture at enterprises, and strategies of communication with personnel. They also participated in interactive quizzes focused on safety topics.



**Elena Zaitseva,**  
*Head of the Section of Working Conditions and  
Occupational Safety Control of the Department  
of Occupational Safety and Personnel Protection,  
Rosenergoatom:*



“Safety must become ingrained into every employee’s mindset. To achieve this effectively, it should become a way of life for each safety representative who sets an example through their actions and influences colleagues’ behaviours. An individual’s behavioural model depends on both their functional state and the psychological climate within the team. Safety representatives, acting as assistants to managers in the matters of safety culture while enjoying trust among colleagues, can significantly influence the formation of safe behavioural model among our workers.”

## GAINING SELF-CONFIDENCE

The support of participants of professional skills competitions by Rosatom Technical Academy psychologists, who are also part of the ROSATOM team, multiplies the efforts invested in preparation for the competition and helps the participants focus on winning.

A programme developed by the psychologists includes elements aimed at activating,

maintaining, and restoring an optimal mental state under competitive conditions. In particular, group sessions include training “Development of Stress Resistance” and relaxation exercises, with individual consultations available if needed. Additionally, the participants can use devices for eye and neck massage to relieve tension, improve blood circulation, and restore energy levels.



At the Fourth International Construction Championship held on October 1–4 in Yekaterinburg, the ROSATOM team once again demonstrated that it is the strongest and most competent team at the competition.

**Elena Orlenko,**  
*Expert of the Centre for Safety Culture and Human  
Factor Reliability of Rosatom Technical Academy:*



“Psychologists play a crucial role in preparing and supporting participants at competitions. They teach how to overcome anxiety and remain calm in critical situations to reduce error probability. On the one hand, psychologists help participants maintain a positive mindset and confidence, boosting their motivation. On the other hand, they teach them how to deal with setbacks and failures, analysing mistakes and learning from them without losing their inner drive.”



Professional psychological support can turn trained professionals into an invincible cohesive team ready to face any challenges together and achieve the set goals.

At the 11th International High Technology Skills Competition “HiTech-2024, ROSATOM’s team competed in 22 competencies and won prizes in 21 of them.





Specialists from Rosatom Technical Academy also participate in AtomSkills championships as authorized experts and developers of contest tasks within the Radiation Monitoring category.

The project “Prevention of Stress and Professional Burnout. Recharge Days,” implemented by the Centre for Safety Culture and Human Factor Reliability of Rosatom Technical Academy, became the winner of the annual cognitive-behavioural therapy contest “Pavlov’s Dog” in the Administrative Project nomination.

According to Elena Chernetskaya, Director of the Centre for Safety Culture and Human Factor Reliability, the training programme presented at the competition aims to enhance industry workers’ resilience against stress and teach them how to prevent and overcome its consequences. 504 industry employees participated in the Recharge Days events. The programme included interactive coaching on achieving psychological well-being, assessment of employee stress and burnout levels, along with psychological consultations, individual trainings, and relaxation sessions. After the event, 440 participants reported improvements in their emotional states.



The award ceremony took place during the X Anniversary Cognitive-Behavioural Therapy Forum in St. Petersburg.



## KNOWLEDGE SOCIETY

- » Obninsk NEW-2024
- » “IAEA Model”
- » “Journey into Profession”: Guided Tours for Schoolchildren





# THE WORLD INSPIRED BY ATOM



**More than 900 delegates from over 100 countries gathered at Rosatom Technical Academy for the International Youth Nuclear Forum Obninsk NEW. This event, dedicated to the 70th anniversary since the commissioning of the World's First NPP, was held under the slogan "The world inspired by atom: our shared dream for the next 70 years."**

Russian President Vladimir Putin congratulated the audience on the significant date. His address was read out by Deputy Prime Minister Dmitry Chernyshenko. The President congratulated the personnel of ROSATOM and industry veterans. He emphasized that the start-up of the Obninsk Nuclear Power Plant represented a bright chapter in the history of the development of peaceful atom, giving rise to nuclear power engineering both in Russia and abroad. Over the years, Russian nuclear industry has made significant progress, and today, advanced nuclear technologies are opening up new possibilities in power engineering, medicine, in the implementation of the National Space Programme, and other sectors.



Welcoming remarks were delivered by the Governor of Kaluga Region Vladislav Shapsha, and video addresses came from Rafael Grossi, Director General of the IAEA, and Sama Bilbao y León, Director General of World Nuclear Association.

At the plenary sessions of the Forum, representatives of various ministries and departments, senior managers of national nuclear programmes, university rectors from various countries, including Russia, China, Brazil, Bolivia, Vietnam, Egypt, Myanmar, Zimbabwe, and senior officials from the IAEA, discussed the future of nuclear energy. Among them were Alexey Likhachev, Director General of ROSATOM, Mikhail Chudakov, Deputy Director General of the IAEA and Head of the Department of Nuclear Energy, and Mikhail Kovalchuk, President of the Kurchatov Institute. The event was also attended by students, postgraduates, young scientists, and experts. The participants discussed the development of a global system for nuclear education and the need to collaborate in the promotion of nuclear and related technologies for sustainable future.

National strategies for training personnel for the energy sector were presented by the participants of the round table on human capacity building in BRICS countries in the context of the energy transition. Key areas for interaction were identified, including cooperation in professional education, practical knowledge exchange, and expansion of youth cooperation.

## Vladislav Shapsha, Governor of Kaluga Region:



"I am confident that Obninsk will contribute significantly to the training of highly skilled personnel for the nuclear industry, where experts predict around four million people will be employed worldwide in 25 years from now. International collaboration will ensure efficiency, safety, reliability, and accessibility of peaceful nuclear technologies. For this purpose, we establish an international scientific and educational centre in partnership with ROSATOM, an initiative supported by President Vladimir Putin. Perhaps there are those among you who will soon return here for new knowledge."



*The Forum's agenda included interactive seminars, panel discussions, and meetings between industry senior managers and the youth council and student council of ROSATOM.*





**Irfanul Islam KHAN,**  
Brigadier General, Nuclear  
Security and Physical  
Protection System Cell  
(NSPC), Bangladesh Army:



“The main goal of my participation in the Forum is to communicate with different delegates from around the world and give more concrete shape to the dream we are building for humanity’s better future. The dream is ensuring peaceful use of nuclear energy and combating climate change.

In my presentation, I focused on three key issues: first of all, enhancing opportunities for higher quality education for the next generation. Secondly, fostering teamwork. We need stronger teams within the nuclear community today so that knowledge and best practices can be shared more efficiently. Finally, I was talking about our environment and what it will look like about seventy years from now. The dreams we’re creating now must become reality.

Bangladesh has joined the “Nuclear Energy Club” as the thirty-third member. We need to develop infrastructure and provide our younger generations with better educational opportunities in nuclear science and nuclear energy. Our young professionals are sent to Russia for further professional training in the nuclear field. The graduates apply the knowledge acquired



## OBNINSK NEW: TOWARDS THE DREAM

at Rosatom Technical Academy in real life by participating in preliminary work necessary for the start-up of the country’s first nuclear power plant.”

**Paul Atta Amoah, Research Scientist, Ghana Atomic Energy Commission:**



“At the Obninsk NEW Forum, I have an opportunity not only to share knowledge with colleagues from various countries but also to inspire young people who, just like me earlier, were given the chance by ROSATOM to enhance their skills in Russian universities.

I was fortunate enough to teach courses in nuclear security at Tomsk State University as a

visiting expert. Additionally, I attended continuing training programmes in nuclear medicine at Rosatom Technical Academy to understand what nuclear security measures are required when handling materials in this field.

With these valuable insights gained in Russia, I’ve returned home to serve my country and promote cooperation between the Russian Federation and Ghana. I’m doing everything possible to convince my nation that such expertise could indeed be applicable in Ghana or in other developing countries.

Having been appointed as an International Atomic Energy Agency expert in nuclear security, I participated in several IAEA missions. I’ve visited many countries including the United Arab Emirates, Nigeria, Namibia. This experience has been highly beneficial for the development of international collaboration.

I believe that eventually, the nuclear energy development programme proposed to us by the Russian Federation will be fully implemented. My fellow alumni and current students trained in Russia would love to see large modern laboratories and other nuclear facilities similar to those we’ve seen in Russia become a reality.”

## NUCLEAR EDUCATION AMBASSADORS



*The prizes were presented by Deputy Director General and Head of the IAEA’s Department of Nuclear Energy Mikhail Chudakov and Head of the Nuclear Knowledge Management Section Pedro Dieguez Porras.*



“Russian Nuclear Education Ambassadors” is a project that brings together foreign students studying at ROSATOM’s flagship universities, who actively promote scientific research and education in nuclear and related disciplines. Currently, the ambassadors’ activities are supervised by the Project Office “Nuclear Education Transfer” of Rosatom Technical Academy. Today, the project involves approximately 70 students representing 28 different countries. Annually, the participants attend and organize local and international events. They share their initiatives through social media and traditional press, and take part in industrywide events.

The team of Russian Nuclear Education Ambassadors: Grace Nabbei Mbofwana, Maya Mumba (Zambia), Teodora Solarevic (Bosnia & Herzegovina), and Soumojit Mukherjee (India) won in the innovative ideas competition “ProSTEM Challenge” with their project “BeSTEM,” aimed at assisting students in mastering subjects in natural sciences and engineering.





The award ceremony took place during the Conference on Nuclear Knowledge Management and Human Resources Development held at the headquarters of the International Atomic Energy Agency in Vienna.

During the session "BRICS Youth Energy Outlook: Presentation of the 2024 Edition" at the Russian Energy Week, Soumojit

Mukherjee, a postgraduate student at MEPhI, presented various scenarios for the evolution of nuclear energy and technologies in BRICS countries, developed by foreign students from ROSATOM's flagship universities - members of the Expert Group on Nuclear Energy and Technologies.

Foreign students also shared their experience of studying

at Russian universities at the Eurasia Global-2024 International Youth Forum. They spoke to the audience about the challenges faced by international students due to language barriers and the tools available to overcome them. The Forum brought together about 500 students from 115 countries. The Ambassadors also acted as moderators, helping to conduct various events.

Within the panel discussion "Obninsk is the Youth Capital of Global Nuclear Industry," the Nuclear Education Ambassadors highlighted the advantages offered by the unique Obninsk Tech project currently being developed with the support of ROSATOM. Special attention was paid to the role of young specialists and their contribution towards strengthening Russia's position in the global education field. Other topics included the development of infrastructure for the future University City, as well as educational and cultural initiatives aimed at attracting young people from around the world.



The mentoring event brought together female students from leading Russian universities and became an open platform for the dialogue between female scientists and technological leaders with girls interested in pursuing careers in Science, Technology, Engineering, and Mathematics (STEM).

Representatives from ROSATOM and the Association of Women in the Nuclear Industry discussed their experience in technical fields and career opportunities available for women in universities, public and private companies, and public associations. Alina Josan, Partnership and Resource Mobilization Coordinator at the Department of Nuclear Energy of the IAEA, informed the participants about the Agency's programmes designed to promote women's career growth in the nuclear industry.

**Marina Belyaeva,**  
*Deputy Director for International Relations and Director for Cooperation with International and Foreign Organizations at ROSATOM:*

"In ROSATOM, women make up 32% of employees compared to the global average of 26% in the nuclear industry. They excel in specialized professions such as lathe operators, welders, and crane operators. Even aboard icebreakers, there are 75 women serving as Engineers, Radiation Safety Engineers, and Assistant Captains."



**Maria Khaletskaya,**  
*Vice-Rector, Director of the Moscow Branch of Rosatom Technical Academy:*

"The nuclear industry requires your knowledge, enthusiasm, and unique woman's perspective in solving complex problems. Do not be afraid to set ambitious goals and work towards them despite obstacles. You could become the next leader in nuclear science or industry."



STEM (Science, Technology, Engineering, Mathematics) is a model that integrates natural sciences and engineering disciplines into a unified system. Globally, among graduates qualified in engineering, manufacturing, and construction, roughly 28% are women; in Information and Communication Technologies, this number is 30%; whereas in natural sciences, mathematics, and statistics, the proportion rises to 57%.





**Elena Onishchuk,**  
Expert of the Training and Methodological Centre  
“Nuclear and Radiation Safety” of Rosatom  
Technical Academy:

“The youth conference was designed to assess interest among young scientists and specialists. This experience demonstrated that Rosatom Technical Academy can become a key venue for hosting large-scale youth scientific conferences in Obninsk, with sessions on various topics, plenary and poster reports.”



For her active efforts in promoting science among young people, Elena Onishchuk, head of the Scientific and Technical Section of the Youth Council at Rosatom Technical Academy, received an award at the annual public recognition contest “Person of the Year” in Obninsk.

Over 300 leading scientists and specialists from Russia’s first science city, as well as representatives of state authorities, discussed current trends of development in the nuclear industry during a scientific and technical conference dedicated to the Russian Science Day.

The conference presentations covered a wide range of topics relevant to modern science and in demand in Russia: multicomponent nuclear energy, non-energy applications of nuclear technologies, and the development of nuclear medicine. The participants addressed issues of personnel training, opportunities for cooperation between universities and schools with enterprises of the scientific and industrial complex, and attracting young professionals. Significant attention was paid to the establishment of the World Nuclear Education Centre “Obninsk Tech.” At the youth section, the participants were presented with the first results of the Decade of Science and Technology initiative. Young scientists and experts shared their vision of the future of the nuclear industry.



## PARTNERSHIP WITH UNIVERSITIES



САХАЛИНСКИЙ  
ГОСУДАРСТВЕННЫЙ  
УНИВЕРСИТЕТ



ПОЛИТЕХ  
Санкт-Петербургский  
политехнический университет  
Петра Великого



ТОМСКИЙ  
ПОЛИТЕХНИЧЕСКИЙ  
УНИВЕРСИТЕТ



МОСКОВСКИЙ  
ГОСУДАРСТВЕННЫЙ  
УНИВЕРСИТЕТ  
имени М.В. ЛОМОНОСОВА



Воронежский  
Государственный  
Университет



Уральский  
федеральный  
университет  
имени первого Президента  
России Б.Н. Ельцина





Rosatom Technical Academy Builds Collaboration Ecosystem with Major Universities

An example of effective partnership in training personnel for the Russian nuclear industry is the Department “Operation of VVER -Type NPP,” established by Rosatom Technical Academy and Voronezh State University based on the University’s faculty of physics.



In this complex educational process, Rosatom Technical Academy takes on a mentoring role today. At this department, Master’s degree programmes and summer internships have been conducted for two years at the Novovoronezh Branch. Since January 2024, students have been preparing qualifying research papers under the guidance of experienced instructors. Specialized materials and modern training aids of the Branch are used during classes.

Fifth-year students of the Faculty of Romance and Germanic Philology at Voronezh State University completed a three-week internship at the Novovoronezh Branch of Rosatom Technical Academy.

**Elena Pechuritsa,**  
*Head of Technical Translation Group:*



“The Novovoronezh Branch of Rosatom Technical Academy is one of the few regional enterprises offering daily practice in interpretation and translation because it continuously trains foreign specialists. For the instructors of the Branch, internships give an opportunity to meet aspiring translators and share their expertise in the work related to nuclear energy.”



Students had practice in technical interpretation and translation, observed interpreter work during classes attended by Bangladeshi trainees, and learned about the principles of nuclear power plant operation. For three students who completed their internship at the Academy last year, the Branch became a place of employment.

Professors from Voronezh State Technical University visited the Centre for Practical Training of the Novovoronezh Branch of Rosatom Technical Academy to familiarize themselves with its technical facilities and discuss future cooperation opportunities in terms of personnel training.



It was emphasized during the meeting that the University aims to collaborate extensively with employers to establish specialised departments, provide students with all types of practical training at partner enterprises, and ensure graduate employment. In 2023, the University developed and approved a new academic programme in “Nuclear Power Engineering and Thermal Physics.” One of the primary tasks for the department was to sign partnership agreements to organize the training process.

Rosatom Technical Academy signed a cooperation agreement with Ivanovo State Power University in the field of personnel training.



**Oksana Filatova,**  
*Director of Language Support Centre, Rosatom Technical Academy:*



“The foreign language course will be taught by professionals from the Academy’s Language Support Centre, who are involved in ROSATOM’s international projects. The training will be divided into two modules: general and technical English, based on professionally-oriented materials on nuclear technologies.”

The document was signed as part of a roadmap for cooperation between the University and Rosenergoatom in the fields of personnel, technologies, and science.

The University professors will undergo continuing training under the programmes of further professional education offered by Rosatom Technical Academy. Graduating students will attend a series of lectures “Modern Process Solutions in VVER-1200 Reactors” and “Energy of Future” from the special courses series.



Getting acquainted with the activities of Rosatom Technical Academy is an essential step in the development of cooperation with educational and scientific institutions, professional communities, and enterprises across various industries. In 2024, the Academy welcomed representatives from the EuroChem Mineral and Chemical Company, young professionals from branches and organisations within the RusHydro group, heads of international departments of leading Russian universities, students from African countries, young diplomats from Russia and Uzbekistan, young scientists from ROSATOM, and other delegations.



During their visit to the Kaluga Region, young professionals from branches and organisations of RusHydro learned about the business activities and safety culture initiatives implemented by Rosatom Technical Academy. The visit was part of the module “Internal Energy Source” for developing the talent pool of young employees.

**Alexey Andriyanov,**  
Head of Methodology and Training Development  
Administration at Rosatom Technical Academy:

“Rosatom Technical Academy is a modern, diversified personnel training centre for both Russian and foreign nuclear industries. With the country achieving technological independence and expanding into new markets, ROSATOM envisions its development strategy over decades ahead. The Academy has the necessary resources and expertise to respond quickly to current challenges. Therefore, it is essential for us to meet, establish connections, and collaborate with corporate centres and universities on implementing new, effective projects.”



**Kirill Mezintsev,**  
Lead Expert at Project Engineering  
Department of RusHydro Group:

“RusHydro has been implementing lean manufacturing practices since 2021. We were interested in learning about the development of ROSATOM Production System and safety culture. Work culture and a culture of thinking are instilled in the nuclear industry, from the entrance into the enterprise to compliance with the regulations regarding operation, occupational safety, social security and other areas. We hope that we will be able to develop joint projects in future.”



EuroChem Mineral and Chemical Company learned about advanced methods and equipment used for the training of personnel in the nuclear and related industries. The delegates visited the Centre for Practical Training of the Novovoronezh Branch of Rosatom Technical Academy, as well as the full-scope and multifunctional simulators.



**Sergei Rogachev,**  
Head of “EuroChem Technological University”:

“We are interested in Rosatom Technical Academy’s experience in practice-oriented training and personnel development. The academic programmes and extensive range of technical facilities make it possible for the Academy to address a wide range of tasks related to the training of personnel not only for nuclear power plants but also for adjacent fields and high-tech industries. Today, for EuroChem, designing and equipping training centres is a particularly relevant topic.”

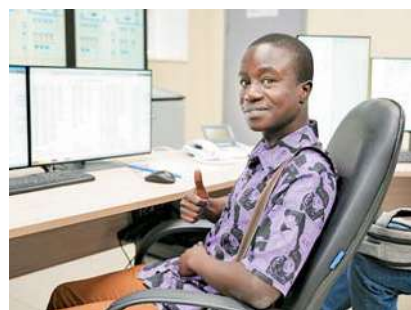


**Heads of international departments from 27 partner universities of ROSATOM explored international educational projects in the field of nuclear and related technologies carried out by enterprises and organizations based in Obninsk.**

This event took place during the second module of the educational programme organised by Skolkovo School of Management and ROSATOM aimed at enhancing the competencies of university representatives for promotion of promising educational products in industrywide markets in partner countries. As part of a technical tour, the School participants visited the following facilities: Leypunsky Institute for Physics and Power Engineering, A. Tsyb Medical Radiological Research Centre, Institute for Nuclear Power Engineering of the National Research Nuclear University MEPhI, Rosatom Technical Academy, and Kraftway. They learned about the educational practices and discussed potential cooperation opportunities.







**Twenty African students, who won the video contest “Atoms Empowering Africa” organized by ROSATOM, made a stop at the Academy on their exciting journey through Russia.**

The students from Nigeria, South Africa, Kenya, Uganda, Egypt, and Sudan learned about the training programmes offered by the Academy and the technical training aids used in the training of nuclear industry personnel.



**Seventy young diplomats from Russia and Uzbekistan attended Rosatom Technical Academy as part of the Nuclear Diplomacy Forum held in Obninsk under the auspices of the Association of Russian Diplomats of the Ministry of Foreign Affairs with support of ROSATOM.**

The Academy's employees introduced the participants to the organisation's international activities and conducted a comprehensive tour for them, including visits to radiation measurement technology laboratory, multifunctional simulator, model of a hypothetical nuclear facility, and a 3D NPP visualisation complex “CAVE.”



**Boris Medvedev,  
Dean of the Russian State University for the  
Humanities and Honorary Diplomat of Russia:**



“Nuclear diplomacy is an aspect of energy diplomacy. It is important for diplomats to understand the process behind the creation of documents and have general knowledge in the field of nuclear energy. That is why we decided to hold this Forum at the birthplace of the peaceful use of nuclear energy. The familiarisation of high-school students with Rosatom Technical Academy and the World's First NPP significantly enriched their knowledge acquired in physics classes at school.”



**A series of familiarisation visits to Obninsk enterprises was arranged by the Industrywide Youth Council for members of the youth movement of Rosatom Scientific Division. The aim was to strengthen horizontal communication between young researchers from different industry companies.**

The participants received detailed information about Rosatom Technical Academy, events organised by young employees, and collaborative projects involving Rosatom Juniors, Council of Young Scientists, and other public associations.







# A JOURNEY INTO PROFESSION

The project “Journey into Profession,” that was organized by Rosatom Technical Academy and won in the Presidential Grants Competition, gave five hundred schoolchildren from the Kaluga Region an opportunity to explore scientific and engineering

professions that are in demand in Obninsk and its surrounding area within the context of implementing the International Scientific and Educational Centre for Nuclear and Related Technologies “Obninsk Tech” project and the “University City” programme.

A series of career guidance events included informative lectures and engaging tours into the realm of modern nuclear technologies. Young instructors from the Academy introduced students to the application of nuclear energy in agriculture, industry, and medicine. They shared their own professional journeys with the children, provided insights on nuclear-related professions, education at ROSATOM’s flagship universities, possible career trajectories, social protection systems for employees, and compensation packages.

During the tour, the schoolchildren were introduced to the model of a hypothetical nuclear facility where they identified potential weaknesses in the system of physical protection and proposed improvements. They experienced what it was like to be an operator of a nuclear power plant at a multifunctional simulator, and a three-dimensional visualization complex called “CAVE” enabled them to virtually fly through walls and see a reactor building from the inside.



Rosatom Technical Academy held a series of career guidance lectures for Obninsk schoolchildren “Find Yourself in the Profession” as part of the extracurricular activities “Talking about Important Things.” Professionals from the Academy shared their knowledge on choosing future careers with schoolchildren and introduced them to ROSATOM’s areas of activities.

**Pavel Zhuravlev,**  
Vice-Rector for Strategic Communications of  
Rosatom Technical Academy:



“ROSATOM places a great emphasis on human capacity building in the nuclear industry. We believe our educational efforts towards achieving this goal are very important, which is why we have agreed with several school directors in Obninsk to include information about opportunities offered by ROSATOM as part of the extracurricular sessions “Talking about Important Things.” We began these discussions at the Lyceum “Physics and Technology School,” where future physicists, chemists, IT specialists, and industrial technologists receive their education. We also delivered lectures at the municipal Gymnasium and School No. 18. It was very important for us to inform young people about their prospects with ROSATOM.”



Schoolchildren from Obninsk School No. 16 during a tour at Rosatom Technical Academy.





## Atomic Lesson Attracts 300 Schoolchildren from Obninsk



An Atomic Lesson marking the 70th anniversary of the start-up of the World's First NPP brought together 300 seventh-to-eleventh-grade schoolchildren from Obninsk schools at Rosatom Technical Academy. Andrei Goverdovsky, former head of the Institute for Physics and Power Engineering, Doctor of Science (Physics

and Mathematics), Professor, and recipient of the Russian Government Prize in Science and Technology, delivered a lecture "Atoms Around Us." He introduced the schoolchildren to the world of nuclear physics in an accessible and engaging manner. The most attentive and creative participants received gifts.

### **Andrei Goverdovsky,** **scientist:**

"Fifteen years is a serious age when one has to decide on one's purpose in life and choose a profession. Approximately every thousandth person globally is engaged in science, meaning eight million out of eight billion. If even one student among today's audience decides to pursue a career in science after today's session, then we've exceeded this ratio threefold."



### **Sofia Popova,** **an eighth-grader at Obninsk School No. 12:**

"We were asked to identify contradictions in Dr. Goverdovsky's lecture. My observation turned out to be correct. This is very important for me because physics is my favourite subject. I want to continue growing professionally in this field and work at ROSATOM. The book by Stephen Hawking on space and time that the Professor gifted me today is quite difficult. However, I'll strive to understand it thoroughly. Today's Atomic Lesson at the Academy was a great opportunity that inspires me to continue developing in this field."



The Youth Council of Rosatom Technical Academy with the Junior Council of ROSATOM, supported by the Association "Educational Cluster of Kaluga Region" and General Education Department of Obninsk Administration organized the second quest "AtomStory" for schoolchildren.

This event became part of the annual festival of science and technology in 2024, timed to coincide with celebrations honouring the Russian Science Day in Obninsk and supported by the Presidential Grant Foundation "PRO Projects. The School of Project and Research Activities."

Forty schoolchildren from Obninsk schools participated in solving challenges set up at different 'stations', learning more about the rich history of Russia's first science city and key milestones in the development of Russian nuclear industry.







## NST CLUB: READ AND PRACTICE

In 2024, the Nuclear Science and Technology Club summarized the results of the eighth and ninth seasons of captivating discussions among young professionals from Rosatom Technical Academy.

The highlight of the eighth season was an interactive game format. Deciding to diversify their usual discussion-and-presentation approach, young professionals from Obninsk and Saint Petersburg conducted a total of 20 gaming sessions. These games helped participants become familiar with new nuclear technologies, enhance their strategic thinking, sharpen professional skills, and improve communication abilities, creating a warm and welcoming environment.



**First Business Game for High-School Students "Model of the IAEA," initiated by the Junior Council of ROSATOM, was held at Rosatom Technical Academy**

It involved 48 English-speaking students from sixteen Obninsk schools. The participants simulated a real session of the IAEA. Representing delegates from 48 member countries, they discussed the role of nuclear energy in combating climate change within the framework of the Paris Climate Agreement signed in late 2015.



**Ilya Nikulin,**  
Chairman  
of the NST  
Club, Lead  
Engineer for  
Personnel  
Training:



"In the course of the game, the participants had to guess terms by describing them verbally or non-verbally, reconstructed the chronology of events connected to nuclear power engineering, and even constructed nuclear power plants according to specific capacity requirements."

**Tatyana Volnistova,**  
Head of General Education  
Department of Obninsk:

"This first business game aimed at introducing schoolchildren to the organizational model of the International Atomic Energy Agency represents a unique experience. Its value lies not only in career guidance and strengthening interdisciplinary connections but also in its full realization by the kids – from the concept to execution. It is a fantastic experience for future successful work. We would like to thank the teams from Rosatom Technical and Corporate Academies for their substantial contribution to organizing such interesting events for young people. We hope that today's lively business game will become a tradition in all nuclear cities."







The ninth season, held under the slogan “Read and Discuss”, revolved around discussing scientific publications related to nuclear topics. To discuss what they had read, the members gathered for 18 sessions at their Branches of the Academy. Discussions covered innovative technologies, AI implementation, reactor safety systems, service life of nuclear power plants, public perception of nuclear energy, and the shortage of qualified personnel. The discussions were evaluated in terms of interest, usefulness and preparedness.



**Elena Kazakova,**  
co-chairwoman of the Club and Head of the  
Project Language Support Division of Rosatom  
Technical Academy:

“Language is a teacher’s working tool. The information that we present to our students should be not only meaningful, but also appealing in terms of language. Therefore, it is necessary to be able to find publications and evaluate their quality. In addition, if we do not read good literature, the language acquires the imprint of our native language. This hinders mutual understanding with foreign students and reduces the effectiveness of the training process.”



6

## BUILDING ON THE TRADITIONS OF NUCLEAR CITIES

- » The Year of Family
- » 70th Anniversary of the World’s First Nuclear Power Plant
- » ATOM LIVE-2024





During the celebration of the 70th anniversary of the World's First NPP, a new public square called SOVA was officially inaugurated at Rosatom Technical Academy ("SOVA", meaning "an owl," is a some kind of acronym for the "Training System for Highly Qualified Nuclear Specialists" in Russian).

Featuring new fur and deciduous trees, flowers, benches, walking paths, electric vehicle charging stations, arbours, and hard landscaping elements, the green technological space extends in front of the fifty-year-old hub of nuclear industry talent, resembling the head of the wise bird when viewed from above. The inauguration ceremony was attended by municipal officials, foreign experts, employees of the Academy, and local residents.



**Tatyana Leonova,**  
*Mayor of Obninsk:*

"Rosatom Technical Academy isn't just creating a space for citizens to have some rest – it is fostering a sense of community among those who see the city as one large family, always working to make every plot, every building more beautiful."



**Amon Murwira,**  
*Minister of Higher Education, Innovation, Science, and Technology Development of the Republic of Zimbabwe:*

"It is important for us to participate in these historic events here in Obninsk, as they underline the significance of the nuclear industry – without which there wouldn't be any future collaboration with ROSATOM regarding nuclear technology development and personnel training. Zimbabwe places top priority on nuclear education, which is why we send our students to study in Russian universities and plan further interaction with Rosatom Technical Academy concerning nuclear infrastructure personnel training."



**Igor Sokrustov,**  
*International Arbiter and Chief Arbiter of the tournament:*

"This is the first time we've ever held such a festival outdoors. Anyone who passed by the square could come up and watch a game or play outside the competition. Furthermore, the tournament was broadcast live online, allowing viewers around the world to watch."



The first event hosted at the new square was the XX Chess Festival "Obninsk, the First Science City of Russia," commemorating both the 100th anniversary of the International Chess Federation FIDE and the 70th anniversary of the World's First Nuclear Power Plant.



Chess enthusiasts, players, and masters ranging in age from 5 to 85 gathered together from various regions across Russia. The contestants followed the sport discipline known as "Blitz." Twenty chess tables were set up along Kurchatov and Slavsky alleys, and two additional sets of chess pieces were provided for recreational use.







## FOR THE FIRST TIME IN THE CITY OF FIRSTS

### Obninsk Hosts ATOM LIVE-2024 Festival

The Nuclear Industry Workers' Day was celebrated in Obninsk with a major festival called

ATOM LIVE. This event was the final in a series of creativity and volunteerism festivals in nuclear cities, which were previously held in Sosnovy Bor, Polyarnye Zori, and Desnogorsk. More than

*The opening performance was given by the rock band "ROCTAR" from the Novovoronezh Branch of Rosatom Technical Academy.*

six thousand guests attended the festival from Moscow, Kaluga, Tula, Ulyanovsk, and other cities, while over seventy-eight thousand watched online.

The festival was organized by the volunteer communities of Rosenergoatom, Coordinating Council of Youth Organizations of the Power Engineering Division of ROSATOM, Rosatom Technical Academy, with the support of the city administration and social organizations of Obninsk.

The festival featured two music stages and fifty interactive zones focused on nuclear energy and patriotic themes. Activities included programmes run by volunteers from enterprises of Rosenergoatom, Rosatom Technical Academy, students of National Research Nuclear University MEPhI, and Rosatom Juniors.



*Schoolchildren, students, and adults joined young employees of Rosatom Technical Academy to experience flight through an FPV drone simulator.*



Musical performances in support for nuclear cities were performed by bands from Novovoronezh, Udomlya, Desnogorsk, St. Petersburg, Moscow, Obninsk, Sosnovy Bor, and by the popular rock group "Pilot".

As part of the festival, humanitarian aid collection was arranged for residents of the Kursk region. Special area "Letter to a Soldier" was set up, and master classes in crafting trench candles were organized. The event also included activities organized by communities "Young Guard of United Russia", "Victory Volunteers", and "Medical Volunteers".



*Pavel Zhuravlev, Vice-Rector for Strategic Communications of Rosatom Technical Academy, awarded labour dynasties for their contributions to preserving traditions and ensuring intergenerational continuity.*







Representatives of labour dynasties from Obninsk, Novovoronezh, Balakovo, Kurchatov, Volgodonsk, Udomplia, Zarechnyi, Desnogorsk, Sosnovy Bor, Bilibino, and Moscow convened at an award ceremony honouring the winners of the essay contest “Family Traditions of Dynasties of Nuclear Cities”. The event was held at Rosatom Technical Academy in Obninsk in the warm atmosphere of traditional Russian tea party.

The best essays were selected by the Organizing Committee in four categories: “Dynasty of Nuclear City,” “Professional Dynasty,” “Family Guarding the Traditions,” “Defenders of the Fatherland.” Congratulations and words of gratitude were expressed by representatives of the nuclear industry, government, clergy, and military forces.

**Pavel Zhuravlev,**  
Vice-Rector of Rosatom  
Technical Academy, Head of  
the Project:

“Year after year, the contest becomes a tradition and attracts significant interest from the public. This year, applications were submitted by 64 dynasties of nuclear physicists, doctors, teachers, law enforcement officers, athletes, cultural figures, and people of arts representing eleven cities where ROSATOM operates – all those who contributed significantly to the development of the peaceful use of nuclear energy.”



**Jumberi Tkebuchava,**  
Deputy Director General of  
Rosenergoatom:



“My father worked for 42 years in Tkvarcheli coal mine in Abkhazia, earning the title of Hero of Socialist Labour. My brother and I, graduates of the Moscow Mining Institute, became miners. Life led me into another important endeavour — electricity production. However, it is part of the same power industry. Each person working in nuclear industry passes on their knowledge and experience to the future generation and strengthens our heritage. They are our pride and treasure. I am proud to have worked alongside you for 20 years, learning how to live, work, treat others, and love our homeland.”







The ceremony honouring the nominees of the project “Family Traditions of Dynasties of Nuclear Cities” continued in Novovoronezh – the most active participant city of the competition. Here, another 30 families were recognized, 16 of which became winners.

**Gennady Sklyar,**  
Member of the State Duma  
of the Russian Federation,  
Chairman of the Organizing  
Committee of the Contest:



“Families are what we can make the key factor driving the development of our nuclear industry and country. National unity is rooted in family unity. Harmony arises from harmony within families. These dynasties embody the continuous history of our country and ensure confidence in the future.”

*The Golubev family traces their lineage back to the second half of the 19th century. Their relatives, spanning several generations, were priests and educators. Renowned physicist Lev Golubev became the first nuclear worker of the family.*

**Nikolay Netyaga,**  
Mayor of Novovoronezh:



“Dear Families! Thank you for sharing your family histories. Your stories evoke genuine warmth. Families like yours inspire pride, care, and reverence. I would like to express my gratitude to Rosatom Technical Academy for this meaningful and valuable project. Nowadays, it is critical to uphold family traditions and cherish memories of the past.”

**Andrey Solntsev,**  
Vice-Rector, Director of the  
Novovoronezh Branch of  
Rosatom Technical Academy:



“Today, we welcome distinguished and renowned dynasties in this hall. Thank you for contributing to the development of Novovoronezh, upholding family traditions, and continuing to bring glory to our city. My mother was born as the thirteenth child with twelve brothers in a large family local to Voronezh lands. Later, this area transformed into a nuclear city, and the power plant itself became the main workplace for generations of our dynasty.”



For organizing and holding the contest “Family Traditions of Dynasties of the City of Firsts” Vice-Rector of Rosatom Technical Academy Pavel Zhuravlev was presented with a statuette of the laureate of the annual public recognition contest “Person of the Year” in Obninsk.

Every year, employees of Rosatom Technical Academy take part in events commemorating the Victory Day, honouring the memory and expressing gratitude to the generation of great heroes.

★★★★

Young people from the Academy participated in transferring a particle of Eternal Flame from the memorial “Sorrowful Mother” in Kozelsk, City of Military Glory, to various cities across the Kaluga Region. Despite heavy rain and strong winds, the traditional event organized at the initiative of the regional youth parliament, was successfully carried out. The Flame arrived in Obninsk at 5 p.m. and was solemnly placed at the memorial “Eternal Fire”.

★★★★

On May 9th, employees of the Academy and its Branches laid wreaths and flowers at mass graves during city rallies. In Novovoronezh, names of local soldiers are immortalized at the memorial “Stars of Glory” where the defence line passed during the war. It is symbolic that among those who came to this sacred place were many young people and families with children.

★★★★

On the eve of the holiday, employees of the Academy, along with their children and grandchildren, visited the museum and airfield of the military unit in the town of Yermolino, as well as the birthplace of the Marshal of Victory, four-time Hero of the Soviet Union, Georgy Zhukov, in the village of Strelkovka. They also saw the exposition of the branch of the Victory Museum – the Zhukov Museum, and laid a wreath at the bust monument of the great compatriot.





More than 300 people participated in the clean-up event to celebrate the 70th anniversary of the World's First NPP.



Not only adults but also children took part in the event. Together with their parents, they dug pits, planted and watered the trees.

Organized by Rosenergoatom, this large-scale volunteer event brought together volunteers, employees of Rosatom Technical Academy and other Rosenergoatom subsidiaries, workers of Leypunsky Institute for Physics and Power Engineering, veterans of the nuclear industry, MEPhI students, Rosatom Juniors, and residents of the city. During the clean-up, 70 trees were planted in the park near the House of Scientists and at the memorial "Cranes".



The employees and management of Rosatom Technical Academy extended the Collective Agreement. The extension of the Agreement will allow the management and trade union representatives to develop and improve the social policy of the organization over the next three years.



**Boris Polivoda,**  
Legal Affairs Director  
of Rosatom Technical  
Academy:



"Signing the Collective Agreement in 2022 marked the beginning of new social policies of Rosatom Technical Academy towards its employees. Measures like financial support in various life situations and social assistance for retired employees of the Academy are already being implemented. In addition, throughout the year we organize numerous cultural, sports and entertainment activities for our personnel. Extending the collective agreement is an important step to maintain and improve employees' satisfaction with working conditions."

## ENERGY OF THE YOUTH

- » Shaping the Future Together
- » Friendship Without State Borders
- » Ice Favourites





# CONCENTRATION OF UNITY AND FRIENDSHIP

A team of young professionals from Rosatom Technical Academy joined the World Youth Festival in Sochi.

**Mikhail Fedorov,**  
Chairman of the Youth Council  
of Rosatom Technical Academy:

"We've been preparing for this festival for more than six months. We participated in Forsazh-2023, held a joint strategic session with partners on integrating our projects into the programme of the World Youth Festival, signed an agreement with the Kaluga Region Youth Policy Administration, passed the selection process, and did much more. Over 320 thousand applications were submitted for participation in the festival, and we made it into the group of 20 thousand participants."



The event organized by the Federal Agency for Youth Affairs gathered 20 thousand participants from more than 180 countries. There were 800 interactive events covering various topics, including business, media, international cooperation, culture, science, education, volunteering, and sports. Discussions on educational and scientific issues, speeches by renowned speakers, outdoor games, and much more provided each participant with opportunities to find something important and interesting.



**Roman Kuklin,**  
Specialist:

"The temporal eclecticism, in the artistic sense of the word, amazes me here. Entire epochs are collected in one place. If you look to the right, you'll see artificial intelligence, computers, robots, everything representing the future. Just look to the left, and there are lectures about graphic design development during the Soviet era, discussions about art, cinema, and literature of past centuries. This festival is a great platform for cultural exchange and communication."



**Marina Tsverkun,**  
Specialist:

"A high concentration of unity and friendship without state borders – that's how I would describe the festival. An opportunity to communicate with the best professionals in their fields, leaders of all-Russian projects. Each time, I'm convinced that there are many true patriots living all around the world who share equal values of peace and kindness toward each other."







Organizational support on the part of Rosatom Technical Academy was provided by Project Office “Nuclear Education Transfer,” which helped over 60 students from ROSATOM’s flagship universities attend the festival events. They also became speakers at a round table discussion “Window to the Big World: Russian Power Engineering Education” and participated in a debate “Creating Obninsk Tech Together: the Youth Nuclear Project.” Mina Tawadros and Khaled Ramadan, Egyptian students from Tomsk Polytechnic University, attended a meeting between the festival participants and the President of Russia.



**Oleg Mironov,**  
**Engineer for Personnel Training:**

“I’ve never interacted with such a diverse range of cultures before. What impressed me most was the feeling of family-like unity among participants from every continent and country. English language skills proved to be very useful, as I often had to help other guys to communicate with foreign guests. The festival demonstrated how we can all communicate as equals despite political and social challenges.”



## YOUNG PROFESSIONALS CONTRIBUTE TO THE FUTURE OF RUSSIAN NUCLEAR ENERGY INDUSTRY

Young professionals from Rosatom Technical Academy participated in the VI Youth Gathering of ROSATOM’s Power Engineering Division. The event brought together over 170 young employees of the nuclear industry, students of flagship universities, and leaders of volunteer and youth organizations.

The main focus of the meeting was the discussion of the strategic objectives set forth in the 25/45 Project, aimed at the development of the nuclear industry until 2045. The Academy employees shared their ideas on enhancing production process efficiency at nuclear facilities and provide human resources for future industry projects. The proposals of the participants received positive reviews and support from the senior management of Rosenergoatom, and were approved for implementation.

The Division’s Gathering not only demonstrated the involvement of young specialists in nuclear energy development but also highlighted their crucial role in the implementation of the strategy aimed at strengthening ROSATOM’s role in the global energy market.







The Governor of Kaluga Region, Vladislav Shapsha was present at the signing of the document by Yuri Seleznev, Rector of Rosatom Technical Academy, and Elena Valuyeva, Head of the regional Youth Policy Administration.



**Yuri Seleznev,  
Rector of Rosatom Technical Academy:**

"In the coming decade, we face the ambitious task of achieving a breakthrough in Russian science and building up own technological sovereignty. Young scientists and specialists will be the driving force behind these efforts. It is very important that Kaluga land, the birthplace of peaceful nuclear technologies, becomes a hub attracting talented and active young people that will contribute to the development of promising innovative areas in the nuclear industry."



**Rosatom Technical Academy and Kaluga Region Youth Policy Administration signed a cooperation agreement as part of the business programme of the Kaluga Region Day at the exhibition-forum "Russia".**

The agreement is aimed at creating conditions for development of the creative, intellectual, and scientific potential of young people, implementation of youth initiatives, supporting spiritual, moral, and patriotic education, reinforcing civil unity, improving interethnic relations, and supporting young families. Under this agreement, it is planned to organize regional, national, and international festivals, competitions, discussion clubs, round tables, seminars, forums, career guidance events for school pupils, academic mobility programmes for young professionals, researchers, educators, and learners, including exchanges involving leading scientists, teachers, and experts.



**The Youth Council of Rosatom Technical Academy initiated the establishment of the Charter of Youth of the City of Firsts.**

The primary goal of the Charter, signed by representatives of youth communities from enterprises and organizations of Obninsk, is to implement collaborative activities and engage with government and municipal authorities to advance science, business, education, and urban comfort. Young people of Russia's first science city aim to contribute to achieving the strategic objective of developing Obninsk as an internationally recognized scientific and educational centre with a high standard of living and opportunities for self-realization.

Any Russian individual or legal entity, public, regional, industrial, professional unions, and network communities adhering to its principles may join the Charter.



**Mikhail Fedorov,  
Chairman of the Youth Council  
of Rosatom Technical Academy:**



Our inspiration for consolidating the city's young scientists came from the MIR Forum, which was held two years ago at Rosatom Technical Academy. It resulted in the establishment of the Council of Young Scientists and Specialists under the Administration of Obninsk. By signing the Charter of Youth, we've taken another step towards uniting youth efforts to make life better in our city. We love our city and are ready to work together to maintain the status of Firsts!"





Rosatom Technical Academy hosted the biggest corporate event of the summer: the Third Spartakiad. Novovoronezh for the third time became a hub of intense athletic competition among the employees.

The participants dedicated their triumphs to the 70th anniversary of the World's First NPP in Obninsk and its worthy successor, the Novovoronezh NPP, with which the Academy has been cooperating for many years.



## SPARTAKIAD-2024: REACHING NEW HEIGHTS



*Setting the tone for positivity was a hands-on culinary masterclass conducted by the celebrated chef Vladimir Mukhin, holder of a Michelin star*

Like in previous years, the teams comprised athletes from various Branches of the Academy. The employees demonstrated their skills across numerous disciplines: football, volleyball, relay competition, streetball, 800-meter race, tug-of-war, CrossFit, darts, billiards, and table tennis. The participants enjoyed a range of social activities: corporate games, quiz sessions, an entertainment show, eSports PlayStation tournament, team-building events, and a yoga workshop.



*Yuri Seleznev, Rector of Rosatom Technical Academy, proposed to make the Spartakiad an international event.*





The victory of Rosatom Technical Academy marked the end of the II All-Russian Winter Ice Hockey Cup of the Nuclear Industry-2024. On the ice rink in Moscow, seven hockey clubs competed for the title: Central Office of Rosenergoatom, Gidropress, VNIIA, Titan-2, Atomenergoproekt, UMATEX, and Rosatom Technical Academy.

From the very beginning of the match, the Academy players demonstrated their determination to win, and the fans truly enjoyed the intense play on the ice rink. Each team showed high-quality hockey with thrilling attacks as the confrontation reached fever pitch. The stands actively supported the players.

Rosatom Technical Academy won the Nuclear Industry Ice Hockey Cup for the second time, with Captain Alexey Salashchenko leading the team to victory. He was recognized as the best player and received a hockey stick from the organizers. Valery Gorshkov was the top scoring forward, while goalkeeper Vitaly Pantykin kept the opposition at bay. Novice players Vladislav Cherdantsev and Pavel Zotov also made their mark, and the cheer group did not disappoint either. The Gold Cup for the most active fans went to the supporters of Rosatom Technical Academy.

## HOCKEY CUP OF THE NUCLEAR INDUSTRY WON TWICE BY ROSATOM TECH



**Andrey Solntsev,**  
**Vice-Rector, Director of the**  
**Novovoronezh Branch of Rosatom**  
**Technical Academy, Team Coach:**



"The games of the II All-Russian Winter Ice Hockey Cup of the Nuclear Industry-2024 featured a combined team of Rosatom Technical Academy from Obninsk and Novovoronezh. The players demonstrated a high level of skill and teamwork. To become champions for the second year in a row, they had to train hard during their free time."



The players of the Rosatom Technical Academy team, goalkeeper Alexey Petrashov and defender Maxim Protopopov, were recognized as the best players of the Novovoronezh NPP Cup, which was held as part of the Nuclear Puck Project under the auspices of the Centre for Modern Sports Technologies of Rosenergoatom, with the support of the Novovoronezh Administration and the Novovoronezh Hockey Federation. The awards were presented by Vyacheslav Shvarov, Deputy Director of the Novovoronezh NPP for Procurement and Logistics, and Andrey Solntsev, Vice-Rector and Director of the Novovoronezh Branch of Rosatom Technical Academy.





# FULL OF ENERGY



The team “Academy” took first place in the small league of the 52nd Obninsk City Youth Gathering, dedicated to the Year of Family and the 70th anniversary of the start-up of the World’s First NPP. Fourteen teams participated in sports tournaments, intellectual and creative competitions. Veterans of previous gatherings competed alongside young participants.



**Yulia Mishunenkova,**  
Project Manager at Rosatom Technical Academy:

“We put a lot of effort into preparing for this event. We needed to improve our athletic skills, prepare for the greeting competition, and rehearse dances. We became a real team – active, hardworking, and creative. Our camp was filled with friendship and mutual support. All this led us to victory.”



Thirty teams from nine Russian cities came together at the Fifth Intellectual Tournament for the Cup of Rosatom Technical Academy to compete for the title of the most knowledgeable. Based on the game results, the winning team was «Nu i Nu» from Kaluga. Second and third places went to teams from Obninsk – “Sluchainy sektor” and “Dich”.



Employees of Rosatom Technical Academy from Obninsk and St. Petersburg participated in the Northern Capital Half Marathon runs over distances of 21.1 km and 10 km. About nine thousand runners started the race, with routes passing through the historical centre of the city.



**Pavel Maslov,**  
Lead Expert of Rosatom Technical Academy:

“The scale of the event and meeting with colleagues who share similar interests created a strong competitive spirit within our team. The amazing atmosphere, great weather, and beautiful views of the city made it interesting and helped to set personal records.”





Youth activists from Rosatom Technical Academy presented a theatrical performance titled “Checkmate,” dedicated to the memory of the great scientist Igor Kurchatov.

The play allowed viewers to look behind the scenes into the life of the academician and leader of the atomic project, revealing his personality and contributions in a more profound way. The plot was based on memories shared by colleagues, relatives, and friends of the great scientist. The premiere took place at Rosatom Technical Academy during the XXIII Scientific and Technical Conference “Structures and Technologies for Manufacturing of Non-Metallic Products,” organized by Obninsk Research and Production Enterprise “Technologiya” named after A.G. Romashin.

**Oleg Komissar,**  
Chief Designer at ORPE “Technologiya:”

“The show made a strong impression. It demonstrated the role of a scientist in scientific and technological progress. Great achievements are possible thanks to the willpower, strength of character, and determination of such people.”



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TECHNICAL  
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ROSATOM

## ТЕХНИЧЕСКАЯ АКАДЕМИЯ РОСАТОМА – ЦЕНТР ПЕРЕДОВОГО ОПЫТА МАГАТЭ

5 TRAINING SITES  
IN OBNINSK,  
MOSCOW,  
NOVOVORONEZH,  
ST. PETERSBURG,  
SOSNOVY BOR



98,500  
TOTAL AREA  
OF PREMISES



ABOUT  
500,000  
INDUSTRY  
TRAINEES HAVE  
BEEN TRAINED  
SINCE 1967



700  
TRAINING  
PROGRAMMES



> 8,000  
FOREIGN NPP  
SPECIALISTS HAVE  
BEEN TRAINED  
SINCE 1972



> 1,000  
SCIENTIFIC AND  
TECHNICAL  
EXPERTS  
INVOLVED



ABOUT  
5,000  
NUCLEAR  
INFRASTRUCTURE  
SPECIALISTS  
FROM PARTNER  
COUNTRIES HAVE  
BEEN TRAINED  
SINCE 2010



45  
SPECIAL  
LABORATORIES



IAEA  
COLLABORING  
CENTRE IN  
5  
AREAS



SIMULATOR  
TRAINING





FOLLOW OUR NEWS

