



# **World of MEPhi**

**March' 18**

***Russia celebrates the Day of cats on the 1st of March. MEPHI also has its soft and fluffy animal. Please meet – Cauchy. She is clever and toady, a lover to look into the soul and sit on the knees. Guys from the LAPLAS Institute noticed that she loves to go to lectures and communicate with students***



# MEPHI HOLDS FIRST GRADUATION CEREMONY FOR STUDENTS FROM TURKEY AND MONGOLIA



**On March 12, MEPHI has held a solemn presentation of diplomas to foreign and Russian students. For the first time students from Turkey and Mongolia received diplomas of the famous University.**

Among the guests were lots of distinguished guests including the Director General of the State Corporation Rosatom A.E. Likhachev, the Governor of the Kaluga region Anatoly Artamonov, rector of MEPHI M.N. Strikhanov, Deputy of the State Duma of the Russian Federation G.I. Sklyar, Vietnamese, Mongolian and Turkey Embassy officials as well as their colleagues from Zambia and Jordan whose students study at the university.

173 people, including 35 Turkish, 2 Mongolian and 62 Vietnamese citizens, were on the stage this evening. It is worth noting that this was the first graduation of MEPHI students within the training program for the Akkuyu nuclear power plant, which is being implemented in accordance with the Intergovernmental agreement signed between Turkey and Russia on May 12, 2010. Current graduates will work at the Turkey's first nuclear power plant – Akkuyu NPP in Mersin Province.

The Director General of the State Corporation Rosatom A.E. Likhachev congratulated the graduates «on the first adult title – the title of Russian nuclear scientists». "You hold the

most important thing in your hands – the keys from the time when Russia, Turkey, Vietnam and Mongolia will work together to build a secure bright future. I want to say that the global progress, global growth will depend critically on how our countries will cooperate," said A.E. Likhachev. According to him, it is important for Rosatom to create an entire cluster of education and research activity in Obninsk. Likhachev wished the graduates «to carry the sense of internationalism, a sense of those people whose lives and work will focus on the development of the global agenda through the whole life». «Your life path depends equally on two factors: the knowledge that you have received in MEPHI,

our basic University, and your desire to develop and learn,» noted A.E. Likhachev.

«With the help of the Rosatom State Corporation, MEPHI becomes a truly international hub for training specialists in a wide range of areas, first of all, nuclear energy and nuclear technologies. University programs are modified on the basis of customer's requirements,» said the rector of MEPHI M.N. Strikhanov. Over the past four years, the University has been ranked among the top 100 leading universities in the world by authoritative international rankings THE and QS. «I think it is based on the fact that we are really important resource, the base University of one of the most successful global corporations,» said the rector. Mikhail Nikolaevich wished the graduates of MEPHI to find interesting high-paying job in prestigious areas: «You are starting a new life, a wide window of opportunities and great career prospects are in front of you».

Ambassador Extraordinary and Plenipotentiary of Turkey in Russia, Hussein Dirioz said, «Excellent education that our students received at MEPHI plays a crucial role in Russian-Turkish relations. I have no doubt that our students will contribute to the implementation and promotion of the joint Russian-Turkish project of NPP Akkuyu, which forms a kind of bridge of friendship between our countries.»

In turn, the Deputy Minister of energy and natural resources of Turkey Nedzhati Yamach stressed in his speech that the Akkuyu NPP project was one of the most important projects aimed at the development of relations between Moscow and Ankara. «This is a very presti-

gious project both for Turkey and Russia and the fact that our students became graduates is a significant step forward,» he said.

The first Secretary of the Embassy of Mongolia in Russia Agvaangongor Amarsaihan also congratulated compatriots on the day: «Our Embassy is proud that our students have graduated from this famous University. We are very pleased with their success and look forward to graduates in Mongolia to work».

Young people were welcomed by many guests of honor and then there was a concert prepared by student creative teams.

This day was the most exciting and joyful for former students of MEPHI. Graduates from different countries shared their impressions and plans for the future:

**Temuujiin Battulga, Mongolia:** «Six years ago I came from the country to study in Russia. It wasn't easy, I missed my family. But thanks to my classmates and teachers I was able to go this way to the end. I am glad that my thesis was appreciated, and it is an honor for me to hold MEPHI diploma of honours. The University gave me a good quality education, I learned to speak Russian. I'm proud that I studied here.»

**Egor Bobkov, Russia:** «I have been learning in the direction of «Nuclear stations: design, operation and engineering» for six years. I will remember it for a lifetime. MEPHI gives students a chance to participate in domestic and international events, scientific tournaments. I'm glad I had that experience. A good diploma and personal activity allow to find a job quickly, find people who are interested in me. Rosatom is very big. There are a lot of options where can I go to work, for example, a nuclear power plant or nuclear navy. I feel happy that graduates from different countries have come together. At the same time, I am proud to have received a diploma of MEPHI. One phase of life ended for me».

**Eyup Yaramaz, Turkey:** «Seven years of study passed very quickly. Lectures were given by teachers with a wide experience, they gave us good knowledge. I received my diploma today, and I am very happy about it. I'm going to continue to work at the NPP Akkuyu. I hope I will be a great boss.»

Le Gia Hien, Vietnam: «It's very nice to get a diploma of MEPHI. Now I can work in the nuclear industry. At the University I gained experience and knowledge, as well as new friends. In the future I want to work at the Novovoronezh NPP.»



# STUDENTS OF TOKYO INSTITUTE OF TECHNOLOGY: “WE ARE PIONEERS IN DEVELOPMENT OF COOPERATION WITH MEPHI”

**Students of the Tokyo Institute of Technology have passed an internship at MEPHI. It is a part of the implementation of the interuniversity project «Training of leading scientists and engineers in the field of healthcare, medicine, nuclear power and energy industry between Japan and Russia», which is planned for 5 years.**

The internship took place at the Institute of Nuclear Physics and Engineering (INPhE) on the basis of the Department №2, Department №1 and the Laboratory of engineering computer simulation in the field of nuclear technology. During their stay in MEPHI students were familiarized with basic principles of reactor control in normal and emergency modes of operation, gained knowledge in the field of ionizing radiation and instrument of radiometric and dosimetric control, practiced in the complex modeling of nuclear power plants using modern Russian and foreign codes.

As part of the internship, there was an excursion program, including a visit to the laboratories of MEPHI, Kolomenskoye and Tsaritsyno parks and a trip to Obninsk.

Students **Kawai Kota**, **Kuwagaki Kazuki** and **Shoji Naruki** shared their impressions of the days spent in MEPHI:

- We spent two weeks, having lectures, workshops and excursions. The tours were

both inside the University and outside it, when we went to Obninsk. At the University, we really liked NEVOD and the Nanocenter. We would like to note the nuclear power plant simulator, it is a very interesting and, most importantly, understandable.

Although MEPHI is a nuclear University, we saw many other diverse areas that accompany the main one. It's amazing how

promising this industry is, how many applications it has!

Another advantage of our trip is that we met Russian young scientists, who are likely to work with us in the future.

We had a very rich program, everything was very well, and we hope that the program will be continued. We became pioneers in the process of interaction between MEPHI

and the Tokyo Institute of Technology. We visited MEPHI and in the near future, Russian students will come to us. It is important that students from our countries had the opportunity to get to know each other better, because there were sad events in Russia and Japan, Chernobyl and Fukushima, and we need to communicate to build a better world.

In spare time, we managed to visit many places, such as the Red Square, the Kremlin, bought souvenirs, went to the circus. We were pleasantly surprised by the subway. People visiting Japan are usually surprised at our underground, how it is organized. And if our interval is three minutes, here trains arrive every 30 seconds in rush hours! Wow!



# MEPHI DETERMINES WINNERS OF NATIONAL TECHNOLOGICAL INITIATIVE OLYMPIAD IN NUCLEAR TECHNOLOGIES

On March 12, high school students from many cities of the country, including St. Petersburg, Novosibirsk, Komsomolsk-on-Amur, Zheleznogorsk, Kursk, have come to the National Research Nuclear University «MEPhI» for the final of the Olympiad of the National technological initiative in the profile «Nuclear technologies».

The purpose of the NTI Olympiad, organized by the Russian venture company and the Agency for strategic initiatives in partnership with the largest technical universities and corporations of the country, is to find and develop talents for the National Technology Initiative – a program to create fundamentally new markets and ensure global technological leadership of Russia by 2035. The Olympiad is held in 17 educational profiles that correspond to the sectoral priorities of scientific and technical development of Russia.

The Profile «Nuclear technologies» was assigned to MEPHI. This is a completely new direction of the competition, which appeared in 2017 when our University, interested in talented, motivated to engineering education entrants, offered a profile which corresponds to the main educational agenda of the University.

66 enthusiastic about science guys were selected to participate in the finals out of four thousand high school students. They were checked in physics, mathematics, theoretical foundations of nuclear technology and skills in solving problems.

Tasks for the final stage were developed by the staff of the SEC NEVOD of the Institute of Nuclear Physics and Engineering at MEPHI, and this is not by accident. As the author

of tasks said, a young scientist and teacher of SEC NEVOD Egor Zadeba, the Institute of Nuclear Physics and Engineering combines two areas: fundamental studies of the properties of matter, elementary particles and subatomic condition and applied studies related to nuclear technologies.

«That is why we decided to develop a project that would combine the features of both directions. During the final stage, the students should create a dosimeter that measures the radiation background in real time. At the same time, the same detecting elements act as a detector of cosmic rays, which can be used to measure a microsecond lifetime of such elementary particles as muons. Thus, the device created by schoolchildren will simultaneously solve both the applied problem of radiation monitoring and the fundamental problem of studying the properties of the secondary cosmic ray flux.»

It should be noted that the unique experimental complex NEVOD is the world's only scientific facility that allows to conduct both fundamental and applied research, such as forecasting the near-earth space, studies using natural particle streams on the Earth's surface.

As part of the NTI Olympiad, a large business program was organized for teachers, who are involved in organization and support of project and research students' activities, as well as for University professors, carrying out pre-University specialized training of gifted students and career guidance. A series of round tables, seminars and master classes were held, where they comprehensively discussed the issues of formation of students' interest in engineering specialties.

During the seminar «High-tech engineering projects at school and university» the participants discussed the possibility to implement projects with high degree of scientific content and aimed at the final product in the educational process. Andrey Andryushkov, the dean of the engineering school of Moscow Polytechnic University pointed out that this type of project was an important form of engineering education. During the seminar, the participants presented different models of project training in the educational process of the University and school and shared their experience in their application.

The Head of methodology department of the Rosatom Corporate Academy Ulyana Ravedovskaya revealed the secrets and technologies of creation of modern educational formats, «in order to keep up with the times.» During the master class «New educational formats: same language with the younger generation», participants learned about the technologies, the specifics of the new formats that can be used in the development of curricula for students, and tried to apply it in practice.

The Director of the Centre for the development of business and engineering competences of the Rosatom Corporate Academy Alexey Ponomarenko proposed to discuss the important topic of early professional orientation of schoolchildren and preparation to the WorldSkills championship. Within the collective dialogue the participants were looking for answers to questions, how to interest students in obtaining engineering education and what role WorldSkills movement plays in it.



But the main part is announcement of Olympiad results!

The best team which coped with the task was «MICRON» (Margarita Kudryavtseva (Novokuznetsk), Semen Fadeev (Irkutsk), Egor Cherkashin (St. Petersburg), Vladislav Rumyantsev (Novosibirsk), Diana Timokhina (Novosibirsk)). The winners in the individual standings were high school students from Novokuznetsk, St. Petersburg, Irkutsk, Komsomolsk-on-Amur, Zheleznogorsk and Novosibirsk. The full list of winners is on the website of the NTI Olympics.

«The NTI Olympiad is a real chance to understand where you can apply and realize your talents and knowledge, decide and choose the right path,» Valery Karezin, Director of educational projects of the Rosatom State Corporation addressed the finalists. «For example, you can enter MEPHI or other supporting universities of the State Corporation, and we will provide you with interesting tasks in the construction of nuclear power plants, the creation of laser systems and supercomputers during the work at the enterprises of the corporation.»

Addressing to the winners of individual championship, vice-rector of MEPHI Elena Vesna stressed that their success largely depended on team work. «I would like to say about one more team: during this period you joined in the research team of NEVOD - and therefore in the team of MEPHI. This is evident from your feedback on joint work during the Olympiad. Therefore, we will certainly be glad to see you as students of our University!»

«As for MEPHI, this year we decided to take the winners of NTI Olympiad without exams!» said Elena Vesna.

Winners and awardees received memorable gifts from organizing committee, and most importantly - diplomas that will give them privileges at the admission to the leading universities of the country, since the profile «Nuclear technology» is included in the list of the Russian Council of School Olympiads.

**Irina Lyalikova, winner of the Olympiad, Kursk, school № 6:**

– For me, this is a new experience, a new format of competitions. I did not participate in such events before. I like to work in a team, I gained new skills, such as programming.

**Sergey Kiselev, winner of the Olympiad, Komsomolsk-on-Amur, Lyceum №1:**

– Yeah! It was a very interesting Olympiad, it required not only theoretical knowledge, but the ability to work in team, to come up with engineering solutions, that is, to do something with your hands, not just with your brain.

**Ilya Kozlov, winner of the Olympiad, Zheleznogorsk, school №91:**

– We came as a team of six people. The task was difficult and, I can say, unexpected. I learned from scratch how to program, gained experience. It has become much clearer to me what it is to study at a nuclear university, and now it is easier to decide where to go.

