



# World of MEPHi

March' 19

**BEAUTY OF  
MEPHi**

## OUR TEACHERS

# FORMULA OF HAPPINESS

**Nikolay Kalashnikov, head of the Department of General Physics, has been teaching for more than 50 years. In class, students come up with the formula of happiness, find out about Newton's conflicts and above all they learn to think. Professor told us, why 'things' are important for lectures and what the physicist thinks about looking at the sunset.**

## About lectures with 'his own things'

Professors used to give lectures and teach using a student's book in 5 volumes. In the beginning of 2000-s I decided to refresh the course and wrote a new book with my colleagues. We managed to put all the material in 2 volumes. Information was highly concentrated but still very interesting; there were many illustrations and practical examples. Now they use the new book at the MEPhI and the MIPT (Moscow Institute of Physics and Technology).

Teacher must be an actor to keep the attention of the audience. I use my own things in each lecture – these are the facts that can surprise students or make them laugh. It relaxes them very well. So, you know that physicist Isaac Newton had been in a conflict with other physicist Robert Hooke? Hooke claimed he had been the first to discover the law of universal gravitation and Newton just arrogated the discovery to himself. Or the Coulomb's inverse-square law had been discovered by American scientist Benjamin Franklin 30 years before Charles Coulomb, but the law

was named after Coulomb.

I ask my students to write the formula of happiness using the concept of dimension. First, we decide how to measure happiness. Usually students tell me about money, health, love or status. Let's assume we measure it in money. Then we think, what does this factor depend on. So, you can come up, step by step, with the formula. It is a multifactorial, ambiguous task. I have not decided yet, what to use to measure happiness. I do not have enough time to solve such a problem.

Nobel Laureate Richard Feynman said, "If you are a scientist, a quantum physicist, but you cannot explain to a 5-year-old child what you do in a nutshell – you are a charlatan". He was absolutely right. You can always find simple words to make these daunting scientific things clear and interesting to any listener.

It is funny, but I am nervous every time before giving the first lecture to the freshmen. What if they know it better than me? That is why I put all things off before the 1st September and get ready for the lecture.

## About 'nice monster'

Students write feedbacks about me on the Internet. 'The teacher is cool, but it is difficult to pass'. Or 'He's nice but really a monster'. I cannot agree with the last definition. I am not monstrous, just try to rate students' knowledge objectively. I am strict to those, who use cribs. During one examination period, I sent to a retake almost a half of master-degree students. And what should I do,

if they don't know the subject? Then they retake the exam for several times.

There is a leader in my list. The student, who had been coming for 7 times. But he got his deserved 'C' in the end.

But frankly speaking, I became more sentimental with the years. I realized that students have other problems, not only physics. It is necessary to commensurate physics and other stuff.

## About modern students

I have been teaching physics at the university for more than 50 years. From the beginning of 1960-s students have barely changed, except that they became more pragmatic. They measure everything from the point of their own benefits. I base on the fact that it is hard to find people for vacancies of our department. It means a lot of effort to offer a job to young people – now they must be interested financially. It is the same situation in other departments. In the 1970-s it was prestigious to be a university teacher, all graduates dreamed about this position. Nobody even thought about salary.

## About school knowledge

The introduction of the unified state exam led to the situation, when students at schools are not being taught physics but trained to guess the right answer. 10 years ago, we introduced a control over applicants who enrolled with the results of the USE. In September first-year students were offered to solve 10 exercises from all the topics of the school curriculum.



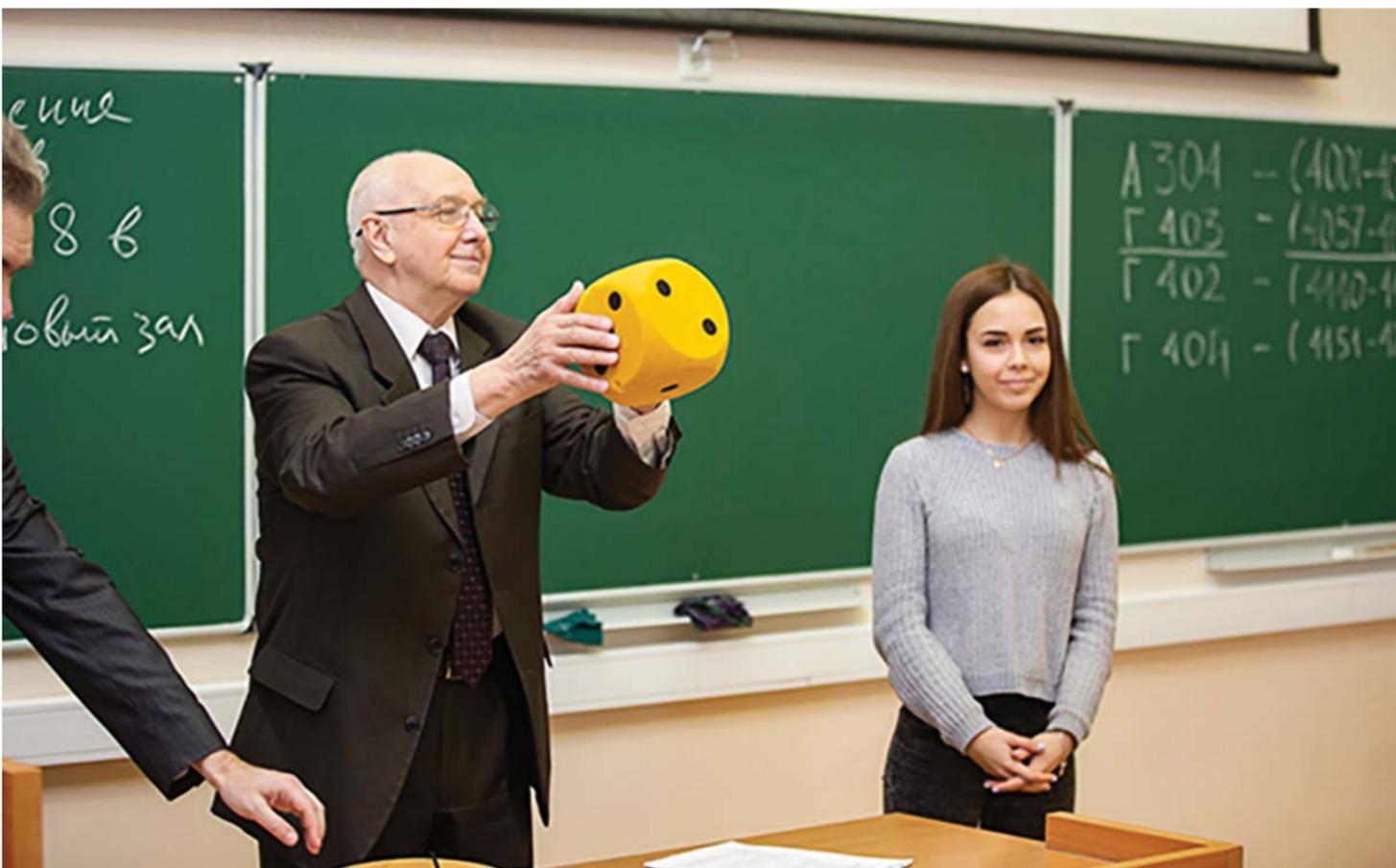
The results of the first check were essentially different from the grades of the USE. The average point was decreased by one and a half. Maybe, they forgot what they knew during the summer or their preparation left much to be desired. We did not expel anyone, but gave school teachers' recommendations, which sections to pay attention to when preparing high school students. Now the situation is better. The results of the input control almost coincide with the results of the USE. I think this is due to a change in the attitude of society towards technical sciences. Applicants used to be interested in economics

and law, but nowadays they are switching to technical fields. The preparation is getting better with each year.

## About physics on television

In the mid-70s, the Department of Educational Television (Department of Physics) was created by a joint decision of the Central Television and the Ministry of Higher and Secondary Special Education of the USSR at MEPhI. A "correspondence" university worked in the USSR, based on the 4th Central Television program. They taught foreign languages, natural sciences (higher mathematics and physics) and engineering disciplines (strengths of materials, machine parts, etc.) The higher mathematics study program was led by Viktor Sadovnichy, who is the rector of Moscow State University now. I was responsible for physics. There was a mobile television station in the courtyard of MEPhI, it broadcast lectures on the educational channel. We worked on air from our own studio. Like real TV people. A script was prepared for each lecture, audio and video sequences were developed as well.

Once, Professor Evgeny Lovetsky gave a lecture on physics, and the director gave him a sign – she drew a circle with her hand in the air. In the language of television, it means "to finish". Evgeniy interpreted the gesture in his own way. "And now I will tell you about a ring railway", he said to viewers and started explaining the specifics of the movement of the material body around the circle.



OUR TEACHERS

Every week on the Saturday issue of the Moskovsky Komsomolets newspaper there were published tasks for viewers of preparatory courses. The print run was sold out instantly. It was almost impossible to buy Moskovsky Komsomolets on Saturdays. Viewers sent answers to Shabolovka – these were bags of letters and postcards. It was appreciated at Central Television, in those years the rating of television programs was determined by the number of letters. At the Department of Physics, we checked assignments and answered to each viewer. At the end of the school year, we invited children for full-time classes and after finishing, those children got certificates of completion of television preparatory courses. When entering the USSR universities, such a certificate gave the applicant an advantage. The study programs of the Central Television worked until the beginning of the 80s. Advertising began to pressure, and people from television decided that it was commercially unprofitable to release educational programs. Such a pity!

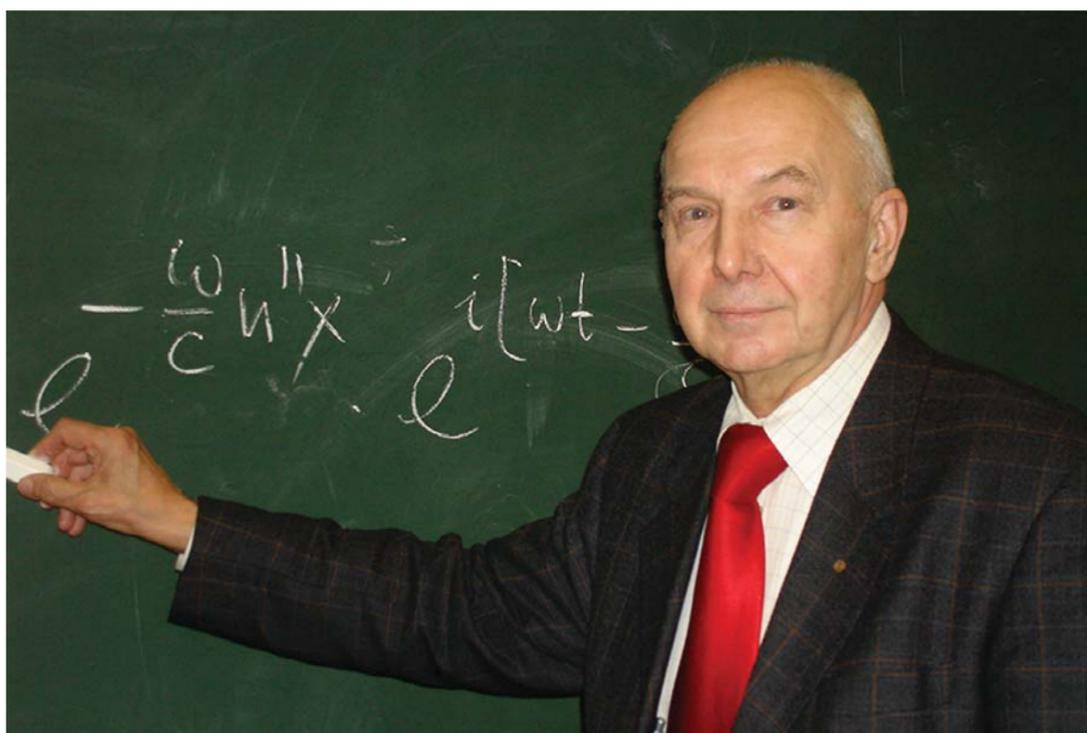
**Why science is sacred**

My professional activity consists of three parts. The first thing is science — this is sa-

cred. Then goes pedagogical work, and then administrative one, which I call my holy duty. [Laughs.] There is an opinion in the scientific community that universities should teach and not engage in science. But when a teacher is engaged in science, they are an example to follow, which means they have the moral right to teach. If you left science and only teach, then you become a methodologist and a quote writer. In this case, better to be teacher at school.

The main direction of my scientific work is the interaction of charged particles with single crystals. So far, we are talking about fundamental things. If you have a laser beam of one frequency, then after passing through the crystal and interacting with the electron beam, the frequency can change several times.

In practice, it can be used in biological and medical purposes. For example, a beam of electromagnetic radiation can inhibit cell division or stimulate it. We experimented with storing irradiated food products without lowering the temperature. It turned out that the oil and sausages can be stored at room temperature.



**About Order**

Getting the order for services to the MEPHI on the teaching board became a surprise to me. I did not expect it, but I was very pleased.

**About thoughts at sunset**

Physics helps me to maintain the interest in the world around. Sometimes I catch myself thinking about some natural phenomena that do not have an

adequate physical interpretation. For example, I cannot fully understand why there is a green lighting at the sunset. With given education I cannot construct a model that could explain what is going on up there in the sky. I am a bit worried. [Smiles.]

**About future**

I think the future lies in the interaction between an artificial intelligence and a human.

Everything that has done by a human can be done by a computer but much faster. The question is how to speed up the thought process of a man using computers? How to create inverse relationships between a cerebral cortex and a computer? On the one hand, there is a scientific problem. On the other hand, there is a humanitarian problem. What if computers will become smarter than us?

SERVICE OF GOOD DEEDS

BLOOD DONOR DAY AT MEPHI



**The traditional donor day took place on the 19th of March at MEPHI. Concerned students, professors and other workers of the university united to do a good deed together. More than 131 people participated in the event, the organizers reported about 59 litres of saved blood.**

After the procedure, the students did not go home but stayed at the university to take a rest. There was organized an

equipped space – sitting at the tables or lounging on bright beanbag seats donors could eat some sweets and have a cup of tea talking to each other.

Artyom Sidorenko: "I donated blood for the 5th time, and I think it's an important thing to do. Each time I feel overtaken by some unusual feelings after realising that I've done something good for other people, that my blood can really help those who need it".

Kirill Korolev: "I donated

blood for the 2nd time, it was easy. And doctors were really kind"

Gleb: "Most of the people that I know have donated blood for many times, so I decided to do the same. It was difficult for me to prepare for the procedure because about 70% of my food ration consists of roasted meat and dairy products. I had to keep a diet and follow some rules. And then after donating my blood I realise that it was worth it".



## YOUTH AND SCIENCE

# ALL WINNERS OF NTI CONTEST «INTELLIGENT ENERGY SYSTEMS» — AT MEPHI

On March 13-18, MEPHI hosted the final of the competition of the National Technological Initiative (NTI) in the category of «Intelligent Energy Systems». The NTI Olympiad is the first Russian engineering competition for teams of schoolchildren and students, which is organised by the NTI, Agency for Strategic Initiatives (ASI) and Russian Venture Company (RVC JSC). In 2018/19 the competition was held in 19 nominations. 38,359 schoolchildren from 86 regions of Russia registered for participation, so the organizers developed a system of distributed finals: the final stages of the most popular categories took place in several cities simultaneously. Thanks

to that decision, the maximum number of talented participants, who made it to the finals, could come to the last in-person stage.

Final competitions in the category of «Intelligent Energy Systems» were held simultaneously at MEPHI and at Irkutsk State University. During the competition, the finalist teams had to write a program for managing a distributed energy network controlling a special model booth that has consumers (houses, hospitals, factories) and generating facilities, that is, power plants and windmills.

Intelligent energy is a promising area for the development of modern electricity in Russia

and in the world. This concept involves the unification of consumers and producers of electricity into a single automated system on electric networks. Such a system will be able to reserve power in case of an accident and store electricity for peak loads.

The conditions of the task were as close to reality as possible: the stand recreated changes in light, wind and other conditions. Teams competed against each other to see who will construct a better network and write a better control algorithm. Also the participants had the opportunity to sell electricity to competitors - other teams. The «Intelligent Energy Systems»

category was included in the list of competitions of the Russian Council of School Olympiads. All prize-winners get priority entry to universities – they can score 100 points on the USE in mathematics or informatics or they can enter without passing any exams.

Winners were announced in Moscow and Irkutsk on March 17, 2019. While the participants of the Moscow venue were waiting for the results from Irkutsk, Igor Chausov, a leading expert at the Infrastructure Centre «Energy Net», gave a lecture on the topic «New Digital Energy Practices» and described the development prospects for the industry for the next 10-15 years.

Before the closing ceremony of the Olympiad, Igor Chausov wished all the participants to continue developing in the fields they are interested. He also highlighted the features necessary for modern engineers, that the participants already have: «This competition gives you an enormous intellectual freedom, and all of you have shown unconventional thinking in performing the tasks!»

The deputy director of the Institute of Physico-Technical Intelligent Systems at MEPHI Alexander Berestov announced a winning team called «I'm going to bed». He gave the parting words: «Gone are the days when science was done by loners, now is the time for a teamwork! I hope that you will enter universities, get higher education and gain knowledge

that will allow you to solve complex problems. During the competition, you were solving problems of the highest level, when the formulation of the question is not very clear, and methods of a solution are generally unknown. This is the type of tasks you will have to meet in the future! My advice is to set the tasks correctly and then you will succeed!» Members of team «I'm going to bed» Maxim Alexandrov, Pavel Martynyuk and Ekaterina Zhuk became the winners of the «Intelligent Energy Systems» category of the Olympiad of the National Technological Initiative. Another winner from the same category was a member of another team - Ivan Naumov. Thus, it turned out that all the winners of this category participated in the competition on the venue of the MEPHI.

Airat Kamaletdinov and Dmitry Kolosov became prize-winners of the Olympiad. They were awarded by a leading specialist in economic and technical development of Polyus-NT LLC Ivan Latsimirsky: «Thank you very much for your participation, you are very quick in understanding everything, your level of training is very high. Well done! Keep learning and developing! You will succeed!»

The organizers of the NTI Olympiad invited all the winning teams to the super final, which will be held at the Skolkovo Institute as part of the «Island 10-22» intensive in July 2019.



## INNOVATIVE MATERIAL FOR BIODEGRADABLE IMPLANT IS DEVELOPED AT MEPHI

At the end of 2018 there have been approved the lists of projects introduced for funding under the programme 'Umnik', among which 8 youth innovative projects of the MEPHI students. Polina Kroklicheva, the master student of the Institute of Nuclear Physics and Engineering (INPhE) at MEPHI, became an author of such a project with a topic called 'Development of a method for obtaining an innovative composite based on bioactive highly porous ceramics, hardened with a magnesium phase, for a biodegradable implant using powder metallurgy methods'.

The main point of the project is to create an innovative material for a biodegradable implant, which is used to treat various degrees of fractures in traumatology and surgery. Creating the

new material will increase the rate of bone fusion, increase the time of bone tissue regeneration, promoting the formation of healthy bone callus, replacing the implant with «living» bone tissue.

Such an implant has many advantages: lack of expenses for an additional operation; reduced risk of infection for the patient; the exclusion of allergic reactions of the body to the metal material of the implant; reduction of patient postoperative recovery time.

Biodegradable implants are still not used in Russia. The reason is that the implant material does not meet the specified requirements: biocompatibility, strength, corrosion resistance and biodegradability. With all the positive characteristics of implants made of



metal, ceramics and polymers, a number of disadvantages can be distinguished: a high modulus of elasticity of metal

implants is one of the reasons for bone resorption; polymer implants during biological aging release toxic and carcino-

genic substances that have a negative effect on the human body; the high fragility of ceramic implants does not allow their use in particularly loaded parts of the bone.

«There is a real need to create material that offers an alternative solution to the problems mentioned above. The laboratory, in which I work, offered a model for creating a composite based on a bioactive ceramic matrix that is reinforced with magnesium particles obtained by powder metallurgy methods. Magnesium is a completely biodegradable and non-toxic element; the strength of magnesium is closest to the strength of the cortical bone layer. Magnesium is an important factor in bone metabolism, bone formation and mineralization», noted Polina Kroklicheva.

## YOUTH AND SCIENCE

## STUDENTS OF MEPHI PARTICIPATE IN NEW PROJECT OF BAKSAN NEUTRINO LABORATORY



A project at the Institute of Nuclear Research of the Russian Academy of Sciences (INR RAS) is being prepared for updating the Baksan Neutrino Observatory (BNO), located in the Baksan Gorge in the Elbrus region (Neutrino village). A detector structure is being developed. It will be sensitive to all types of low-energy neutrinos. The working (detecting) substance of the new detector is a liquid scintillator with a total mass of 10 kilotons.

Liquid scintillator allows to record events from neutrinos and antineutrinos simultaneously, using various reactions

of the interaction of neutrinos with matter. The low energy antineutrino is recorded using proton inverse beta decay reactions (IBD). This reaction was used for the first detection of the antineutrino in the famous experiment by Raines and Cowan. The neutrino is detected by the reaction of scattering of neutrinos on target electrons. A Borexino detector in Gran Sasso weighing 300 tons serves as an example. In addition, there is a possibility to use other reactions, for example, the interaction of neutrinos and antineutrinos with carbon nuclei that are the part of a liquid scintillator. However, the cross section of this reaction is much smaller than that of the IBD reaction, and the detection threshold is much higher. Therefore, it can be used only for high-energy neutrinos, for example, for ones from supernova explosions.

A study of geoneutrino-antineutrino emitted by radioactive elements located in the bowels of the Earth — will be an important physical task for such a detector. Geoneutrinos were already registered by two detectors: Borexino in Italy and KamLAND in Japan. However, the statistics of events in these detectors is too low to draw final conclusions about the amount of radioactivity in the Earth and its effect on the heat flux of the Earth. That is why there is a need for a more powerful detector that can detect not only

antineutrino radiation from uranium and thorium, but also from potassium. Registration of potassium neutrinos can solve the problem of the heat flux of the Earth.

However, a large-volume liquid scintillator has an unrecoverable background from the  $^{14}\text{C}$  isotope, which is a part of any hydrocarbon, and this background increases with an increasing volume. In the Borexino detector, the background from  $^{14}\text{C}$  limits the detector's ability to measure pp-neutrinos from the Sun, which are the main part of the entire solar neutrino flux. Nowadays there are arguments in favour of the possibility of creating a scintillator with a low content of the  $^{14}\text{C}$  isotope. Works on the determination of the  $^{14}\text{C}$  concentrations in various solvents are carried out directly in the BNO (project manager Prof. Dr. V.V. Sinev.)

The MEPHI master's degree students Maria Krygina (2 year) and Vladislav Chernyshov (1 year) also participate in the project. They are writing their master's theses at the INR RAS in the laboratory under the supervision of the Chair of SEC NEVOD Prof. Dr. L. B. Bezrukova. "The main goal in my scientific work now is to modernize the calculation model of background conditions and to get a reliable result, which, I hope, will ensure the successful defense of my master's thesis," said Maria Krygina.



## SCIENTISTS LEARNED HOW TO PREDICT RADIATION DOSES IN SPACE

Specialists of the National Research Nuclear University MEPhI, University of Oulu (Finland) and St. Petersburg Institute of Physics and Technology compared the effects of solar modulation of cosmic rays, recorded by neutron monitors and the PAMELA satellite experiment. According to scientists, this will allow to provide more accurate prognoses of radiation doses in near-Earth outer space, which plays a huge role in space planning missions. The results of the study were published in the 'Journal of Geophysical Research: Space Physics'.

PAMELA (Payload for Antimatter Matter Exploration and Lightnuclei Astrophysics) is an international satellite experiment launched in 2006. It is designed to register charged particles and antiparticles in cosmic radiation, search for antimatter and measuring the spectra of various components of cosmic radiation, as well as measurements of the radiation

environment around Earth and the establishment of nature of the dark matter. Authors of a published study compared effects of the solar modulation of cosmic rays recorded by the international experiment PAMELA and neutron monitors.

Neutron monitors are a network of ground units operating since the 1950s. They have been registering secondary particles from interactions of cosmic rays with the nuclei of the atmosphere. At their work, Russian scientists used data recorded in real time by a neutron monitor located in Oulu (Finland).

The results of the study will help verify the correctness of work of the response function of neutron monitors in different periods of solar activity. It became possible only after the start of the PAMELA experiment, says the senior lecturer of the Institute of Nuclear Physics and Engineering (INPhE) MEPHI Sergey Koldobsky.



«The correct work of the response function of the neutron monitors together with huge statistics of their continuous (about 70 years) operation allow us to provide prognoses about radiation doses in near-Earth outer space. It is essential when planning

space missions», said Koldobsky.

Direct measurements provided by the PAMELA experiment allowed to check the accuracy of the so-called response function of neutron monitors. It connects the spectrum of cosmic rays, coming to the

boundary of the Earth's atmosphere, and the number of neutrons that is recorded by the unit. During the work, the calibration of networks of the ground-based neutron monitors was provided using data obtained in the PAMELA space experiment.

# BEAUTY OF MEPHl

## MARIA NESTEROVA— MISS MEPHl 2019 — TOLD ABOUT COMPETITION EXPERIENCE



Since the beginning of December, eyes of all MEPHl students were on the most ambitious student competition of our university — Miss and Mister MEPHl 2019! 50 applicants, 18 contestants, 10 finalists and only 2 winners! Mister and Miss MEPHl 2019 became Vladimir Chursin and Maria Nesterova. Miss MEPHl 2019 Maria Nesterova spoke about her experience in participating in the competition, how she managed to combine

it with her studies and her valuable pieces of advice to future contestants.

**- Have you been persuaded, or it was only your decision to participate?**

- I decided it myself, nobody asked me. People think that only junior students take part in such competitions, but as a fourth-year student, I thought: "Why not?"

**- What fears did you have before participating?**

- None. After four years of

my studies at MEPHl, I had no fears. I developed a good immunity to stress and in critical situations, I do not worry, but think everything over and make decisions calmly.

**- What challenges did you face during your participation?**

- I do not sing and dance; I do not have any pronounced talents in a particular field. I had to figure it out and think how to present myself. It was difficult, because my rivals

both danced and played music. It seemed that they were good at everything they would touch, so the competition was serious.

**- How have you figured it out?**

- I must say that I have many friends from MEPHl, we got together and came up with something to surprise the judges. We considered many options: to appear in a dress made of garbage bags or to throw a ball in the ring on the stage, but in the end, we decided to compose a rap. If you do not know how to do anything, just rap, this is the golden rule that worked. We shot a video for a rap song and showed it at the finale. The judges were thrilled! It was harder to create a performance for the final. The idea came unexpectedly, I was in the subway and suddenly one thought came to my mind: "Why not to dress up in a Russian folk costume and to entertain the audience with ditties?"

**- How was the intellectual competition?**

- We solved different cases at the intellectual competition. It was necessary to come up with a solution to the tasks. The judges evaluated both the ability to work in a team and individual work, so it was necessary to be remembered and liked. There was also a quiz, where you need to answer fast. The questions were difficult, for example, on the quiz I found out that the jar for wine

is called a "decanter".

**- What was your final performance?**

- At the finale, I showed my rap video once again. As the judges were constantly changing, they saw it for the first time. Then the curtain opened, and I went out with the accordionist boy, and we started singing the ditties.

**- What did you feel before and after entering the stage during the final?**

- I must say that when I registered for participation, I thought: "I am going there, I need to win!" Closer to the final, I rehearsed with a girl who taught me how to play notes. Then I had the opportunity to look at the rehearsals of other contestants, and only before the final I thought for the first time: "It's okay if I will not win." I still had some confidence in victory until I stepped on the stage. After the performance, I went down from the stage and thought: "Hopefully, I will not be the first to be awarded!" Everyone was worried, no one could even guess who would get the title. All the girls had very deep, lyrical performances, and I acted more as a clown and tried to entertain the audience.

**- How did you collaborate with sponsors?**

- Many thanks to the contest organizers for cooperating with very cool and well-known brands. Most of all I remember our dresses from «Terekhov



## СТУДЕНЧЕСКАЯ ЖИЗНЬ

Girl». We were dressed up by the brand's stylist, there was a photo shoot from a photographer who works with designer Alexander Terekhov. Our photos were published in their official Instagram account.

**- What do you feel after finishing the competition?**

- Lightness. Now I have more free time, which I can devote to studies, because my thoughts were previously occupied by the competition. I am excited to be one of the judges next year. I am also pleased that the crown does not need to be handed over and it will stay with me to remember.

**- What presents did you and other contestants get from Miss MEPhI?**

- There were many gifts, and everyone was given approximately the same sets: a power bank, 2 certificates for manicure from different salons, silver earrings and a necklace. It is funny that one partner gave boys sets for beard care, which cannot be used because all the boys study at the military department.

**- What else do you do besides studying?**

- I have been drawing the topology of printed circuit boards since September. Once, things I drew on a computer were printed and given to me to solder. Now I like it, but I hope to get married soon. I decided to find a job to use the accumulated theoretical knowledge in practice. My roommate in a dormitory works at the university department, and I got a job working with her. Now I know what all these labs were for and what the length of a microstrip was.

**- What piece of advice can you give to future contestants?**

- The most important thing is not to be afraid and allow yourself to be funny. Otherwise, it only creates difficulties. This is evident when a person is embarrassed. You need to love yourself and be yourself, then luck will be on your side! You still need to do everything from the heart, because the audience feels everything and loves sincere performances.



## REGIONS

## STUDENT TV PROJECT 'VITI-TV' SUCCESSFULLY STARTED IN VOLGODONSK

Student life at Volgodonsk Engineering and Technical Institute of MEPhI is very busy. In addition to the main educational activities, there are many different areas such as scientific, sports, military-patriotic, volunteering and others. Students are actively engaged in public work, take part in urban and regional events. The university holds a lot of meetings of various kinds, organizes trips and excursions. A special field is student construction brigades. All this work creates a special atmosphere that contributes to a more effective implementation of the main activities of the educational organization: the preparation of a competitive specialist in accordance with the requirements of the time. It is quite natural that the results of such many-sided work become well-known for the community through media coverage of events, both episodically and on a regular basis. One of the projects, that has been attractive for the audience for a long time, is called «Student City». It served as the beginning of a new, student television, VITI-TV.

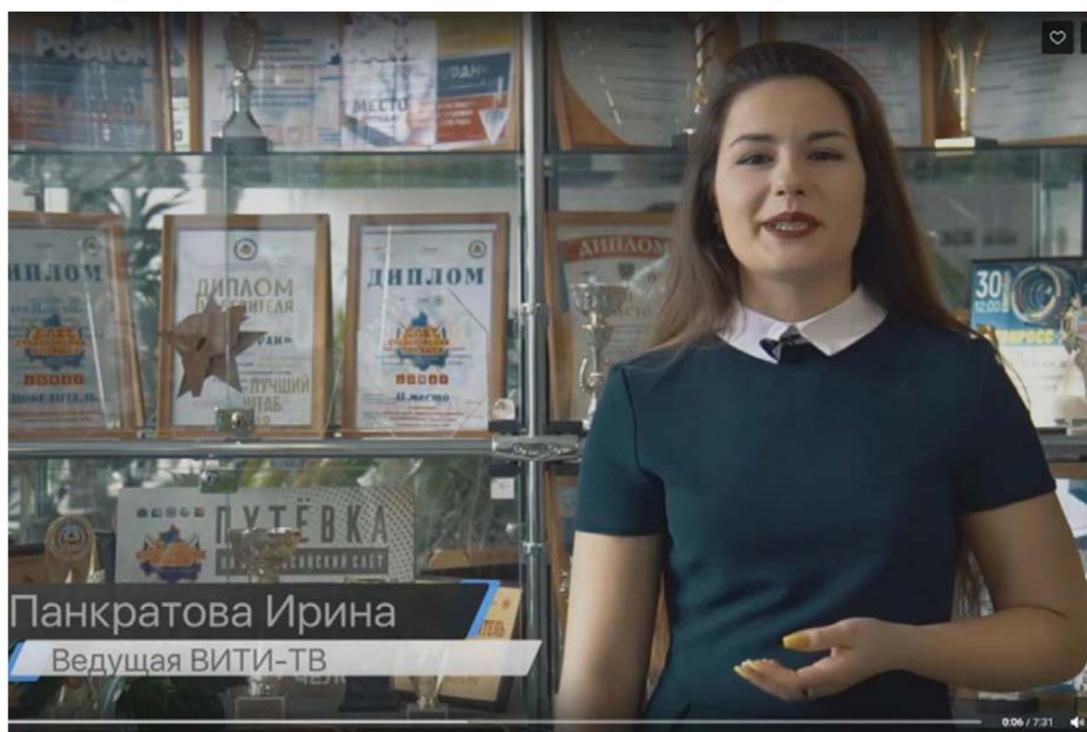
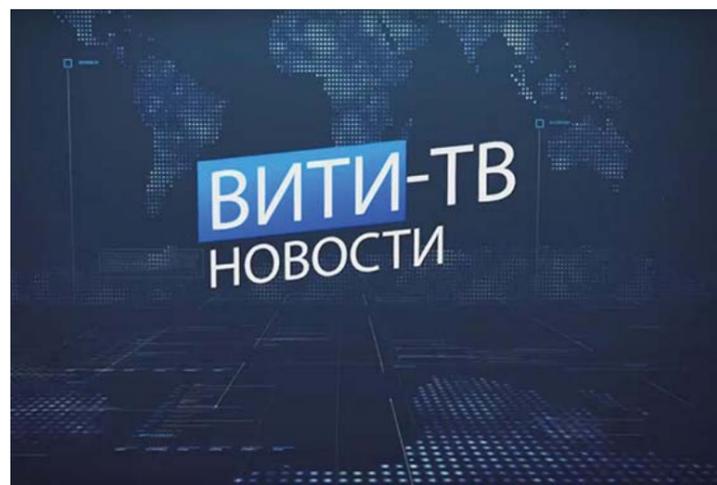
It should be noted that almost every year students of

the Volgodonsk Engineering Institute take part in the Media School organized at MEPhI. At this school, professionals share their knowledge of the art of messaging out information. As a result, the VITI develops personnel, who can compete with those people who are very good at what they do. The most active and initiative university students have united to create a specialized media group. The management of the VITI MEPhI helped to acquire professional video equipment. And the project has started!

The first program of VITI-TV was released based on the results of the expiring anniversary year for the university. Students talked about the most significant events, and later the audience was able to watch programs about the examination period, Student's Day and the Student of the Year award ceremony. The topic of the third episode is "Rosatom's new personnel, grandiose plans for 2019 and how VITI MEPhI celebrated the Day of Russian Student Groups".

Among the initiators and direct organizers of university television are Dmitry Pshenichny, Irina Pankratova, Andrey Mikhaylyuk, Anna Gusar. Media group members

tell about the most important and interesting events of student life, interviewing their teachers and classmates on a student wave. The program is released once a month. You can see it both on the official website of VITI MEPhI (<http://viti-mephi.ru/announcement/studencheskoe-televidenieviti-tv>) and on social networks ([https://vk.com/timeline\\_vitimephi](https://vk.com/timeline_vitimephi))



CITIUS, ALTIUS, FORTIUS!



## MEPHI TEAM BECOME MEDALLISTS IN FITNESS AEROBICS COMPETITION IN MOSCOW STUDENT SPORT GAMES

On March 16, the team of MEFHI was awarded on the XXXI Moscow Student Sport Games in fitness aerobics competition. The participants took third place in such nominations as hip-hop, aerobics and step-aerobics. Overall the MEFHI team was ranked the first place among all the Moscow universities.

Congratulations to our girls!

## URC MEPHI STUDENT WINS URAL MINI-MOTOCROSS CUP

The final lap of the Ural Mini-Motocross Cup, organized by the Federation of Russian Motorcycle Sport, was ended by a victory of the URC MEFHI student Kirill Shaislamov! Kirill managed to get the gold in the Pit Bike Motorcycle competition in winter season.

Judges noted a qualitative renewal of the winners. The second-year student Kirill Shaislamov (study program 'Electric stations, networks and systems') is one of the youngest and very ambitious sportsmen of the Sverdlovsk region.



## ANNUAL PAINTBALL TOURNAMENT AT OTI MEPHI

On March 2, the annual paintball tournament took place at the Ozyorsk Technological Institute.

12 teams had to fight for the victory in the tournament: teams of higher education students, teams of the secondary vocational education students, and teams of the OTI MEFHI

staff (total number of participants was 60; number of supporters was even more). For the first time, 4 mixed teams consisting of girls and boys took part in the tournament.

Alexey Zaramenskiy, the main judge of the competition, explained to the participants rules of the game in

detail. Equipped with markers, masks and other attributes of paintball, teams rushed into battle that was carried out in 4 stages.

As a result of fierce fights, the third place was taken by the team of SVE students Stroyotryad-2019, losing a little by points to the team

called "RMK". The winner of the annual OTI MEFHI paintball tournament was the team of senior students of HE called "MST - team".

The tournament was fun and competitive. Director of the OTI MEFHI I.A. Ivanov handed the cup to the winner, and medals and diplomas to

the prize-winners. All teams received diplomas of participants. According to the organizers, the annual OTI MEFHI paintball tournament is a very good university tradition, and every year there are more and more teams taking part in it.

