



## DonNTU's Team Takes Part in XI International Youth Industrial Forum "Engineers of Future-23"



Photo: DonNTU's Site

DonNTU's team took part in the XI International Youth Industrial Forum "Engineers of the Future-2023" which took place in Tulskaaya oblast on June 23d-July 3d. DonNTU's Rector Prof. A. Anoprienko was the Forum distinguished guest.

DonNTU's young professionals – the Assistant Professor R. Bozhko, the postgraduate student D. Ogrenich, and the fourth year student D. Pdolkhov were trained at the Faculty of Prospective Design, the Aerospace Faculty, and the Car Faculty,

and actively interacted with representatives of different companies and universities of Russia.

The Republican delegation took part in the panel on consolidation of regional efforts to get technological independence. The First Deputy Minister of Industry and Trade of the DPR Mr. Y. Nikanorov, the founder of the company "Yasinovatski Machine Building Plant" Mr. V. Trubchanin, the Director of the company "Yasinovatski Machine Building Plant" Mr. V. Murai, and the Deputy Minister of the DPR Youth Policy Mr. M. Uspenski participated in the discussion. The participants discussed the plan of activities of the Donetsk Regional Department of the Union of Manufacturing Engineers of Russia and implementation of measures to support young professionals as well as the role of engineers in forming technological independence of the country and getting practical skills during the processes of studying.

The discussion "Interdisciplinary Practice Oriented Approach to Train Professionals in the New System of University Education" was organized within the frameworks of the Forum business program. DonNTU's Rector Prof. A. Anoprienko took part in it. The Deputy Minister of Science and University Education of Russia Mr. D. Afanasyev, the First Deputy Governor of Tulskaaya oblast Mr. V. Fedorishchev, the HRM Director of the company "Rostech" Ms. Y. Tsvetkova, and rectors of key Russian universities were the event speakers.

About 1000 young professionals from industrial companies, students and postgraduates of 26 universities from 56 regions of Russia, and representatives of 73 world countries took part in the events of the Forum "Engineers of the Future -2023". More than 300 speakers shared their practical experience and knowledge with students of 15 faculties in the frameworks of the educational program. There also were about 200 events of the social and sports program, excursions and master classes.

Different military and civil developments of Russian companies were presented at the Forum. The participants got to know new products of the car and aviation industries, pilotless vehicles, spacecrafts, railway and medical equipment etc.

The International Youth Industrial Forum "Engineers of the Future" is held annually. It is organized for young leaders of structural subdivision of industrial companies, engineers, university students and



Photo: DonNTU's Site

postgraduates, representatives of youth public organizations.

This year the Forum organizers were the Union of manufacturing Engineers of Russia, the government of Tulskaaya oblast, and the League to Help Defense Companies under the support of the “Rostech”, the Promsvyaz Bank, and the groups of the companies “Rosset” and Novilombank.

### **Delegation of Ministry of Education and Science of Russia Visits DonNTU**

The delegation of the Ministry of Science and University Education of the Russian Federation headed by the Deputy Minister Mr. A. Gatiyatov visited Donetsk National Technical University on July 26<sup>th</sup>. The current enrollment campaign, the infrastructure and the state of the objects of the university property complex were discussed in details.

As to the enrollment campaign the prospects of fulfillment of the government order in the most problematic areas of training such as mining, metallurgy and others defined by the DPR government as the first-priority to renew Donbas industry were examined. In June 2023 the Memorandum of Cooperation with the DPR Government was signed because of the necessity in close coordination with the Republican government to provide the process of Donbas renewal with professionals. The Memorandum stipulates for close cooperation in forming and fulfillment of the government order to train engineers. The DonNTU’s contingent was far more than 20 000 during the peace time and full functioning of the Region’s industry. It reflects the necessity in engineers under the upcoming conditions of renewal of the DPR’s industrial potential and its further development.



Photo; DonNTU’s Site

The issues of the nearest prospects of development of the university material and technical resources, the provision of the university anti-terrorist defense, and step-by-step renewal of its laboratory equipment and computers were discussed in details.

To sum up the visit the team photo near the commemorative sign placed by the university graduates in spring 2021 and devoted to the 100<sup>th</sup> anniversary of DonNTU in the Park of Forged Figures was taken. The Park borders with the Donetsk City

Administration.

### **Programming Engineering Students Success Helps to Establish Cyber Sports Laboratory at DonNTU**

Grozny hosted the I International Festival in Sports Programming “The Peace Code” on May 24 -28<sup>th</sup>. It is the joint project with the Ministry of Digital Development and Mass Communication of the Russian Federation, the Ministry of Sports, and the Federation of Sports Programming. The Federal Project “Sports is the Life Norm” helped to implement it. The prize money was 3 500 000 rubles. The teams from 11 countries were the Russian programmers’ competitors. Students from the Scientific and Educational Institute of Computer Science and Technologies of our university competed in the final of the event. The Associate Professor E. Savkova says: “Our students I. Sygin, L. Sygin, M. Vavilin, O. Vasilchenko, and K. Rudnev were the Festival participants.



Photo: DonNTU’s Site

The guys competed in two disciplines: algorithm programming and food programming.

The algorithm programming competition lasted for 5 hours during which the participants had to solve 12 tasks. Our team consisted of 3 participants, and they worked on one computer. They impressed the jury very much as they had solved 2 tasks during the last hour and improved their position in the rating table.

The food programming is a new discipline for us. All members of our team participated in it having their own laptops. All the teams got one task: to develop the site on farm products wholesale and retail trade. The participants had to show the program which implements the stated functioning and has convenient interface for different users: farmers, buyers and the site administrator. Application of different advanced technologies was also an important issue.



Photo: DonNTU's Site

The competition lasted for 24 hours. The first day the working period was from 9:00 till 24:00; the second day – from 9: 00 till 18:00. There was the competition interim step during which the teams were to show the jury the results of their work according to the timetable. This stage is very important: the jury defines whether the team is on the right way and corrects it, if there is any necessity, and evaluates the presented code.

Then at 24:00 15 teams were selected to the final according to the results of the interim step and loaded codes. There were 28 teams in the “food programming” though 40 had been announced previously. We were very happy to

get to the final. Our participants were the youngest and it was for the first time when we have taken part in the competitions like that. The lack of experience influenced the stage of the project presentation, but the overall results showed the availability of DonNTU's team, and let us evaluate our knowledge and understand the development direction. Our guys are determined to take part in further competitions”.

The Federation of Sports Programming helped the cyber sportsmen from 39 organizations of the Donetsk People's Republic, the Lugansk People's Republic, Zaporozhskaya oblast and Khersonskaya oblast. But the biggest assistance was addressed to DonNTU. Due to our students' success the cyber sports laboratory equipped with new special furniture and 10 specialized computers with the characteristics optimized for cyber sports competitions was established at the 4<sup>th</sup> building of our university.

The administration of DonNTU would like to thank the Deputy Minister of Sports of the Russian Federation, the Chairperson of the Fund “Our Sports” Mr. O. Baisultanov and a member of the Board of the Federation of the Sports Programming Ms. H. Tsakaraeva, and the representatives of the Fund “Our Sports” who delivered the computers and furniture to our university.

According to the Fund representatives cyber sports unite people who are keen on computer games and competitions all over the world. This kind of sports requires not only high level skills in gaming but also team work, strategic thinking and quick decision making. It opens new possibilities for young people, allows developing skills and competing at international tournaments. Sports programming is also an important element of computer technology development and the trend which is actively promoted in modern education. It lets young people study modern programming quickly enough, develop efficient algorithms and solve complex tasks with the application of all potential of advanced computer technologies which is extremely needed in the modern information community.

**DONNTU Leaders are Participants of X International Technology Development Forum  
«Technoprom-2023»**



Photo: Telegram Chanel "RF Universities"

On August 22 Novosibirsk launched the X International Forum of Technological Development "Technoprom-2023" the participants of which were the Rector of Donetsk National Technical University Prof. Anoprienko and the Vice-Rector of the University Prof. Borshchevsky. The strategic session of the National Center for Physics and Mathematics (NCPM) "Scientific Cooperation of the National Center for Physics and Mathematics - Leading Regions and New Regions" took place during the event.

Alexander Sergeyev, the Academician of the Russian Academy of Sciences, the NCPM Head, noted that the scientific cooperation of the Scientific Research Centre, which already includes 57 scientific, educational and high-tech organizations in Russia, is aimed at providing scientific and technological support not only to the nuclear industry, but the whole country. According to him, it is necessary to create in the country the certain concentration of efforts, means and brains in the certain place. Today the "Rosatom" takes responsibility for the development of new technological directions and economic sectors in Russia: there is understanding of the need to solve these problems, and there is an opportunity to do so. Today the world market is dominated by those who can acquire new knowledge in the field of basic science and use it in an applied sense. These factors led to the creation of the National Center for Physics and Mathematics in Sarov with the support of the "Rosatom". Today the scientific cooperation of the NCPM consists of 57 scientific organizations, universities and high-tech companies from all over Russia: MSU named after M.V. Lomonosov, RCTU named after D. I. Mendeleev, NSTU named after N.I. Lobachevsky, and others. As part of the interaction, teams of scientists and engineers are formed to create and operate the latest scientific and experimental base with the «midi science» and «mega science» class installations, conduct research and obtain world-class results in the following areas: nuclear physics, gas dynamics, high-density energy physics, particle physics and cosmology, astrophysics, artificial intelligence development, supercomputers and others.

The Head of the Department of Applied Mathematics of the Institute of Information Technologies, Mathematics and Mechanics of NSU named after N.I. Lobachevsky Mikhail Ivanchenko spoke about participation of representatives of the university in the implementation of almost all directions of the scientific program of the NCPM: "Serious cooperation at the university and NCPM has developed within the task of creation of photon computing systems, in directions of development of neuromorphic technologies for artificial intelligence tasks and construction of powerful laser complex "Multiter". For the University participation in the

implementation of the scientific program of NCPM is a big opportunity”.

Rector of DONNTU Alexander Anoprienko presented the advanced frontiers of the basic science in new regions of the Russian Federation. He said: “Science has come to Donbas and is present here only thanks to Russia. Today, the region has an unused potential and resource. From the point of view of the basic science, the Dnieper-Donetsk Trench is of great interest, as it contains sedimentary rocks saturated with various rare earth elements. Thanks to integration into Russian science we hope to get a new impulse to further development of science in the Donetsk region, as well as to be useful with those deposits that we managed to save”.

Vadim Medvedev, the Director General of the Project Support Fund, noted that physics and mathematics are basic sciences that contribute to the technological development of Russia. In his opinion, it is important to organize the process of scientific cooperation in such a way that new high-tech enterprises are opened on the basis of the gained knowledge, new products that provide safety and better living conditions for the Russians are born”. He also emphasized: “The practical result should be demanded today and create a foundation for the future. If we find the way to do this, we will succeed. I believe that NCPM is one of the most important scientific and technological projects, which we will implement in the near future ».

The discussion was also attended by the Deputy Governor of the Novosibirsk Region Ms. Irina Manuilova, the Advisor to the Governor of the Nizhny Novosibirsk Region for Science and Education Mr. Yuri Fomin, the Director of the Institute of Theoretical Physics named after L.D. Landau Mr. Igor Kolokolov, the Head of Project Office for Management “Science and Innovation” Mr. Andrey Anikeyev. The strategy session was moderated by Mr. Mikhail Romanovsky, the Director for Management of Scientific and Technical Programs of the Private Institution for Scientific Development of the Nuclear Industry «Science and Innovations», the Deputy Director for Science of the NCPM Mr. Mikhail Romanovski.

At the end of the meeting, the discussants noted that collectivity is an important component of the Russian mentality, including the sphere of bringing together scientists from various scientific centres, organizations and regions to solve the common problems of scientific and technological development of the country.

*(Telegram Chanel “The RF Universities”)*

### **Mining University Representatives Visit DonNTU**



Photo: DonNTU's Site

Representatives of Saint-Petersburg Mining University of Empress Catherine II – the Vice-Rector of the direction “Development of Partner Universities” Marat Leonidovich Rudakov and Head of the Inspection Security Department Lev Burlinov arrived at Donetsk National Technical University on August 29.

On the morning of August 30 they met the First Vice-Rector of DONNTU Arthur Arkadyevich Karakozov and the Vice-Rectors Sergey Vasilyevich Borshchevsky, Andrey Nikolayevich Ryazanov, Alexey Borisovich Biryukov.



Photo: DONNTU's Site

Marat Rudakov introduced to the participants the plans of joint work of the two universities, and also said that the Mining University started the project “Student Donbass-2023” to train DONNTU first year students for a year and a half, instead of a year as it was before, on the unified curriculum, including practice. A tour of 1, 2, 4, 5, 8 and 9 school buildings, classrooms and laboratories was organized for the guests. Also, the First Vice-Rector told the guests about the heads of the university of different years, the portraits of whom are located in the picture gallery, and the Director of the History Museum Ms Lidiya Kovaleva introduced «Stages of the Great Way» - infographic, which tells us about the achievements of the university since its foundation. The museum exhibition, especially the exhibition «250 Years of Engineering Education of Russia», which presents materials about teachers and scientists of DONNTU, graduates of the Mining University, who made a great contribution into the history of Donetsk National Technical University were of huge interest for them.

The three-day business meeting included:

- The meeting with first-year students wishing to participate in the program “DONNTU Student in Russian Universities”;
- The lecture «The Role of Scientific Research in the Activities of the Teacher” delivered by M.L. Rudakov for young scientists in a remote format;
- Psychological testing of freshmen (if there is a written statement of consent);
- Discussion of the development of DONNTU-SPMU interaction;
- Testing in physics and mathematics;
- Meeting with DONNTU professors sent to the Mining University;
- A tour of the university campus;
- The video message from the management of DONNTU and representatives of SPMU to Donetsk polytechnics in connection with the start of the new academic year;
- The meeting of SPMU representatives with Rector A. Y. Anoprienko;
- Discussion of scientific cooperation between DONNTU and SPMU, training of highly qualified personnel;
- The meeting with DONNTU industrial partners;
- The Meeting of the Academic Council, presentation of SPMU certificates to the scientific and pedagogical workers of DONNTU.

### **DONNTU Students Take Part in Summer Schools at Empress Catherine II Mining University**

Two groups of students of Donetsk National Technical University participated in short-term educational programs of international summer schools organized by Saint-Petersburg Mining University of Empress Catherine II together with the International Center of Competence in Mining Technical Education under the auspices of the UNESCO. From June 26, 16 Donetsk polytechnics were trained in three areas - «Oil and Gas Geology», «Modern Structural Materials» and «Digital Mining», and from July 3, 13 students – in two more: «Engineering



Photo: DonNTU's Site

Geodesy: Theory and Practice», and «Mining Machines and Equipment».

Two-week programmes included lectures and practical classes, master classes and trainings, which were held in specialized classrooms under the guidance of leading employees of the oldest technical university of Russia, as well as excursions at the leading industrial enterprises of Saint Petersburg and the Leningrad region. During the training, participants acquired

additional professional competencies that were an important complement to the results of mastering the main educational programs. Thus, students studying under the program “Digital Mining” received additional knowledge about modern tendencies in the field of digitalization of the minerals and fuel and energy complex, as well as in the field of modern methods and means of collection, information processing and transmission in mining information systems. The study of this program also provided practical skills of work in software and hardware systems used for the design, modeling and analysis of the work of technological processes and equipment of mining production.

Students having the course “Modern Structural Materials» acquired theoretical knowledge about the structure and properties of a wide range of structural materials used in modern mechanical engineering, as well as the methods of their research, production and heat treatment of materials, reliability and durability of materials under different operating conditions.

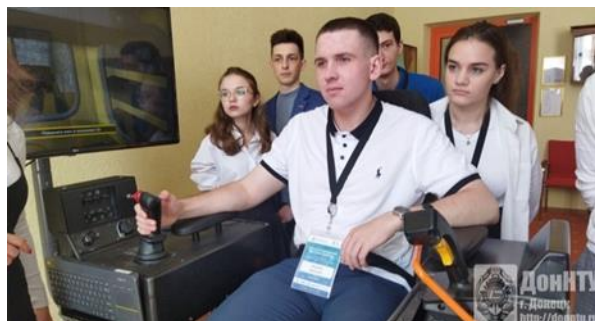


Photo: DonNTU's Site

“Oil and Gas Geology» program allowed students to acquire theoretical knowledge of natural accumulations of oil and gas, criteria and features of oil and gas bearing, methods of discovery of deposits, technologies of exploration, assessment of reserves and resources and their main classifications.

Participants of the program «Mining Machines and Equipment» acquired knowledge and skills in the field of design, production technology and operation of special equipment.

The summer school in “Engineering Geodesy» was aimed at obtaining knowledge and skills in the field of geodetic measurements, cadastral work, monitoring of deformation processes of buildings and structures.

DONNTU students also had a cultural programme giving them a great opportunity to get acquainted with the historical heritage of Saint Petersburg.

### **Meeting of DONNTU and SIC for Strategic Partnership of State and Business**

On June 28 DONNTU hosted a meeting of representatives of the university and SIC for Strategic Partnership of the State and Business» (Moscow). The University was represented by the first Vice-Rector A.A. Karakozov, the Vice-Rector A.B. Biryukov, the Dean of the Faculty of Engineering and Economics A.A. Kravchenko, and the Professor of the Department of Economic Theory and Public Management Y.V. Khomenko. The Moscow delegation included the Leading researcher of “Central Economic and Mathematical Institute of the Russian Academy of Sciences” the Director of the SIC for Strategic Partnership of the State and Business O. F. Shahov, the Deputy Director for Development S.N. Ulanovsky, and the Chairman of the Organization A.A. Chursin.

Within the framework of the meeting a constructive dialogue on the possibility and prospects of establishing a long-term partnership between the two organizations was held. Common points of interest as well as an exchange of views on the usefulness and expediency of implementing the



Photo: DonNTU's Site

development of the Research Centre in the Donetsk People's Republic were identified.

Currently, a group of scientists under the leadership of O.F. Shahov is working on the implementation of the system for repair and construction (restoration) work in the DPR on the basis of the application of the mechanism of the state-reconstruction mechanism of public and private partnership to increase aid to the Russian regions. The scientific basis of the system was presented in the report of O.F. Shahov at the conference «Innovative Perspectives of Donbas». The essence of the proposal of the representatives of the Moscow delegation was that the activities of researchers and volunteers were carried out within the framework of the SIC Strategic Partnership of the State and Business in cooperation with DONNTU. The meeting also discussed a number of important issues, including the following: whether and to what extent the mechanism of public-private partnership in the DPR is used; what government programs to restore the infrastructure of the DPR exist and how they work practically in terms of management and financing; the expected sequence of infrastructure reconstruction in terms of their importance and types, and many others.

A lively discussion ensued. It resulted in new ideas and proposals that were more constructive and practical than the original ones. The agreement was reached to hold a round table in the near future with representatives of leading industrial enterprises of the Donbas, management of DONNTU and SIC Strategic Partnership of the State and Business where answers to the questions will be received in a broader format. Based on the results of the discussion, specific practical recommendations on the restoration of social, housing and industrial facilities of the DPR will be developed with the direct participation of scientists and volunteers from the SIC Strategic Partnership of the State and Business.

### **Delegation of DONNTU Participates in XV All-Russian Scientific and Technical Conference**

#### **“Dynamics of Non-linear Discrete Electrical and Electronic Systems”**

On June 2 the XV All-Russian Scientific and Technical Conference “Dynamics of Non-linear Discrete Electrical and Electronic Systems” was held in Cheboksary at I.N. Ulyanov Chuvash State University.

At the event the theory of non-linear discrete systems, discrete control systems, dynamics of non-linear systems at technical universities programs were considered.

The delegation of Donetsk National Technical University included 4 students and postgraduate students of the Department of Electric Drive and Automation of Industrial Installations of the





Photo: DonNTU's Site

Faculty of Intelligent Electricity and Robotics. Donetsk polytechnics also took part in a number of tours. Vladimir Gennadyevich Kovalev, the Dean of the Faculty of Energy and Electrical Engineering, and Sergey Alekseevich Koltsov, the Director of Personnel, organized the visit to Cheboksary Electrical Plant where the production of relays and contactors and assembly of control cabin were demonstrated. The tour participants were told how such cabinets and frequency

converters are tested. A tour to the Museum and classrooms was also held.

The DONNTU delegation also visited the ECRA plant which produces modular buildings, relay protection and automation, automation equipment for ACS.

The tour of the educational laboratories of the Faculty of Energy and Electrical Engineering of the State University of Economics was conducted by the Head of the Department of Electrical Technology Alexey Hermanovich Kalinin.

### **DONNTU Teachers Trained on Method of Conducting Discipline “The Basics of Russian Statehood”**

In the beginning of 2023 the Ministry of Education and Science of Russia launched a program to train specialists who from September 1 will teach the discipline «Basics of Russian Statehood» for all students of Russian universities. The Russian President Vladimir Putin announced the introduction of this policy in December 2022 at the State Council devoted to youth policy. The course development is carried out within the framework of the project «DNA of Russia» which is supervised by the internal political block of the Kremlin together with the society «Knowledge» and the Ministry of Education.

Within the framework of the new discipline five themes are studied: «What is Russia», «The Russian State-civilization», «The Russian Worldview and Values of Russian Civilization», «The Political Arrangement» and «Challenges of the Future and Development of the Country». The aim is to create students’ awareness of belonging to the Russian society, to develop a sense of citizenship, to form a spiritual, moral and cultural foundation of a developed and integral personality aware of the features of the historical path of the state, the identity of its political organization, combining individual dignity and success with social progress and political stability of their homeland. This spring 3,000 teachers from 562 universities of the Russian Federation took part in the discussion of this course. Donetsk National Technical University represented the Associate Professor of the Department of Economic Theory and State Administration Elena Shumaeva. In June about 5,000 university teachers from all over Russia were trained to teach the new discipline.

At Donetsk National Technical University the delivery of the course “Basics of Russian Statehood” is entrusted to one of the oldest departments of the university - the Department of Economic Theory and Public Administration. The whole staff has had the distance learning course in Moscow and the off line one in Rostov-on-Don.

The training included the development of all thematic sections of the course, their content and organizational and methodical support, as well as the development of educational and methodological, information technology support for the implementation of lectures and workshops. All teachers of the Department of Economic Theory and Public Administration of



Photo: DonNTU's Site

DONNTU successfully mastered the course program, defended the projects, and received high marks from the organizers and moderators.

### **Employees and Students of DONNTU Participate in Project “Thank you, Brothers”**

On 18 -20<sup>th</sup> June employees and students of DONNTU took part in the educational intensive course from the Presidential platform «Russia - the Country of Opportunities» on the project «Thank you, Brothers» which was held in Rostov-on-Don. This new unique project is dedicated to work with demobilized students and graduate students of the DPR and LPR at the present time.



Photo: DonNTU's Site

The classes were conducted by teachers of the Management Workshop «Senezh» as well as psychologists of Rostov, state corporations of the Russian Federation. The training was designed to

introduce the best practices in mentoring and to learn how to work with stress and motivation from leading experts.

Among the main topics discussed were the mentoring model in the cultural code of Russia and what its traditions can be taken into their modern practice; how to help students to formulate their goals and understand priorities in development; whether it is possible to predict the conflicts between a teacher and a student; why one learner is understood quickly and easily, and the other is difficult and long. Trainings, business games related to the lecture topics and practical exercises were held. At the end of the intensive phase, project curators together with mentors outlined the way forward for the project work.

### **DONNTU Staff Member is Graduate of Program Development of Management Reserve in Science, Technology and University Education**

More than 80 managers from the fields of science, education, and business and authorities of 27 regions of Russia have graduated from the program of personnel reserve development in the field of science and university education. The Donetsk People's Republic was represented by the Rector of Donetsk Academy of Administration and Civil Service Larisa Borisovna Kostrovets, and the Research Head of Donetsk National Technical University Konstantin Nikolayevich Labinsky.



Photo: DonNTU's Site

“The Strategy of scientific and technological development of Russia clearly spells out the main challenges facing us today. It is important to consolidate and in a single way conduct competent managerial decisions in universities and scientific organizations in accordance with its key provisions, as well as those tasks that are identified by the President of the country”, - said the assistant of the President of the Russian Federation Andrey Alexandrovich Fursenko.

The program included 8 modules devoted to the digital transformation of the scientific industry, the principles of effective management, strategic university management, scientific and technological activities.

“The program is taking place during the Decade of Science and Technology which presents us with new challenges. I am sure that the personnel reserve formed on behalf of the President is a driver of positive changes in the field of science that we need», - said the Deputy Prime Minister Dmitry Chernyshenko.

“Today we saw coordinated teamwork - all participants are ready to protect and defend their

projects. The solutions that have been presented to us are at different levels of readiness: some are ready to work; others will be the basis for future change. This is a real help to the Ministry in solving personnel issues of science and education, as well as in the implementation of the state scientific and technical policy”, - said the Head of the Ministry of Science of Russia Valery Falkov.

As a result of the project defense the participants of the program were awarded diplomas by A.A. Fursenko, D.N. Chernyshenko and V.N. Falkov.

### **DONNTU Participates in Project “Space Class”**



Photo: DonNTU's Site

On August 24-25<sup>th</sup> an educational intensive “Space Class” was held in Moscow. It was attended by employees of schools and universities from 15 regions of the Russian Federation. The organizer of the project is the State Corporation «Roskosmos». Donetsk National Technical University was represented by space class curator Ms. Elena Alekseeva.

The opening ceremony took place at the site of the Museum of Astronautics where a lesson in museum pedagogy was also held. Then the

participants went to the city of Korolev where special tours of the Flight Control Centre were organized and visited the Museum of the PKK «Energy».

On August 25, the participants gathered at Moscow Polytechnic University to study the mechanisms of quality management of education, learn to form the curriculum of the project “Space Class”, to work with educational and methodological complexes provided by the State Corporation «Roskosmos» and get the experience of the project “Cosmic Class” from colleagues from the lyceum MCS named after V.N. Chelomey in the town of Baikonur.

The participants then were divided into groups and managed the design and implementation of the curriculum including the project activities. The group projects were the confirmation of the learned knowledge.

They completed master classes in rocket and satellite engineering, terra-design and space robotics.

### **Students of DONNTU Have Industrial Practice at Cheboksary Electrical Plant**

In February of this year the delegation of the Faculty of Intelligent Electric Power and Robotics (FIPR) visited t Cheboksary Electric Apparatus Plant «CEAP»). Students and teachers of Donetsk National Technical University got acquainted with the features of the technological process of the production of relay protection and emergency automation systems, digital high-tech devices. Staff Director of «CEAP», the Deputy of the State Council of Chuvash Republic Sergey Alekseevich Koltsov held a round table on the basis of the training center of the plant, where possible ways of cooperation of the enterprise with DONNTU were considered. One of the issues discussed during the meeting was cooperation in the training and development of human resources for the DPR industries. Thus, FIPR 3d year bachelor students 1st year master's students were offered to have their industrial practice at the «CEAP».



Photo: DonNTU's Site

At the end of June 11 students of various specialties of the Faculty of Intelligent Electricity and Robotics

arrived in Chuvashia. In Cheboksary they were met by the Head of practice from Chuvash State University named after I.N. Ulyanov (ChuvSU) the Deputy Dean of the Faculty of Energy and Electrical Engineering on pedagogical work the Associate Professor Tatiana Vyacheslavovna Myasnikova.

Next day the trainees from DONNTU went to «CEAP». The students were given a tour of the workshops, showed all the stages of production, acquainted with the history of the enterprise, and then sent to the departments corresponding to their future specialty.

“We designed a driver scheme with regenerative control of voltage zero. Schemes were large, there were a lot of components, sometimes it was difficult, but we figured it out”, - said the third-year student Oleg Zhuk.

“According to the available drawings I prepared 3D-models of individual parts, and then created the assembly drawing of the installation”, - recalls master student Yaroslav Khodakovsky.

The students spent their weekends actively: visited Kazan - the capital of Tatarstan, Yoshkar-Ola - the capital of the Republic of Mari El, Cheboksary museums, and in the evenings walked around the city and the embankment of the Volga.

For a month, interns from DONNTU acquired a lot of useful skills at «CEAP» and became very friendly with the teams of their departments. In their plans is returning to Cheboksary: either as trainees or as employees.

#### **Delegation of UFU and DONNTU Witness Launch of Missile “Soyuz-2”**

Representatives of Southern Federal University and Donetsk National Technical University visited the cosmodrome “Vostochny” where on June 27 they were able to observe the launch of the missile “Soyuz-2” from a distance of five kilometers. The launch of Meteor-M #2-3 and 42 by satellite rockets took place at 14:34 on 27 June. A missile also delivered to the orbit the first Don satellite «ARCCUBE-01». For it students of Rostov schools offered ideas on payload.



Photo: DonNTU's Site

Today the aerospace industry is one of the most progressive and popular in the world, and the use of such satellites is necessary for the development of our economy. Southern Federal University ensures the integration of young university scientists and teams from the new regions of the Russian Federation into the technological agenda of this

industry. Such collaboration makes it possible to combine the scientific potential of the whole country, including new territories, and to ensure the technological sovereignty of Russia.

Thus, in addition to launching, the purpose of the visit was to exchange experience and knowledge with colleagues from Amur State University in the field of satellite payload applications, and the result was the possibility of joint projects to modernize and improve existing equipment, as well as the manufacture of a new, including the ground one.

“We strive to support our partners and at every opportunity to connect them for mutually beneficial cooperation. The space industry is one of the most technologically advanced in the world, and the scientists and students of Southern Federal University are our great hope and driving force for the further development of Russian science. And VTB Bank is happy to support science and systemically significant industries”, - Yuri Viktorovich Avdeev, the Manager of VTB Bank in Rostov Region said. Within the framework of the cooperation program of Roskosmos Corporation, as well as at the initiative of the VTB Bank, representatives of the scientific community from the staff of Southern Federal University and Donetsk National Technical University were allowed to witness the launch. The delegates were the Head of the Department of Electric Drive and Automation Pavel Ivanovich Rozkaryaka and the postgraduate student of the Department of Technical Heat Physics Natalia Natchkebia.

“Observing the launch from the first row, and feeling how the earth trembles and the air rattles,

you understand the power of Russian science and the embodiment of the work of hundreds of thousands of people in technology. To observe this in the future, it is necessary now to "forge frames" capable of catching this difficult and competitive relay. That's what you and I have to work on! To identify talented and, most importantly, enthusiastic students with subsequent professional growth in the scientific and industrial sphere", - said the representative of SFU.

A student of the Department of Electrical Engineering and Mechatronics of SFU also shared his impressions: "Visiting the cosmodrome «Vostochny» allowed not only to see the launch with your own eyes, but also to feel the incredible energy of this place, where "the space is closer and the stars below". On that day, we were able to observe how many satellites, created by students and young professionals, were successfully launched into the orbit. This strengthens confidence in future success and gives motivation to strive for it as never before". The Head of the Department of Electric Drive and Automation of DONNTU noted that the trip to the cosmodrome was extremely important for expanding the horizons of domestic research, and clarified that it was perceived by him as a personal reward: "The trip to the cosmodrome is not only a new experience for me as a researcher, but also the fulfillment of my great childhood dream. In addition, it is a new round of cooperation of universities of the south of Russia in the aerospace industry. After all, any collaboration is always beneficial: it suggests further ways of development, guides and adjusts. I have heard a lot about the scientific activities of Southern Federal University and was sincerely pleased to see representatives of this university as part of the delegation. I hope that thanks to this project we will be able to expand our horizons, to find new acquaintances that can turn into a strong cooperation, to set for ourselves new tasks, as well as to fully understand the scope of all that is happening in the country today".

Today the cosmodrome «Vostochny» is one of the largest projects in Russia of the XXI century. In the period from 2016 to 2023, 13 launch vehicle orbits were performed from the launch site, and 295 spacecraft were launched into the orbit. The launch vehicle «Soyuz-2.1 B», «ARCCUBE-01» and 41 other small spacecrafts of Russian and foreign production were launched on June 27 as the associated payload of the hydrometeorological satellite «Meteor-M-# 2-3. Under the Roskosmos Program for educational and scientific purposes, «UniverSat» nine spacecrafts are launched into the orbit.

«ARCCUBE-01» is the first satellite created on the Don territory, which is a 3U-cubsat of domestic production with dimensions 30 cm x 10 cm x 10 cm. It was created by the team of «FIRON» in partnership with the Center of Space Technologies «Arcturus» and RI «Special University Automatics», which won in the competition of the federal program «Duty on the Panet» from the Foundation for Promotion of Innovations.

*(Published by SFU Public Communications Centre)*



Photo: M.S. Repenko's Report

### **DONNTU Employee Takes Part at All-Russian Youth Forum «Mashuk»**

In August 18<sup>th</sup> a specialist in youth work of the Center of Career and Public Communications of DONNTU Repenko Maria Sergeevna took part in the All-Russian Youth Forum «Mashuk» which was held in Pyatigorsk.

The Forum brought together 2200 participants at the age of 14 - 35, who formed a modern model of the system of learning, education and mentoring based on the best domestic pedagogical practices. «Mashuk» became one

of the key events of the Year of Teacher and Mentor in Russia, the educational program of which was built around the thesis «Teach Those Who Teach! ». The participants of the forum

were teachers and counselors for educational work, guides, librarians, educators and specialists in the sphere of pre-school education, students of pedagogical universities and bloggers and mentors in various fields, as well as children and teenagers from 14 to 17 years old who are interested in teaching.

The educational program included 12 thematic areas, uniting all vectors of development of pedagogy and mentoring in Russia. They're divided into two shifts.

Within the framework of the All-Russian Youth Forum «Mashuk» M.S. Repenko took part in the second shift of «Youth», the direction «Opening», the track «Navigator of Youth Policy and Educational Activity» the work of which was devoted to the problems of education in universities. The participants of this track became teachers of universities, specialists of departments for educational work and students.

One of the directions of work was the preparation of the project «Student's Path», in the framework of which the features of wishes, opportunities and actions of students depending on the course of study at the university were analyzed.

During the Forum «Lessons about Important» master classes on various topics were held.

As part of the cultural program workshops on rock climbing and the passage of tourist crossings, an intellectual tournament, a lecture «Tea Etiquette» and tea tasting, a master class in watercolor drawing, excursion to the place of the duel of M.Y.Lermontov and the gates of love in Pyatigorsk, parties «Day of SCFO» were organized. The result of the track was the launch of the All-Russian marathon of student initiatives, which involves the implementation of a series of activities in all regions of the country.

As a result of the work of the track «Navigator of Youth Policy and Educational Activity» participants had the opportunity to share with colleagues their experience and idea of tools and formats of organization of educational activity at the university, to hear the opinion of the students present.

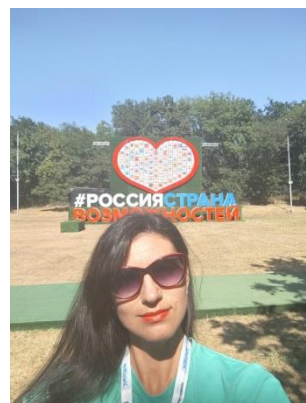


Photo: M.S. Repenko's Report

### **Postgraduate students of DONNTU Are Winners of Project “Platform of University Technological Entrepreneurship”**



Photo: DonNTU's Site

Innovation Promotion Foundation summed up the results of the III stage of the competition «Student Startup» of the federal project «Platform of University Technological Entrepreneurship». Grant in the amount of 1 million rubles for the development of own business project will be received by a graduate student of the Faculty of Metallurgy and Thermal Power of Donetsk National Technical University Anatoly Martynenko

with a project «Development of Technologies for Producing Aluminum Ligatures by Electroslag melting Metal Chips». Anatoly's team also included two graduate students of the same Faculty. This year the competition received applications for 6 billion rubles: this is an absolute record. Today a number of winners have been identified, each of whom will receive a million rubles to create their own innovative start-up. The projects range from digital platforms, decision support systems and sports applications to water purification systems and interactive museums. For each applicant the «Student Startup» is an opportunity to realize the dream and to implement all the projects that are important for the city, the region and the country as a whole» - said of the General Director of the Innovation Promotion Fund Sergey Polyakov on the official website.

The selection of undergraduate and postgraduate applications included several stages of examination, including online defense. The expert jury included representatives of the business

community, universities and scientific organizations, accelerators and other federal project operators. They evaluated the project technology level, market prospects, competitiveness and qualification. Representatives of 263 technical and humanitarian universities from 68 regions of the Russian Federation were announced the winners.

### **Conference “Machine Science-2023” at Department of Machine Design Foundations”**

Donetsk National Technical University hosted the scientific and practical conference “Machine Science” on June 26-28<sup>th</sup>. There were 27 participants from DonNTU, Perm, KamchatSTU (Petropavlovsk-Kamchatski), DonNACA (Makeevka) who made 12 presentations.

The Newsletter was prepared by the International Office of DonNTU (including the materials of the newspaper «Donetsk Polytechnic”).

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