

Donetsk National Technical University INSTITUTE OF INTERNATIONAL COOPERATION

Newsletter

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SPMU Celebrates its 250th Anniversary. Many Happy Returns of the Day!



Photo; DonNTU's Site

St. Petersburg Mining University named after the Empress Catherine II, the first technical university in Russia, celebrated its 250th anniversary on November 1st.

DonNTU's staff, its students and postgraduates are congratulating St. Petersburg Mining University with the jubilee.

The links between St. Petersburg Mining University and Donetsk National Technical University were initiated by Mining University's graduates as SPMU had been supporting our University for many years especially during the military confrontation in the Donbas. Key Russian universities fully supported DonNTU in solving difficulties in the acute phase of the conflict escalation. St. Petersburg Mining University was among them to take DonNTU's Institute of Mining and Geology under its wing. The step was an important impulse in widening and strengthening partnership between the Universities.

The Mining University is controlling training and research at Donetsk National Technical University and introducing different cooperation programs to develop engineering education in the Donbas Region. Both long-term and short-term programs are being implemented within the frameworks of the initiative.

The project "DonNTU's First Year Student at Russian Universities" is one of the most significant and innovative initiatives which are being implemented on the territory of Russia. We introduced the scheme at our University in 2022. It allows our first year students studying at St. Petersburg Mining University during one year.

It is the unique opportunity for our students to get a degree at one of the key universities of Russia. SPMU has a high level of the academic standard and is a recognized center for research. This allows our students being in the intellectually stimulating environment.

The professional competences program "Science Philosophy" is especially appreciable and promising among different short-term educational projects which are being carried out at DonNTU. 137 talented students and postgraduates took part in it. The program is aimed at not only adapting the participants to research, but also at stimulating their interest and enthusiasm in further one.

Donetsk Polytechnic University students are taking an active part in online winter schools. They are having a chance to study different disciplines and widen their professional skills without leaving their homes.

However in the summer the students continue their studying offline. The training organized by the UNESCO International Centre for Competences in Mining Education is taking place at Northern Polytechnic State University.

More than 200 representatives of our University successfully finished the program and got their certificates on the program "Professional Teacher". The crash course significantly widened and deepened the participants' professional skills and competences.

Long term programs of internship for DonNTU's staff have been implementing at core departments of St. Petersburg State University since 2023. The main goal of them is to get the participants acquainted with the modern material and technical basis and master advance technology based methodology to carry out classes. DonNTU's infrastructure and material and technical basis modernizing is planned within the frameworks of the both universities links. It is an important step to provide high level education and research and to attract new students and teachers.

St. Petersburg Mining University is proud to mark significant achievements of DonNTU's students and young researchers. The annual International Forum-Contest of Young Researchers "Topical Aspects of Subsoil Usage" is one of the most important and prestige opportunities for our students.

V.S. Litvinenko has initiated DonNTU entering the consortium "Nedra". The decision was made at the meeting of the Rectors of public professional community of universities "Nedra" which specializes in training professionals for mineral and raw materials complex on November 24th 2022. More than 100 native technical universities are members of the consortium.

Close cooperation and all-round assistance of the supervising university ensure our ability to remove lack of qualified engineering personnel for main branches of Donbas industry through strengthening of material, technical and personnel potential and rising of the level of training. It is the step that will provide our Region's well-being and successful future.

Round Table Meeting "Big Donbas: Technological Breakthrough Potential" at DonNTU

The round table meeting "Big Donbas: Technological Breakthrough Potential" took place on October 27th. The event had been initiated by Donetsk National Technical University and the company "Strategic Partnership of the State and Business" (Moscow). Representatives of legislature, business and science of the DPR and a number of Moscow structures took place in it.

. DonNTU was represented by its Rector Prof. A. Anoprienko, Vice-Rectors Prof. A. Birykov, Dr. A. Ryazanov, the Head of the Research Board Prof. K. Labinski, and professor of one of the departments Y. Khomenko.

The issues of economic potential of the Donbas, its entrepreneurship community integration into the Russian market, and coordination of legislation of the Russian Federation and the DPR were discussed at the meeting.

The participants spoke on forming efficient interaction among the state, science and business to reach technological progress which is to be accompanied by the Region's economy, society and technosphere intellectualization. Some particular examples of Donbas industrialists' initiatives to renew enterprises were given.

The Director of the company "Strategic Partnership of the State and Business" marked its main goals and spoke on the initiatives aimed at supporting and developing business in the new regions. The company delivers a wide range of services which include research, analysis, consultations and legal support to assist in cooperation among state and business structures.

The presentation of one of the participants "Influence of Compatibility of the Legislation of the RF and the DPR on Running Business" caused a lively debate and became the starting point for different proposals of the deputies present to make changes in the current legislation in favour of the DPR's business.

One of the participants gave a profound assessment of the current economic situation in the Donbass. He had studied the business potential of the Region for 2024 and analyzed



Photo: DonNTU's Site

the state of the key branches of the Donbas including chemical, manufacturing and IT spheres.

The measures to help Donbas companies with the help of Moscow partners including the priority readiness of the company "Legion" to introduce advanced projects in the social sphere were also discussed. Besides, the main aspects necessary for further interaction with the regional companies for the real support were found out and the project "Real Action Policy" were initiated.

The decision to organize the Project Office being a part of the DonNTU's Engineering Centre was made. Its main task is to establish partnership and develop business communication among companies of the Donetsk People's Republic and industrial regions of the Russian federation and Moscow companies. The Office will promote interests of Donbas companies in Moscow. Its competence will cover a set of projects which could be represented in Russia with their further lobbying and consultations. The office employees will also provide legal, technical, and organizational and information assistance to the companies which would like to represent their interests in different regions of Russia including Moscow and Donetsk. It is rather a constructive proposal which will promote mutual understanding between the business circles of Russia and its new territories. DonNTU is an important scientific and technical site in the process and it is ready to assist in the new technological breakthrough in Donbas.

DonNTU's Academics Have Their Internship at the Empress Catherine II St. Petersburg Mining University

The Academic Centre "Solnechnoye" of The Empress Catherine II St. Petersburg Mining University has hosted two-day school - seminar on the role of students' professional supervisor in the system of engineering education. Official introduction of the institute of supervisors is one of the university's novelties within the frameworks of the federal pilot project on improving university education according to the President's Order of May 13th 2023.

The supervising professors help students to adapt to a university life during first three semesters, which are the "education core". Further on students' professional and personal development is coordinated at the graduation departments. All teachers become supervisors, however the Heads of the departments—and Deans forward student's movement vector to the engineering status.

It was them who gathered at the "Solnechnoye" to coordinate the details of the upcoming large-scale work. The concept of interaction of university structural subdivision in the frameworks of the new educational model, methodological support of the pilot project at the Mining University, the mission and goal of the supervising professors, and organization of their activity and students' bringing up were discussed.

The employment level at the Mining University is 92%, and the graduates are employed at core or related branches. Nevertheless, according to the Vice-Rector for Education D. Petrakov the university will be more active to attract people from business into the training process.

"This winter we had the first graduation of 23 oil industry engineers (not bachelors, but specialists). After the diploma work dependence had been announced representatives of four companies turned to me with a request to organize a meeting with the graduates in order to



Photo: Site Outpost North-West

offer them employment. I had to disappoint them as all the students had chosen the place of their future work during their work practice. When we refuse to train bachelors, there will be more specialists of the highest qualification and industrialists will be more involved into the university life and the process will require thorough coordination", said Mr. Petrakov.

The supervision institute will help students to develop in the frameworks of the major which meets their abilities most of all. It

can be said that it will tune up future engineers competences.

"Bachelors are called eggplants in industrial circles because you can't eat it raw. As to the bachelors, before they start their production activity they should complete their education. The companies need ready-made specialists. We prolonged the term of studying and filled it with a practical component within the frameworks of the pilot project. Besides, students' wishes should be linked with economy demands. Mutual understanding is predefined in this case. The task of supervisors is to harmonies links and avoids a discord.

When I was young the fabric called crimplene was popular. For example, it was difficult to be at the wedding ceremony if you are not dressed in a crimplene shirt. Several decades have passed and the world came back to the natural fabrics such as cotton and linen. Bachelor programs were our crimplene- fashionable but not of a high quality. Today we are discussing not only the ways to come back to specialists training. We are to extract the best from the accumulated experience and coordinate it with today's reality", said Sergey Serdyukov, the project coordinator.

The Mining University new educational model provides for economic and ecological legislation knowledge to be included into the curricular. Provision of technological independence of our country is the constant for the Mining University. All the supervisors' efforts are aimed at training specialists thinking in this direction.

(The paper was published on the site "Outpost North-West")

DonNTU Mining Faculty Dean Takes Part in 33d Book Fair in Hong Kong

The Dean of the Mining Faculty Prof. A. Korchevski represented the Russian Academy of Natural Science in the **HONG KONG BOOK FAIR 2023** on June 19-July 2th. The "Hong Kong Convention & Exhibition Centre" hosted it.

The organizer of the event which lasted for 7 days was the Council on Hong Kong Trade Development. There were 1 million of visitors at the fair, with more than 100, 000 of them being form foreign countries. 500 exponents from 36 countries and regions took part in it. About 600 seminars and cultural events were organized at the fair sites inside the Exhibition Centre and outside it.

There also were discussions of problems and prospects of international development of book publishing, business meetings with the key publishers, and a press conference with participation of famous public figures and representatives of China. The leading politicians, cultural and scientific figures of the country-organizer took part at the Fair.

Journals, textbooks and methodological literature published in the publishing house of the Academy last year, and catalogues with the information represented at the online Fair of the Academy of Natural Science were shown.

The Fair expositions were aimed at informing the visitors, mass media, and universities of the Pacific Region on new publications in Russian.

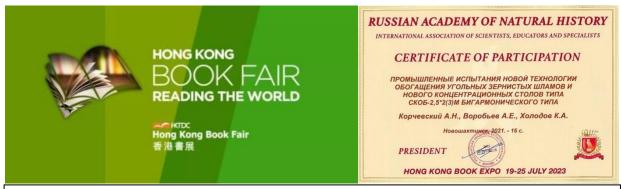


Photo: A. Korchevski's Paper

The following topical in the aspect having scientific and pedagogic significance books were represented at the Fair within the frameworks of the decisions taken by the Presidium of the Academy of Natural Science:

- 1. A. Korchevski, E. Nazimko, V. Naumenko, N. Zvyakintseva Minerals Concentration Flotation Methods;
 - 2. A. Korchevski Trade Production Ecology;
- 3. A. Korchevski, E. Nazimko, V. Samoilik, L. Serafimova, N. Zvyagintseva, V. Simonenko. K. Kholodov Minerals and Their Processing Product Clotting;
 - 4. A. Korchevski, L. SErafimova, V. Kustov, Y. Demura Minerals Concentration History;
- 5. A. Korchevski, A. Vorobyov, K. Kholodov Industrial Trials of New Technology of Coal Grainy Sludge Concentration in New Concentration Bio-harmonious Type Shafts CKOB-2,5*2(3)M

Development of Cooperation between DonNTU and the Islamic Republic of Iran

In 2023 the Dean of the Mining Faculty A. Korchevski took an active part in development of the cooperation between DonNTU and the Company Kanikavan Shargh Engineering Co (the Islamic Republic of Iran, Pardiz, and Industrial Park).

Prof. Korchevski did the following in the frameworks of the cooperation:

- 1. visited industrial objects such as the Coal Association in Shakhrud, dressing works on coal processing, its hip and mines, a coal depositing tank, and the Company Kanikavan Shargh Engineering Co in the Industrial Park in Pardiz;
- 2. had a number of important meetings;
- 3. signed a memorandum on bilateral cooperation L

between DonNTU and the engineering company Kanikavan Shargh Engineering Co;
As a result the agreement for Tehran University to add some additional items in the list of cooperation work with the further signing was reached.



DonNTU's Professor Takes Part in International Scientific and Practical Conference in Mahachkala

Mahachkala hosted the International Conference "Modern Tendencies and Priorities of Region's Sustainable Development" on October 17th. Professor of DonNTU I. Kochura was present at the event devoted to the 300th anniversary of Russian Academy of Science.

The Ministry of Science and Education of the Russian Federation, Dagestan Federal Research Centre, and the Institute of Social and Economic Research were its organizers.

117 papers had been submitted to the Conference. They covered the issues of complex development of problematic regions, their social and economic policy and improvement of the structure of the economic complex under the current challenges.

Prof. Kochura greeted the participants at the plenary meeting and made her presentation "Development of Economic Potential of Problematic Territories through Diversification of Industrial Companies Activity". She emphasized that the reality, which is related with the problematic regions complex development, makes the conference subject matter extremely interesting. It covers the Donbas Region being a difficult region having the prospects of progress and profitability. Nevertheless, despite the difficult situation the region is active in searching its way to development.

The collection of e-papers of the Conference is planned to be issued and published in the frameworks of the Russian Research Citation Index.

DonNTU's Representative Takes Part in Intensive Education Program

The educational online intensive course "The National Technological Olympiad as a Tool to Involve Children and Youth into Engineering Education" was successfully carried out in October 2023. The University NTI 2035, the Circle Movement, and the Academy of Supervisors cooperating with the Skolkovo Fund were its organizers.

Ms. E. Alexeeva, the Head of the Students' Design Work Board of DonNTU was the course supervisor in the DPR.

The program is designed for teachers and supervisors of the Donetsk People's Republic. It is especially aimed for engineering, space and IT classes and provides all necessary tools and resources to be offered to students getting advanced education in technologies.

The subject-matter of the program is:

- the main stages and characteristic of engineering education;
- the privileges for schoolchildren participated in it;
- the format of attracting schoolchildren to it;
- the participants' registration;
- the supervision of schoolchildren at distant stages of the Olympiad;



Photo: DonNTU's Site

- the online course "Flying Robotics" offered by the University NTI 2035 as means to prepare the participants to one of the profiles.

Lectures on the subject-matter and practical classes helped teachers responsible for education at the DPR's schools to be aware of 40 different directions of the National Technological Olympiad and evaluate the advantages of participation of the Republican schoolchildren in this international contest and involve them into it.

DonNTU's Teachers Participate in All-Russian Artificial Intelligence Conference with International Participation

The branch of the national Research University in Smolensk hosted the National AI Conference with International Participation on October 16-20th. Dr. O. Fedyaev and senior lecturer I. Kolomoytseva took part in it.

The event was organized by Russian Association of Artificial Intelligence, the Federal Research Centre "Informatics and Control", and Smolensk branch of the Research University.



Photo; DonNTU's Site

Artificial Intelligence is the industrial and academic sphere which develops intellectual systems able to fulfill tasks which require human's thinking and analysis.

One of its main directions is knowledge engineering which deals with creation of formal models and data bases for the computers to process them, and use the knowledge and solve problems related with the information keeping and usage.

There were more than 200 researchers and professionals representing

universities, academic and branch institutes and organizations from many cities and countries at the Conference. There were participants from Moscow, St. Petersburg, Belgorod, Bryansk, Vladivostok, Vladimir, Volgograd, Donetsk, Irkutsk, Kazan, Kaliningrad, Krasnoyarsk, Novosibirsk, Rostov-on-Don, Samara, Smolensk, Taganrog, Tver, Ulyanovsk, Khanty-Mansiysk, Chelyabinsk and Mogilyov (Belarus) at the event.

There was a discussion "What Will the Next Generation Artificial Intelligence be Like?" at the round table meeting.

Dr Fedyaev and senior lecturer Kolomoytseva who are experts in the sphere of computer vision have made their presentation "Automatic Registration of Students' Presence at Class with the Help of Computer Vision" quite recently. It covered results of the research made in the field of deep neural networks and their application for image recognition in the real time mode.



Photo: DonNTU's Site

The Congress of Russian Association of Artificial Intelligence was held in the frameworks of the Conference. Important decisions influencing the Association's activity as a whole were made there. The renewed Status of the Association was adopted.

Dr. Fedyaev was elected a member of the Research Board of the Association. It is the recognition of his service in the field of artificial intelligence and the Association's members' confidence in him. Senior lecturer Kolomoytseva became one of new members of Russian Association of Artificial Intelligence. It proves her contribution into development of artificial intelligence.

The decision to establish Donetsk Regional Branch of Russian Association of Artificial Intelligence was made at the Congress. It demonstrates widening of the Association's activity in different regions of Russia.

DonNTU's Academic Participates in Technoforum - 2023

Moscow "Expocentre" hosted "Technforum-2023" on October 23-26th. Prof. Marenich took part in it. He represented the exposition "Electrically Safe Ore Asynchronous Engine; Innovative Solution of Protection of Mines Personnel from Being Injured by Electric Current".

Prof. Marenich had a number of meetings with representatives of different Russian boards and organizations. The meeting with Mr. Kononov, the



Photo: DonNTU's Site

Chairperson of Russian Society of Inventors and Innovators was of great importance as the desire to establish Donetsk Regional Centre of Russian Society of Inventors and Innovators at DonNTU was expressed.

Prof. Marenich also took part in the strategic session "Training of Engineers under New Challenges" where he set forth his vision of problematic issues and the ways to solve them.

DonNTU's Student Takes Part in All-Russian Project "Your Hero"

The seminar "Your Hero" took place in Moscow on September 26-29th. A. Yakovchenko, DonNTU's student, took an active part in this educational event organized in the frameworks of the All-Russian project.



Photo: DonNTU's Site

The seminar was aimed at active attracting of military men, including volunteers and mobilized citizens who took part or are taking part in special military operations. Special attention is paid to orientation on socially significant and constructive actions aimed at helping participants of military conflicts and armed clashes adapt in the system of patriotic bringing up of children and young people.

The event was organized by the Federal Agency on Youth Policy in the frameworks of the program

"Patriot".

- A. Yakovchenko couldn't help sharing his emotions as to the remarkable event:
- I like the project "Your Hero" very much. There was a meeting with the Hero of the Soviet Union Kiprian (Burkov) and the Hero of the RF N. Matrenitski. There were 100 people present including the veterans of the campaigns in Syria, Chechnya, and the SMO, people of different military ranks who represented different arms of the service.

DonNTU's Students are Winners of All-Russian Contest on Sports Programming

Grozny hosted the All-Russian Students' Competition on Sports Programming on October 4-8th. It was organized in the honour of the outstanding person – the Hero of Russia, the Head of the Republic Ramzan Kadyrov. The hackathon was focused on the development of the innovation educational platform in which 22 teams from different cities of the Russian Federation took part.

The team "E-notGPT" from the Scientific and Educational Institute of Computer Science

and Technologies represented DonNTU. V. Vavilin, K. Rudnev, O. Vasilchenko, L. and I. Sygin were the members of our team. The Associate Professor E. Savkova was the team's supervisor.

At the hackathon's opening ceremony the teams were given a task to develop digital solution of the educational game able to raise students' motivation to study geography at school. The game has the unique element which adds some interest in studying the subject. The work at the game lasted for



Photo: DonNTU's Site

34 hours and then it followed by the presentation to defend the project.

The team "E-notGPT" demonstrated excellent skills and successfully solved the task. They ranked first, got gold medals and the cup as appreciation of their talent and loyalty to the sphere they worked.

Lyceum Students from Khartsyzsk Supervised by DonNTU's Postgraduate Student Are Winners of Youth Graph Tournament

Moscow hosted the International Congress "Architecture- 2023" on October 2nd. It was



Photo; DonNTU's Site

organized in the frameworks of the Centre's for International Trade activity. The event was aimed at discussing issues of people's life in modern cities, their physical and psychological health. Besides, special attention was paid to search of practical solutions to improve architecture and construction to raise their competitiveness both in the Russian and international markets.

The fascinating graphic tournament for schoolchildren and university students was organized in the frameworks of the Congress. The team of talented 11-form schoolchildren from the engineering class of Khartsyzsk Lyceum # 25 "Intellect" took part in it. They were supervised by the postgraduate student of DonNTU N. Nachkebia. The talented woman helped the participants develop the concept of the unique garden on the roof of a high building. They created a tremendous 3D model of this oasis and carried out questioning of people living in Khartsyzsk on their attitude towards the garden projects on the building roofs.

The team won in the nomination "The Best Design-Project "City's Landscape Gardening" in the frameworks of the BRICS Youth Graphic Tournament "Healthy and Safe Cities and Settlements". The team's impressive potential is E. Semibratova, A. Yemelyanova and M. Vodopyanova who demonstrated their high professionalism at the tournament.

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

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