

A summit devoted to the Belt and Road (BRI) initiative took place on October 17–18 in Beijing, as this year marked the 10th anniversary of the project since it had been launched by Chinese leader Xi Jinping in 2013.



The heads of participating delegations at the Third Belt and Road International Forum. Photo by RIA News¹

BRI is a proposal of the joint projects of the Silk Road Economic Belt (an overland route) and the Maritime Silk Road of the XXI Century (a sea route). The initiative is to improve existing and create new trade and transport corridors connecting Central Asian, European, Latin American and African states, as well as is to promote the development of trade relations between them and China. The concept involves constructing bridges, ports, highways and railways, power plants, oil and gas pipelines, telecommunications projects and other infrastructure facilities related to these. Belt and Road's magnitude is difficult to underestimate, while over 60 % of world's population lives on the project's territory.

The summit — already the third of a kind — brought together representatives of 130 countries and 30 international organizations in China's capital. However, most of European leaders were missing. Mass media actively speculated on whether they intentionally skipped an event in order to express solidarity with

the United States, a well-known opponent of China (in economic field especially), or they just simply did not receive an invitation. Anyway, their absence really



The map of China's Belt and Road Initiative²

¹ URL: <http://www.kremlin.ru/events/president/news/72528/photos/73259>

² URL: <https://theasiatoday.org/news/east-asia/the-green-belt-and-road-of-china/>



Putin's speech during the Belt and Road forum. Photo by TASS

only means one thing. In words of the Guardian, «Xi Jinping's relations with the west become increasingly frosty»³.

A lot of foreign guests did attend though, including the president of Russian Federation Vladimir Putin. He warmly congratulated Chinese colleagues on their success, noting that «considering such global dimensions, 10 years ago it was hard to believe that everything would work out»⁴. Indeed, the initiative can surely be called ambitious, yet seemingly does not fail to take all of the participant countries' interests into consideration.

Previously during the interview with the Chinese press Putin highlighted that «the main advantage of interaction's concept proposed by China is that no one imposes anything on anyone. It is not only the seeking of acceptable solutions, but also the searching for projects and methods which all parties can accept to achieve common goals»⁵.

Basically, all the principles that are a cornerstone of cooperation in BRICS are still of primary importance particularly in the Belt and Road initiative. Inclusivity, solidarity and openness towards cooperation remain

the main values in terms of economic relations within BRICS' states. Moreover, BRICS declarations often mention providing help to developing countries. Belt and Road is a great example of how words are put into practice. For instance, according to the World Bank report, by providing jobs and financing important regional projects this initiative has already lifted more than 7 million people out of extreme poverty and 32 million from moderate poverty⁶.

Speaking of BRICS, during the speech at the Belt and Road forum, Putin mentioned the intent to broaden the cooperation in transport system within the alliance. «Russia, which will chair the expanded BRICS next year, has taken the initiative to establish a permanent commission on transport logistics within the framework of this association and other interested states, could deal with the development of international transport corridors all over the globe»⁴, — Russian leader proclaimed. Bearing in mind that BRICS is going to welcome several new members, it is worth noting that Belt and Road initiative might expand accordingly then.

³ China woos global south and embraces Putin at belt and road Beijing summit. *The Guardian*. URL: <https://www.theguardian.com/world/2023/oct/16/china-woos-global-south-and-embraces-putin-at-belt-and-road-beijing-summit>

⁴ The head of the Russian state spoke at the opening ceremony of the third International Forum "One Belt, one way". Kremlin. URL: <http://www.kremlin.ru/events/president/transcripts/72528>

⁵ China proposes Belt and Road Initiative not to crush others, but offers opportunities: Putin // *Global Times*. URL: <https://www.globaltimes.cn/page/202310/1299879.shtml>

⁶ The Belt and Road Initiative: Economic, Poverty and Environmental Impacts. *World Bank*. URL: <https://documents1.worldbank.org/curated/en/126471554923176405/pdf/The-Belt-and-Road-Initiative-Economic-Poverty-and-Environmental-Impacts.pdf>

Putin also used participation in the summit as an opportunity to tell a few of Russia's plans that complement other infrastructure projects in Eurasia (BRI included). He invited interested states to participate directly in the development of the Northern Sea Route, as Russia is ready to provide reliable ice wiring, communications and supplies. Putin announced that, starting next year, navigation for ice-class cargo ships along the entire length of the Northern Sea Route will become year-round. At the summit he, like other leaders, proceeded to negotiate with heads of participating delegations directly. Judging by the subsequent feedback from the leaders, negotiations were productive and successful.

In addition, it is necessary to emphasize that the forum was not purely about trade and economics. China made it clear that BRI is more than a transport system. Development of a project also tackles other burning global issues, such as environmental and ethical ones, as well as rapid advancement of digital technologies like artificial intelligence. They were reflected in the discussion topics of the forum. During the summit there were held panel events, including 3 high-level meetings on digital economy, interconnectedness and green development, alongside with 6 thematic discussions: uninterrupted trade, rapprochement of peoples, exchanges through think tanks, the so-called honest Silk Road, interregional cooperation and maritime cooperation.

Within the framework of the forum, agreements were reached on 458 projects — the number impressively surpassed the results of the second Forum. Not only general challenges were discussed and solved: specific tasks such as training 100,000 specialists for partner countries by 2030, increasing the number of joint laboratories to 100 were set, too. It was decided to create a Secretariat, which should play its role to improve the institutional framework and implement projects. In closing speech Chinese Minister of Foreign Affairs Wang Yi pointed out that the success of the summit *«proves that peaceful development and win-win cooperation represents the prevailing trend and people's common aspiration. Cold War-style confrontation and decoupling efforts go against the tide of history and will lead nowhere»*⁷. He concluded with expressing hope to start a shared journey towards global modernization and a better future.

Ekaterina Sergeeva

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Federal state budget establishment additional professional education “Educational and instructional center for railway transportation (UMC ZDT), Russia took part in the International Industrial Exhibition “EXPO-RUSSIA IRAN 2023”, which was held on October 10-12, 2023 in Tehran Business Forum.

The exhibition is organized by “Zarubezh-Expo”, JSC with the support of the Ministry of Foreign Affairs, Ministry of Industry and Trade, Ministry of Economic Development of Russia, industry departments of Russia and Iran under the patronage of the Chamber of Commerce and Industry of the Russian Federation.

The objectives of the business forum are to promote further development and strengthening of trade and economic ties between Russia, Iran and EAEU, promotion of Russian export high-tech products to the Iranian market, expansion of investment cooperation and presentation of the most promising investment projects of Russia at the exhibition, stimulation of interaction between the educational systems of the two countries.

Within the framework of the business program of the exhibition, special attention was paid to cooperation between Russia and Iran in the field of education.

The round table “Tasks and Prospects of International Inter-University Cooperation in Overcoming New Challenges and Threats of the World Order” was held, where Mz. O.V. Starykh, Director of UMC ZDT, reported a speech. In her report “Priority areas of cooperation in science, higher and secondary vocational education at the present stage of training qualified personnel for the economy and business of Eurasian countries” Mz. O.V. Starykh outlined the main areas of cooperation in the field of education: publication of educational literature, electronic educational programs, electronic library, BRICS Transport magazine. The round table was attended by heads of Russian and Iranian universities, discussed the issues of the current state of international youth cooperation, existing problems and ways to overcome them on the basis of a systematic approach, organization of interaction

⁷ Wang Yi Talks about the Important Outcomes of the Third Belt and Road Forum for International Cooperation. *Ministry of Foreign Affairs of People's Republic of China*. URL: https://www.fmprc.gov.cn/eng/wjzb_663304/wjzb_663308/activities_663312/202310/t20231020_11165149.html



Tehran International Exhibition and Commercial Centre – Tehran Business Forum, where the exhibition was held.
Photo by UMC ZDT



Grand opening of the exhibition on October 10, 2023.
Photo by UMC ZDT

with foreign subjects of educational activities in the field of international scientific and technical cooperation.

UMC RDT took part in the International Conference “Cooperation in the field of transportation and logistics, development of the North-South ITC, construction of transportation routes and facilities”. In the report “Electronic Library of Railway Transport Publications”, Deputy Director of UMC ZDT Mr. A.Yu. Pavlov emphasized the importance of educational and technical literature. Pavlov emphasized the importance of educational and technical literature in the training of personnel for the transport industry in Iran. The conference was attended by representatives of the Ministry of Roads and Urban Development of Iran, Department of Transportation Planning and Economics, State Corporation “Iranian Railways”, Road Maintenance and Trans-



Round table “Tasks and Prospects of International Inter-University Cooperation in Overcoming New Challenges and Threats to the World Order”. Photo by UMC ZDT

portation Department, Transportation Department of Tehran Municipality and others. The following issues were discussed: prospects and ways of development of the North-South ITC, improvement of the transport system of South-West Asia in the process of development of trade and economic relations between the CIS countries and Iran, transport safety of cargoes passing through Iran, organization of railway-ferry communication between ports of the countries, transit of cargoes through Iran.

At the stand of UMC ZDT presented educational and methodical literature, training manuals, dictionaries, magazines “Transport Technician: Education and Practice” and “BRICS Transport”, and handouts.

Negotiations were held at the exhibition with: Mr. Zeinollah Kalymbetov, Program Director of the Directorate of Transport and Communications of the Economic Cooperation Organization (ECO), on the publication of a dictionary of railway terms in Persian; Mr. Morteza Bagheri, Director of the Transport System and Logistics Research Laboratory (TSL), on the publication of literature in English; Mr. Shari Naderi, Manager of Mapna Company, on the supply of educational literature. Iranian colleagues showed interest in the BRICS Transport magazine.

Further mutually beneficial and fruitful cooperation in the field of education is planned.

By the results of the exhibition, UMC ZDT was awarded a diploma.

*Federal state budget establishment
additional professional education
“Educational and instructional
center for railway transportation”*

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On **October 20, 2023**, the online opening ceremony of the II International Youth Internet camp “InterTransCamp” took place at the **Far Eastern State Transport University** (DVGUPS, Khabarovsk).

During the whole of this year, the team of organisers, which included representatives from the Russian side and representatives of the Chinese side from Shandong Polytechnic College, Jiean Hi-tech Co. Ltd., not only the organisers but also the participants were preparing, collecting and translating materials, preparing the programme for work on the virtual simulator. Taking into account the experience of last year, when not every computer technically met the requirements of the virtual simulator, and many people who wanted to participate in the competition were not able to take part in it, this year educational institutions allocated more powerful technical means for teams of participants or bought them in advance for the opportunity to participate in the international competition.

On October 20, 2023, the online opening ceremony of the II Youth International Internet Camp “InterTransCamp” was held at the Far Eastern State Transport University (DVGUPS). The opening ceremony was attended by the heads of Roszheldor (Federal Railway Transport Agency), DVGUPS, Training and Methodological Centre for Education in Railway Transport, Association of Colleges and Technical Schools of Transport of Russia, students from Russian railway technical schools, and heads of these educational institutions.

Among the foreign participants were Jiang Xiaoyang, Consul General of the Consulate General of the People's Republic of China in Khabarovsk, the management of the Shandong Polytechnic Institute, managers of the Chinese company Jiean Hi-tech Co. Ltd., representatives of the University of Kuala Lumpur (Centre for Railways of Asia) from Malaysia, Professor Li Dawei of Beijing University of Transport and others.

Last year the online camp brought together 22 teams from Russian railway technical schools to prepare for the international championship of professional mastery in railway competences. This year 30 teams from 23 Russian cities took part, as well as 30 Chinese teams from Shandong Polytechnic University, and three teams each from Malaysia and Indonesia. That is 142 participants. It is positive that these competitions are expanding quantitatively!

In his welcoming speech, Arkady Rudolfovich Yedigaryan, Acting Rector of DVGUPS, thanked Shandong Polytechnic University for its active participation, for training experts who will lecture to students. He also expressed his gratitude to the co-organiser of the online camp and championship — Chinese company Jiean Hi-tech Co. Ltd.

Jiang Xiaoyang, Consul General of the Consulate General of the People's Republic of China in Khabarovsk, said in his opening remarks:

— *Providing staff support remains the basis for the development of a modern transport system and transport co-operation between China and Russia. The InterTransCamp Youth International Camp is a unique project that brings together teams from secondary vocational education institutions in China and Russia.*

Igor Petrovich Chirva, Deputy Head of the Administrative and Personnel Department of the Federal Railway Transport Agency, said:

— *Improving professional skills and abilities in accordance with the best practices in the field of railway transport, gaining new knowledge and developing personal qualities remains important for both the self-fulfilment of the contestants and the efficient operation of the railway company.*

Olga Vladimirovna Starykh, Director of the “Training and Methodological Centre for Education on Railway Transport”, drew attention to the fact that “*InterTransCamp*” is one of the most relevant and modern tools for improving professional skills at the international level.

The participants of the opening ceremony were also welcomed by Tamara Sukhareva, Executive Director of the non-profit organisation “Association of Colleges and Technical Schools of Transport of Russia”, First Deputy Director of the Moscow College of Transport RUT (MIIT), Gu Peiqiang, Rector of Shandong Polytechnic Institute, representative of the Chinese company Jiean Hi-tech Co. Ltd. Gao Zhishen and others.

This year, unlike the first camp and championship, students (as competitors) and teachers (as experts) of educational organisations of secondary vocational education (SVE) in professions and specialties were invited to participate: 23.01.09 Locomotive driver; 23.02.06 Technical operation of railway rolling stock (locomotives); 23.02.06 Technical operation of railway rolling stock (freight cars). Last year there were only representatives of 23.02.06 Technical operation of railway rolling stock (freight cars).

The ITC camp programme includes training and advanced training of Experts from among teachers of Russian educational organisations implementing educational programmes in railway specialties and professions. The total amount of training of experts is 12 hours (during 4 days). The tasks of an expert are as follows:

- assistance to the student team of their educational organisation in preparation in the ITC process;
- control and evaluation of the work of student teams in the process of their participation in the international InterTransChampionship.

After ITC training and participation in the Championship, each Expert receives an international certificate confirming the scope of training, his/her participation in the preparation of teams, work on the evaluation of participants, the status of Expert of the InterTransChampionship 2023. The certificate is signed by the organisers from the Chinese and Russian sides.

The training programme for the competitors, recruited from among the students of Russian educational organisations implementing educational programmes in railway specialties and professions, includes a total training volume of 53 hours (13 days). The task of the contestant is to learn to master the virtual simulator “OnlineSystem_WS3C” for participation in the International Championship “InterTransChampionship” and to be trained in four modules including 24 technical tasks.

As a result of the ITC training and participation in the championship, each contestant receives an international certificate confirming the scope of the training as well as his/her participation in the championship. Contestants who have completed the training course but did not pass the intermediate selection for the championship also receive the above-mentioned certificate of participation in the ITC. The certificate is signed by the organisers from the Chinese and Russian sides.

For 15 days Russian students and teachers prepared for participation in the championship, it was intense days and sometimes sleepless nights.

The success of the participants depended on the coordinated work of all team members:

- teachers from the Chinese side, who will transfer competences and teach Russian participants the basics of working on the virtual simulator and solving relevant technical problems;
- consultants from among Russian students who already have experience of participation in the International Championship “InterTransChampionship” and help Russian competitors to understand the solution of technical problems on the virtual simulator;
- technical specialists from the Chinese and Russian sides helping to solve the issues of the virtual simulator operation;
- hosts and translators of the online camp.

It is good to see that such a young championship is being renewed and this year it included a competition for Russian students on knowledge of railway and technical terms in English. This contributes to the professional development of young specialists who can participate in international projects.

So, on 10–11 November 2023, the InterTransChampionship between teams from Russia, China,

Malaysia and Indonesia took place. As last year, the jury and experts evaluated the participants in two categories national championship and international championship. In the national championship, after a meeting of experts and jury of the Russian and Chinese sides, it was decided to award two second places. The results of the championship are summarised below.

International Championship

1st place Shandong Polytechnic Institute

1. Chen Xunan

2. Sun Yirong

99.791 points

2nd place Amur Institute of Railway Transport (DVGUPS)

Expert: Yana Sergeevna Zamyslova

1. Evgeny Sergeevich Bakhtin

2. Nikita Vasilievich Shupilov

99.687 points

3rd place Shandong Polytechnic Institute

1. Wang Chenxin

2. Wang Haocheng

99.644 points

All-Russian Championship

1st place Amur Institute of Railway Transport (DVGUPS)

Expert: Yana Sergeevna Zamyslova

1. Evgeny Sergeevich Bakhtin

2. Nikita Vasilievich Shupilov

99.687 points

2nd place Taiga Institute of Railway Transport (OmGUPS)

Expert: Pavel Valerievich Suglobov

1. Vadim Vadimovich Efunyayev

2. Kirill Nikolaevich Savchenko

98.4 points

2nd place Khabarovsk Railway College (DVGUPS)

Expert: Aleksandr Leonidovich Kostyrko

1. Roman Sergeevich Kolobov

2. Gleb Olegovich Gaevoy

98.4 points

3rd place VTZHT — branch of RGUPS

Expert: Andrey Aleksandrovich Korniyushkov

1. Nikita Alekseevich Bulygin

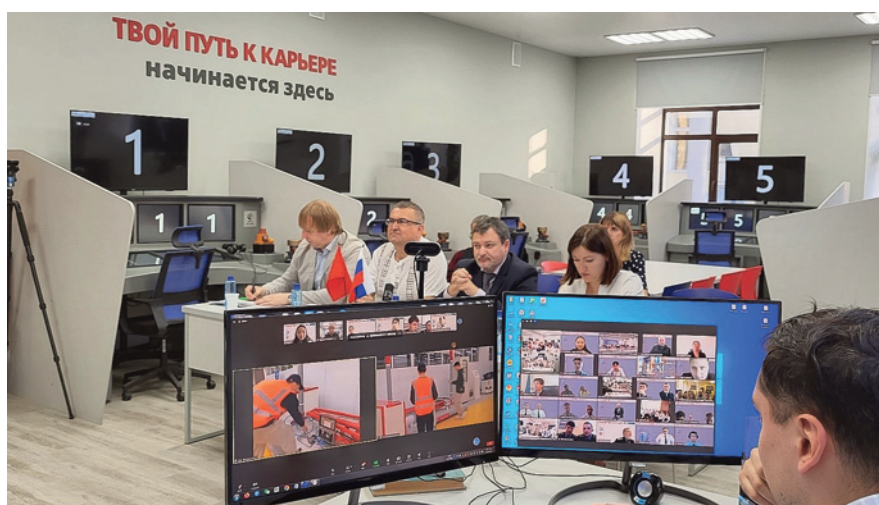
2. Oleg Dmitrievich Nikolaev

98.009 points

Also, as noted earlier, a competition for Russian students to learn railway, technical terms in English was held in 2023 as part of the InterTransCamp online camp. For it, they developed a vocabulary of professional terms (300 words), nine accompanying intermediate tests, and one final extended test. 54 students took part in it.

Winners of the contest

1st place	Georgiy Valerievich Tsogoev	MKT (RUT) MIIT	35 points
2nd place	Maksim Sergeevich Nesterov	SamGUPS, Saratov	34 points
2nd place	Ivan Yurievich Gorshenin	Orenburg Railway College	34 points
2nd place	Denis Nikolaevich Kozhaev	Orenburg Railway College	34 points
3rd place	Danila Dmitrievich Dronenko	SamGUPS, Saratov	33 points
3rd place	Timur Dmitrievich Pulatov	MKT (RUT) MIIT	33 points
3rd place	Ivan Denisovich Savchuk	Orenburg Railway College	33 points



At the ITC opening ceremony, a video of the workflow on the simulator is shown to Chinese students



Jiang Xiaoyang, Consul General of the Consulate General of the People's Republic of China in Khabarovsk, welcomes ITC participants



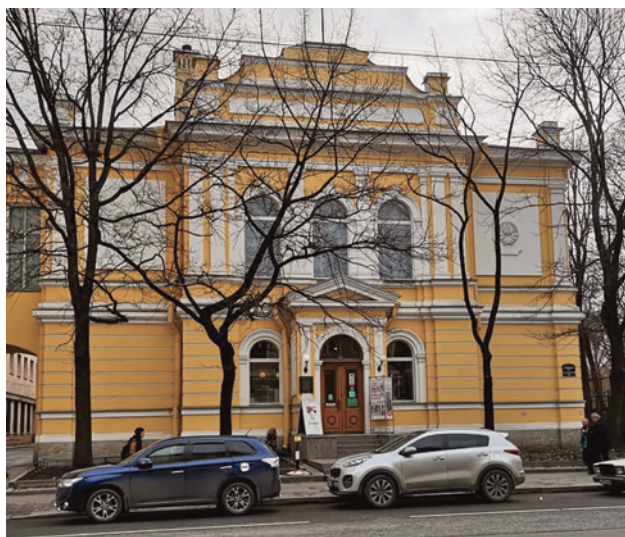
Announcement of the results of the competition

In conclusion, we would like to note that improving professional skills and abilities in accordance with the best practices in the field of railway transport, acquir-

ing new knowledge and developing personal qualities remains important both for the self-realisation of the contestants and efficient work.

*Federal state budget establishment additional professional education
"Educational and instructional center for railway transportation"*

On October 26, 2023, the **Central Museum of Railway Transport of the Russian Federation (CMZT RF)** celebrated the 210th anniversary of its foundation.



The building of the Central Museum of Railway Transport of the Russian Federation, built in 1902. Saint Petersburg. Photo by the Central Museum of Railway Transport of the Russian Federation

On September 26, 2023, the opening of the anniversary exhibition “Treasures of the Special Hall” took place in the museum building at 50, Sadovaya Street. The exhibition presents more than 100 unique mu-

seum objects of the XIX–XX centuries, reflecting the history of the formation of the museum fund, starting with a collection of models made under the supervision and with the direct participation of the founder and first inspector (rector) of the Institute of the Corps of Railway Engineers (IKIPS) – now Emperor Alexander I St. Petersburg State Transport University (PGUPS) Augustin Betancourt.

On the same day in the auditorium of PGUPS a scientific and practical conference dedicated to the 210th anniversary of the Russian Railway Centre, which began with the screening of the movie “History is Written Today!”, prepared by the museum staff.

In his report, Vladimir Mitelenko, Director of the Central Railway Transport Centre of the Russian Federation, reminded the audience that throughout its history the museum was inseparably connected with the first transport higher education institution of Russia and by the highest state Manifesto was established simultaneously at the Institute of the Corps of Railway Engineers: on November 20 (December 2), 1809 Emperor Alexander I signed the Manifesto “Establishment on the management of water and land communications”. In Chapter VIII, devoted to the organization of the Institute, in paragraph 133 it is written: “In a special hall will be kept models of all important in Russia and other lands, the construction of existing or only predetermined, as well as machines used in hydraulic works”.



Opening of the jubilee exhibition at the Central Museum of Railway Transport of the Russian Federation. October 26, 2023



Opening of the jubilee exhibition at the Central Museum of Railway Transport of the Russian Federation.
October 26, 2023



Exhibit of the Jubilee Exhibition of the Central Museum of Railway Transport of the Russian Federation. Portrait of General Adjutant, Admiral, Minister of Railways of the Russian Empire K.N. Posyet

One of the first exhibits were 24 models made under the guidance and with the direct participation of Augustin Betancourt, the first inspector (rector) of the Institute, the chief director of railroads, the founder of engineering education in Russia. Over 210 years, the museum's holdings have accumulated more than 70,000 items, which represent a real wealth of treasures.

Tamila Titova, Acting Rector of Emperor Alexander I St. Petersburg State Transport University, who on behalf of the Rector, teaching staff and students congratulated the museum on its 210th anniversary.

Boris Piotrovsky, Vice-Governor of Saint Petersburg, Igor Chirva, Deputy Head of the Administrative and Personnel Department of Roszheldor, Natalia Astakhova, Deputy Chairman of the Standing Commit-



Exhibit of the Jubilee Exhibition of the Central Museum of Railway Transport of the Russian Federation. Report of P.P. Melnikov and S.V. Kerbedz on their business trip to study the experience of construction and operation of foreign railroads. 1830



Exhibit of the Jubilee Exhibition of the Central Museum of Railway Transport of the Russian Federation. Diploma of congratulatory address to the Managing Director of the Kolomna Machine Building Plant N.K. Antoshin from employees. Leather, silver. 1890. Jewellery factory Carl Faberge



Exhibit of the Jubilee Exhibition of the Central Museum of Railway Transport of the Russian Federation. Diploma of graduation from the Institute of Railway Engineers of Emperor Alexander I in the name of Nikolai Gribanov. 1910



Exhibit of the Jubilee Exhibition of the Central Museum of Railway Transport of the Russian Federation.
Model of a cantilever bridge.
The middle of the XIX century



Presidium of the scientific and practical conference dedicated to the 210th anniversary of the Central Museum of Railway Transport of the Russian Federation. PGUPS assembly hall.
October 26, 2023

tee on Industry, Economics and Entrepreneurship of the Legislative Assembly of Saint Petersburg, Natalia Astakhova, Deputy Head of the Oktyabrskaya Railway for Interaction with Authorities, I. Lobko, representatives of the engineering and technical community, heads of museums and leading educational institutions came to congratulate the museum on its anniversary.

Press Service of PGUPS. Photo by PGUPS

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“**Transport Week**” — an annual event of the country’s transport industry was held in the Moscow Gostiny Dvor. On **November 14–16**, the XVII International Forum and Exhibition “Transport of Russia” took place in Moscow as part of “Transport Week”. Traditionally, the programme of Transport Week was opened by the XIII International Spartakiade of students of transport universities and the International Festival of creativity of students of transport universities “TranspArt”.

Mikhail Mishustin, Chairman of the Government of the Russian Federation, visited the forum and exhibition on November 15. The Head of the Government inspected the expositions of the largest organisations of the transport complex, listened to the reports of the heads of enterprises on the latest achievements of the industry. Mikhail Mishustin also presented state awards to distinguished representatives of the transport complex and spoke at the plenary discussion “Russia 2035: Towards a New Transport Economy”. Prime Minister congratulated the workers of the industry on the upcoming professional holiday and emphasised that despite the sanctions challenges, transport is moving forward dynamically, providing a reliable supply of all necessary goods and services to the industrial sector, businesses and citizens.

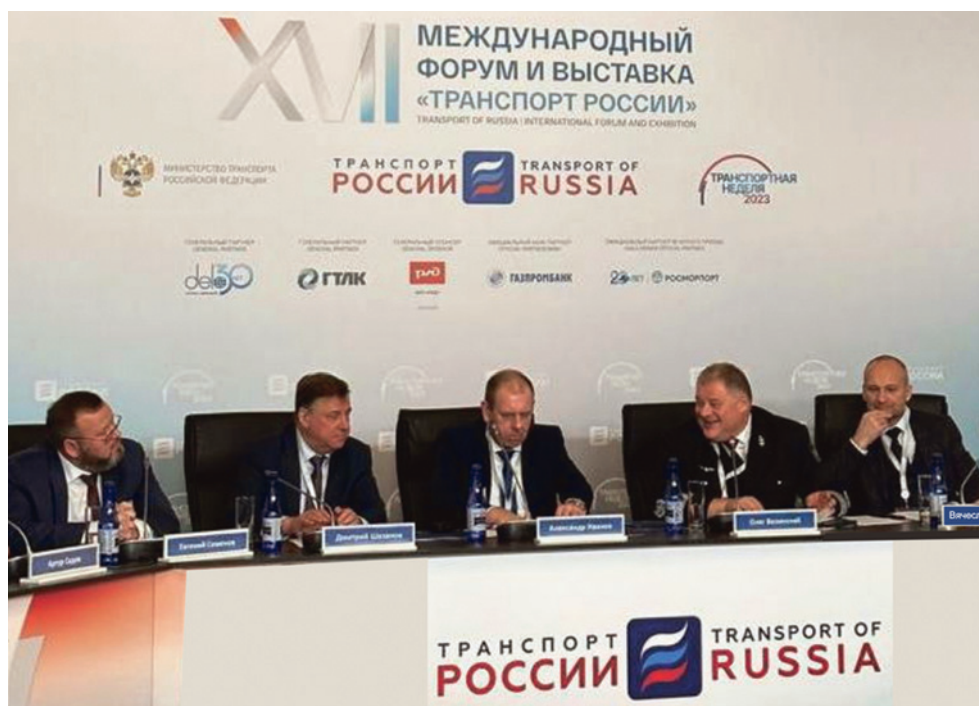
Within the framework of various discussion formats, participants in the forum’s business programme discussed such priority areas for the industry as road construction, development of transport and logistics corridors, transport security, construction of port, railway and air infrastructure, passenger traffic on inland waterways, road transport, as well as issues of digitalisation and staffing of the transport complex.

More than 320 speakers took part in the industry formats, and the total number of participants in the business programme exceeded 3,700 people. Over 20 business formats were held during the three days,



Exhibition “Transport of Russia” in the Moscow Gostiny Dvor.
2023⁸

⁸ Photo by “Transport of Russia”. URL: <https://transportrussia.ru/meropriyatiya/10386-transportnaya-nedelya-2023-sostoitsya-v-moskve-11-17-noyabrya.html>



Participants of the industry conference "Talent shortage. Shortage of working professions at railway transport enterprises. Ways of solving the problem". Photo by PGUPS

which were viewed 440,000 times online. As part of the forum, 36 landmark agreements were signed. The event was attended by 17 heads of regions, delegations from 70 Russian regions, and 10 foreign delegations. The participants also included 970 companies and organisations from the industry. The total area of the exhibition was 3,900 m², 87 exhibitors took part. Over 10,000 people visited the exhibition over 3 days, and over 700 journalists from 244 media outlets provided information support.

Emperor Alexander I St. Petersburg State Transport University took part in the **International Forum and Exhibition "Transport of Russia"** held in Moscow on November 14–16, 2023. The university delegation was headed by Rector Oleg Valinsky.

On the margins of the forum the issues of development of all major modes of transport were discussed with the participation of industry leaders and representatives of the Russian Ministry of Transport. The main theme of this year was "Russia 2035: Towards a New Transport Economy".

The exhibition presented significant achievements of the industry and the most breakthrough projects, including a unique development of the Centre for Computerised Railway Technologies and the Department of Automation and Telemechanics on Railways of PGUPS — the "Block of Formation of Rail Frequencies".

One of the key events of the forum was the industry conference "Talent shortage. Shortage of working professions at railway transport enterprises. Ways to solve the problem", which was attended by the rector

of the university Oleg Valinsky. In his speech, the head of the transport university emphasised that today the university is faced with the task of training railway universalists who will be adapted in advance to the requirements set by the employer.

At the forum Oleg Valinsky took part in the ceremony of signing Agreements in the field of education, scientific activities and joint developments. In particular, Cooperation Agreements were signed with Donetsk Institute of Railway Transport, JSC "NIAS", with "Edu-



Signing of an agreement between Transmashholding Engineering Corporation and Emperor Alexander I St. Petersburg State Transport University. CEO of Transmashholding Kirill Lipa (left) and Rector of PGUPS Oleg Valinsky. Photo by PGUPS

cational Consulting Mindin Yinglian Beijing”, LLC from the People’s Republic of China, as well as with the machine-building corporation “Transmashholding”.

A trilateral agreement on co-operation in the field of educational activities was signed between Emperor Alexander I St. Petersburg State Transport University, TMH Corporate University and Bauman Moscow State Technical University.

Press Service of PGUPS

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On November 15–17, 2023 in the Emperor Alexander I St. Petersburg State Transport University at the Department of “Water Supply, Drainage and Hydraulics” the XI International Scientific and Practical Conference “New Achievements in the Fields of Water Supply, Drainage, Hydraulics and Water Resources Protection” was held in continuation of traditional readings founded in 2001 by Academician of the Russian Academy of Architecture and Construction Sciences V.S. Dikarevsky.

Vitaly Sergeevich Dikarevsky (1926–2019), railway engineer, prominent scientist in the field of water supply and drainage, Doctor of Technical Sciences, Academician of the Russian State Academy of Architecture and Construction Sciences (RAASN), Honoured Worker of Science and Technology of the Russian Federation,



Stanislav Bosov. Portrait of Professor V.S. Dikarevsky. 2020.

Oil on canvas, 60 x 80 cm. Art gallery of alumni and personalities of the Emperor Alexander I St. Petersburg State Transport University

Head of the Chair “Hydraulics, Water Supply and Sewerage”. At present practically all the teachers of the department are his pupils. Since 2001, on the initiative of V.S. Dikarevsky, every two years PGUPS has organised conferences devoted to topical issues in the fields of water supply, water disposal, hydraulics and water resources protection.

Water supply, wastewater disposal and hydraulics issues have been in the field of attention of the university scientists, including its first rectors, renowned hydraulists, since the university was founded.

Augustin Betancourt, the first inspector (rector) of IKIPS (1809), even before coming to Russia, was engaged in issues of river flood regulation in Spain. In Russia he continued his activities in the field of water supply, drainage and hydraulics.

P.P. Bazen — French engineer, mathematician, mechanic and builder, professor, Corresponding Member of the Saint Petersburg Academy of Sciences (AS), Honorary Member of the Saint Petersburg Academy of Sciences (1824), in 1824–1834 he worked as Director (Rector) of the institute. In 1816 he was included in the Committee for Structures and Hydraulic Works, in 1824 he became its chairman. He developed the project of a dam to protect Saint Petersburg against floods (1825), which became the basis of modern dam construction. He created the project and organised the construction of the Shlisselburg sluices.

Great importance was given to the issues of water supply, water drainage and hydraulics by Professor P.P. Melnikov — engineer of railways (1825), professor, head of the Northern Directorate for the construction of the Saint Petersburg-Moscow railway, honorary member of the Saint Petersburg Academy of Sciences, Minister of Railways.

P.I. Palibin (1811–1881), a railway engineer graduated in 1828, is considered to be the first plumber of the capital on the basis of historical facts and documents.

A.I. Delvig (1813–1887), a railway engineer graduated in 1832, engineer-general, was a famous plumber.

In 1884, Professor F.E. Maksimenko (1874 graduate of the Institute), a well-known scientist in the field of hydraulics and water supply, was elected head of the Department of Practical Mechanics.

The first head of the Water Supply and Drainage Department (since 1895) was V.E. Timonov (1862–1936), a railway engineer graduated in 1886, professor (1895), a specialist in hydraulic engineering.

In 1920 the Institute was divided into faculties: land, air and waterways. Professor A.A. Surin, who had defended his thesis by that time, was elected head of the Water Supply Department at the Faculty of Land Transport, and D.P. Ruzsky was appointed head of the similar department at the Faculty of Water Transport. According to A.A. Surin’s memoirs, the staff of these faculties worked as a single department.

This year the conference was dedicated to the 210th anniversary of the birth of A.I. Delvig, a graduate of the University in 1832, engineer-general. According to his projects the water supply system of Moscow, Saint Petersburg and many other cities was thoroughly reconstructed. He is the “pioneer” of water supply in our country, his printed works in this field in French and Russian were among the first in Russia.

The plenary session of the conference on December 16, 2023 was opened by A.V. Benin, Acting First Vice-Rector — Vice-Rector for Scientific Work of the University, noting A.I. Delvig’s contribution to the establishment of water supply systems in our country. M.S. Abu-Hasan, Dean of the Faculty “Industrial and Civil Engineering” and N.V. Tvardovskaya, Head of the Department “Water Supply, Water Disposal and Hydraulics”, addressed the participants with a welcoming speech, emphasising the importance of engineering systems and the need to improve the environmental situation in the modern world.

The Conference was attended by representatives of various organisations, teachers, researchers, postgraduates and students of the People’s Republic of China, the Republic of Belarus and the Russian Federation from Saint Petersburg, Moscow, Vologda, Kazan, Tyumen, and Komsomolsk-on-Amur.

The reports on the activities of the State Unitary Enterprise “Vodokanal of Saint Petersburg” to improve the quality of water supply and wastewater disposal services in the city and environmental protection, on the modernisation of wastewater disposal facilities in Tyumen, on the problems of ensuring environmental safety of water intake and treatment facilities of small settlements in the Astrakhan region aroused great interest at the conference. At the same time, the speakers noted that taking into account the difficult geopolitical conditions, when the usual imported equipment is subjected to sanctions restrictions on the part of manufacturers, special attention is paid to the study of alternative technological solutions for water supply and wastewater disposal systems using domestic equipment and Russian software products to implement digitalisation approaches to the operation of such engineering systems.

In more detail, the conference addressed the issues of improving the efficiency of operation of water supply and sewerage pipelines, dissipation of kinetic energy of water flow and recovery of air flow energy when using mines in wastewater disposal systems in Russia and China, use of vacuum technologies in wastewater transportation. Ways of improving technologies of drinking water preparation from surface and under-

ground sources, including the use of membrane technologies, by increasing the efficiency of water coagulation processes, new disinfectants in disinfection were considered. The participants of the conference listened with special attention to the report of E.E. Navogonsky on the development of water supply system at Kokhanovo station of the Belarusian railway.

One of the important tasks in environmental protection is not only the removal and treatment of domestic wastewater, but also the disposal of liquid industrial wastes, especially those containing toxic ions of heavy and non-ferrous metals, oil and petroleum products. It is known that not only industrial but also atmospheric wastewater flowing from the territory of industrial enterprises and transport infrastructure facilities causes damage to water sources. These problems and ways of their effective solution were also considered at the conference in the reports of the speakers.

At the end of the scientific-practical conference the results of its work were summarised and recommendations were given on the need to continue research in the field of water supply, drainage and environmental protection, the results of which are planned to be discussed in two years at the university at the XII International Scientific and Practical Conference “New achievements in the fields of water supply, drainage, hydraulics and protection of water resources”, dedicated to the 130th anniversary of the Department of “Water Supply, Drainage and Hydraulics”.

*Nadezhda Tvardovskaya,
Head of “Water Supply,
Drainage and Hydraulics” Department of PGUPS*

* * *

On December 2, 2023, on the 214th birthday of one of the oldest universities in Russia — Emperor Alexander I St. Petersburg State Transport University (PGUPS)⁹ — the V Betancourt Engineering International Forum concluded its work in Saint Petersburg. The Forum has been held at PGUPS since 2018 in honour of the first rector of the Institute of the Corps of Railway Engineers, Augustin Betancourt — an outstanding statesman, scientist, engineer and builder. The Forum is intended to unite all those who understand the significance of engineering creativity and the need to form a worldwide unified engineering educational space. The programme of the V Betancourt Engineering International Forum included events significant for the development of the Russian transport industry and for Russian engineering.

⁹ On December 2 (November 20, as they say in Russia according to the “old” Julian calendar), 1809, the Manifesto of Emperor Alexander I approved the first engineering institute in Russia — the Institute of the Corps of Transport Engineers, today — Emperor Alexander I St. Petersburg State Transport University (PGUPS).



The first building of the Emperor Alexander I St. Petersburg State Transport University (PGUPS) is the former palace of the Yusupov Princes on the Fontanka River embankment in St. Petersburg. An architectural monument of the VIII century. Architect Giacomo Antonio Domenico Quarenghi. Classes with students began here on November 1, 1810. Now it is one of the academic buildings of the PSUPS, the cultural and historical center and the museum of the university



One of the educational and laboratory buildings of the PSUPS campus

On **November 28, 2023** the start of the forum was marked by a hackathon¹⁰ “Railway Station of the Future”, which included 40 participants, who had been announced in advance, representing team projects. The main problem of the hackathon was to find a solution to the question of a railway station that would maximally combine passenger convenience and optimal technical characteristics of a transport hub. Hackathon 2023 was held at the Centre for Innovative Development of Oktyabrskaya Railway in Saint Petersburg.

At the grand opening of the forum, which began with the hackathon “Railway Station of the Future”, the opening speech was delivered by Ilya Terekhin, Vice-Rector for Educational Work and Industrial Relations of PGUPS, Daniil Starkovsky, Director of Lenpolygraphmash Technopark and Viktor Ivanov, Chief Engineer of the Oktyabrskaya Railway.

After the official welcoming part, the presentations “Business Model as the Foundation of a Startup” by Daniil Starkovsky, Director of Technopark “Lenpolygraphmash”, “Railway Stations and Airports of the Future in Transport Interchange Hubs” by Tatiana Leontieva, Head of the Laboratory of Technological Entrepreneurship of the Engineering School of GUAP; “Setting a Case Study” by Vitaly Kudryavtsev, Head of the Oktyabrskaya Centre for Innovative Development; “Effective Project Management” by Yan Demidov, Head of the Corporate Management and Strategy Implementation Department of Oktyabrskaya Railway; “Railway Station of the Future: New Professions and Technologies” by D. Lelyukhin, Head of the Computer Vision Centre, Saint Petersburg branch of “NIIAS”, JSC; “Generative Design in 3D Design” by Semen Zimin, successful start-up engineer, were heard.

In anticipation of the hackathon and in order to prepare for it, a theoretical intensive course was organised in the form of evening lectures on November 10–22, 2023 in the framework of the announced issues. The training course was attended by teachers of PGUPS, representatives of Russian Railways, Research Institute of Automated Systems (NIIAS) and Technopark “Lenpolygraphmash” of Saint Petersburg. As part of the course, the participants were immersed in the problematic issues of technical equipment, work regulations and logistical innovations of the “Railway Station of the Future”.

On November 21–22, 2023, a two-day practical educational programme “How to Organise Your Idea” was held at the Oktyabrsky Centre for Innovative Development, aimed primarily at students of PGUPS. The

programme was a logical conclusion of the theoretical training course and was aimed at preparing students for participation in the hackathon.

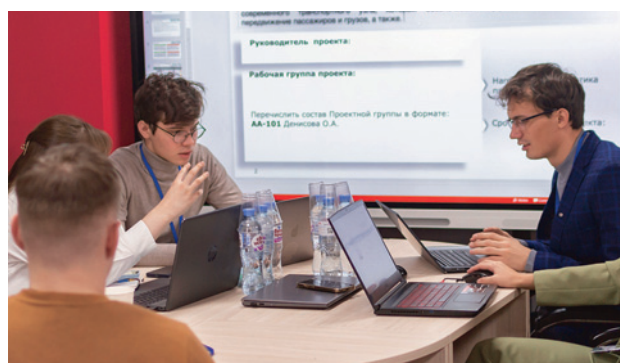
On November 28, 2023, at the V Betancourt Engineering International Forum hackathon, six participating teams presented preliminary designs for railway stations, which were discussed with invited experts.

“Representatives of Moscow, Severnaya, Kaliningrad, Gorkovskaya, Severnaya, North, North-Eastern and Oktyabrskaya Railways took part in organising this year’s hackathon”, commented Daria Ponomareva, the event coordinator and leading technologist of the Oktyabrskaya Innovation Development Centre.



Associate Professor Evgeny Korovyakovsky with a group of students participating in the hackathon

On November 29, 2023, as part of the hackathon, the finalised projects of the six participating teams were presented to the expert committee. According to the results of the “Expert Carousel”, the projects were announced the winners of the hackathon:



Group of students participating in the hackathon

¹⁰ Hackathon (“hacker” + “marathon”) is a forum for developers, during which specialists from different areas of software development (programmers, designers, managers) work together to solve some problem for a while. Sometimes hackathons are intended for educational or social purposes, but more often the goal of a hackathon is to create complete software. Each hackathon focuses on a specific area, e.g. programming language, operating system, application, software interface.



Photo of hackathon participants and winners with Rector of PGUPS O.S. Valinsky (in the centre)

1st place — “Container station of new generation” (made by the team “Christina and guys from UPL”); 2nd place — “Comfort of the future” (made by the team “Letter “E”); 3rd place — “Concept of development of TPU “Yakhtennaya”, introduction of clock traffic on the line “St. Petersburg–Sestroretsk” (made by the team “Dvizhentsy”).

The main ideas of the projects were commented by the captains of the winning teams. Jonas Vodopolas, captain of the team “Dvizhentsy”: *“The main idea of the project is to introduce clock traffic in the direction of Saint Petersburg (Finnish railway station)–Sestroretsk. Now this is an area of active development. And the transport infrastructure in this area is currently poorly developed. This project develops it thanks to the introduction of transport hubs and clock traffic”*. Andrey Pimenov, captain of the “Letter “E” team: *“The main idea of the project is to track the number of people filling the rolling stock and display this information on the scoreboard and in the Russian Railways application. In order to promptly solve logistical problems, it is important for passengers to know how many seats are available in which car”*.

On November 30, 2023 the conference of the International Association of Colleges of Transport took place at the Saint Petersburg Technical College of Railway Transport (SPTZT). The conference was opened by Eugene Shehtman, Director of the Saint Petersburg Technical College of Railway Transport, a structural subdivision of PGUPS. The participants were welcomed by Berlik Kapezov, Director of the State Municipal Enterprise on the right of economic management “Higher College of Transport and Communications” (Astana), Elena Panyushkina, Head of the Department for work

with branches of PGUPS and Elena Kozlova, Director of Orsha College — branch of Belgorod State University of Transport (BelGUT).



Russian participants of the teleconference

During the conference of the International Association of Colleges of Transport the issues of priority improvement of the quality of professional training of students, the importance of mentoring and professional development in this priority, the possibility of a differential approach to the evaluation of professional activities of teaching staff were discussed. Presentations were made by 7 speakers.

Press Service of PGUPS

On November 30, 2023, round table meetings on pre-declared problems were held in different buildings of PGUPS. Within the framework of the V Betancourt Engineering International Forum worked sections

“Problems and achievements in the field of construction engineering”; “Betancourt’s legacy as an impetus for the development of management and economic education for engineering growth”; “Logistic transport systems and technologies: education, science and practice”; “Safe ecosystem of intelligent transport infrastructure”; “Land transport and energy systems”; “Design, construction and operation of railway tracks”; “Design, construction and operation of railway infrastructure”.

For consideration of the round table **“Problems and Achievements in the Field of Construction Engineering”**, which worked under the guidance of the Dean of the Faculty of “Industrial and Civil Engineering” Mahmoud Abu-Hasan, 12 reports of students, post-graduates and teachers of PGUPS were presented, the problems of which broadly cover the current trends and prospects of the construction industry, going far beyond the construction of railways.

These trends, in particular, are demonstrated by the report of Alina Gavrilova, senior lecturer of the Department of “Technosphere and Environmental Safety”, “Analysis of manganese and copper accumulation in ecosystem links in urbanised areas”. *“One of the big problems of modern urbanised areas,” explains Alina Gavrilova, “is the accumulation of heavy metals and their impact on living organisms. To reduce the negative impact on the surrounding space coming from the roofs of buildings, as part of this study we simply covered the roofs with paint. We found such a simple but very effective way”.*

The main problematic precipitated at the round table **“Logistic Transport Systems and Technologies: Education, Science and Practical Activity”**, moderated by the Dean of the Faculty of Transport and Logistics Management, Associate Professor Alexander Badetsky,



The round table “Logistic Transport Systems and Technologies: Education, Science and Practical Activity” is held in the company auditorium of JSC Russian Railways



The moderator of the round table was Dean of the Faculty of Transport Management and Logistics, Associate Professor Alexander Badetsky



The round table “Logistic Transport Systems and Technologies: Education, Science and Practical Activity” is held in the company auditorium of Russian Railways

concerned the definition of the main modern logistic trends in the field of transport systems and technologies in practical activity, education and science. Within the framework of the round table there were 12 speakers. The problems of the reports were presented very widely: from the need to solve the problem of delays of goods trains in the neck of the railway bed due to hostile routes (speaker — Denis Yazev, postgraduate student of the Department of “Railway Stations and Hubs” of PGUPS) to the need to bring the regulatory documents governing freight transport in Russia in line with the requirements of modern engineering (speaker — Dmitry Poluektov, postgraduate student of the Department of “Operations Management” of PGUPS).

Within the framework of the round table **“Safe Ecosystem of Smart Transport Infrastructure”** under the guidance of the moderator Dean of the faculty “Automation and Intelligent Technologies” Associate Professor Olga Stepanskaya 11 reports were heard, six of them were presented by representatives of production.

At the round table **“Land Transport and Energy Systems”**, the work of which was led by the dean of the faculty “Transport and Energy Systems” Sergey Chuyan heard 11 reports. The geography of speakers extended to Saransk (Aleksey Grigoriev, Deputy Chief Designer for alternative advanced products of “Rail Engineering”, JSC) and Khabarovsk (Ivan Ignatenko, vice-rector for scientific work of DVGUPS). The problems of the round table were related to the results of research in the field of land transport and energy systems, development of scientific ties between scientists and activation of scientific and innovative activities of young people.



Round table meeting “Land transport and energy systems”



Round table meeting “Land transport and energy systems”.
Professor Anatoly Gorsky is speaking

The round table **“Design, Construction and Operation of Railway Track of Increased Resource for Heavy-Weight Train Traffic”** represented a strategic direction for “Russian Railways”, JSC, which is a priority for the company’s development until 2030. The round table was moderated by Lyudmila Blazhko, a major expert in the field of railway track structures for extra-heavy loads, Professor of the Railway Track Department, Professor Emeritus of PGUPS.



Round table “Design, Construction and Operation of Railway Track of Increased Resource for Heavy-Weight Train Traffic” in the Mendeleev Auditorium



Round table moderator Professor Lyudmila Blazhko (pictured right). Professor Evgeny Dudkin of the Department of Road Construction of the Transport Complex speaks



Round table “Design, Construction and Operation of Railway Track of Increased Resource for Heavy-Weight Train Traffic” in the Mendeleev Auditorium

“Based on the words of the rector of our University (PGUPS) Oleg Valinsky that traffic is the driver of development, it should be noted that the amount of freight increases year by year”, commented the coordinator of

the round table, Associate Professor of the Department “Railway Track” of PGUPS A. Kiselev, *“this poses new challenges for us. Firstly, the need to create a new rolling stock that is capable of travelling with high axle loads. Secondly, the creation of infrastructure that will be able to provide the increasing freight intensity of traffic at a shrinking traffic interval”*. The round table heard 7 reports on topical issues.

Alexander Kabanov, Dean of the Faculty of Economics and Management, moderated the round table **“Betancourt’s Legacy as an impetus for the development of managerial and economic education for engineering and technical growth”**. 7 reports were heard, in which acute and topical issues of the economic content of transport projects and improving the level of training of engineers in the field of economics were raised.



Round table meeting “Betancourt’s Legacy as an Impetus for the Development of Management and Economic Education for Engineering Growth” in the white hall of the Yusupov Palace on the Fontanka Embankment



Round table moderator Aleksandr Kabanov, Dean of the Faculty of Economics and Management

On **December 1, 2023**, the V Betancourt Engineering International Forum continued with the round table **“The State and Development of High-Speed Rail Transport in Russia”**. The round table was led by Alexander Misharin, President of the Russian Academy of Transport. The meeting was attended by Rector of PGUPS Oleg Valinsky, First Vice-Rector, Vice-Rector for Research Tamila Titova.



Round table “The State and Development of High-Speed Rail Transport in Russia”



Presidium of the round table “The State and Development of High-Speed Rail Transport in Russia”. Pictured from left to right: Tamila Titova, First Vice-Rector, Vice-Rector for Research of PGUPS, Alexander Misharin, President of the Russian Academy of Transport, and Oleg Valinsky, Rector of PGUPS



Round table “The State and Development of High-Speed Rail Transport in Russia”



Participants of the round table. Pictured from left to right: Olga Efimova, Chief Scientific Secretary of the Russian Academy of Transport; Ilya Potapov, Executive Director of the Russian Academy of Transport; Igor Kiselev, Professor of PGUPS and Chief Scientific Editor of the BRICS Transport journal



Anatoly Burkov, Professor of the Department of Railway Electrical Supply, participating in the round table



Participants of the round table. In the photo from left to right: General Director of "Railway Transport Engineering Centre", JSC Alexander Kireytshev, Chief Project Engineer of "Roszheldorproekt", JSC Viktor Kolomiets, Director for Technical and Technological Development of "Roszheldorproekt", JSC Alexander Alhimovich



Round table participants Pavel Popov (on the left), Deputy General Director – Director of the Saint Petersburg branch of "NIIAS", JSC, and Andrey Guryev, Editor-in-Chief of the magazine "Transport of the Russian Federation", expert of the Public Council under Rostrasnadzor



Participants of the round table – scientists of PGUPS. In the photo from left to right: Vladimir Seronov, Associate Professor of the Department of Railway Electrical Supply, Associate Professor Andrey Romanov, Head of the Department of Wagons and Wagon Maintenance, Professor Yuriy Boronenko, Head of the Department of Electric Traction, Professor Andrey Evstafiev



Round table participants – scientists of PGUPS. In the photo from left to right: Head of the Department "Railway Track", Associate Professor Andrey Romanov, Head of the Department "Wagons and Wagon Service", Professor Yuriy Boronenko, Head of the Department "Electric Traction", Professor Andrey Evstafiev, Head of the Department "Road Construction of Transport Complex", Associate Professor Aleksey Kolos

Major experts in various fields of knowledge related to the organisation of high-speed rail traffic in Russia, construction of high-speed railways and production of Russian high-speed rolling stock, professors and associate professors of PGUPS were involved in a serious conversation about the organisation of high-speed rail traffic in Russia.

The round table was attended by heads and specialists of a number of enterprises and institutions in-

involved in the development of the High-Speed Railway project and rolling stock for it: "Railway Transport Engineering Centre", JSC, "Roszheldorproekt", JSC, "Federal Passenger Company", JSC, "NIIAS", JSC and others.

The next issue of our journal "BRICS Transport" will contain a detailed report on the round table meeting "The State and Development of High-Speed Rail Transport in Russia".



Plenary session of the V Betancourt International Engineering Forum



Speakers of the panel discussion at the forum's plenary session. Pictured from left to right: moderator of the plenary session – Russian Railways TV presenter Marianna Ozherelieva, panel members: Oleg Valinsky, Rector of the Emperor Alexander I St. Petersburg State Transport University; Sergey Pavlov, First Deputy General Director of JSC Russian Railways; Valentin Enokaev, Chairman of the Saint Petersburg Transport Committee; Evgeny Charkin, Deputy General Director of JSC Russian Railways; Alexander Misharin, Chairman of the Board of Directors of Sinara Transport Machines JSC (STM), President of the Russian Transport Academy; Dennis Minkin, Director of the St. Petersburg City Electric Transport Company "Gorelektrotrans"

The relevance of the forum programme attracted a large number of participants to the university: transport specialists, scientists, representatives of educational institutions, heads of large industrial enterprises and businesses.

PGUPS received a greeting from the Minister of Transport of the Russian Federation Vitaly Savelyev, who wished the participants of the V Betancourt International Engineering Forum fruitful work and noted that the popularisation of the ideas of the brilliant engineer, scientist, courageous practitioner Augustin Betancourt deserves respect and support.

At the forum a discussion was held, where important questions were raised, in particular, what steps universities and the industry as a whole should take to cope with the so-called “talent shortage”, which is becoming more and more tangible every year. How to saturate the transport industry with workers and engineers? What does a modern transport engineer look like?

“The problem of talent shortage is relevant for the industry as a whole, not only for the railway,” said Oleg Valinsky. According to him, a number of measures should be taken to solve this problem. Firstly, it is necessary to have a modern training base. Students should be trained on the equipment they will have to work on in the future. Simulators and stands, digital systems, quantum technologies adapted to production as much as possible are required.

“The transport industry needs specialists of the appropriate level — engineers who, after leaving the walls of the educational institution, will be able to immediately start solving the tasks at hand,” emphasised Oleg Valinsky.

The second prerequisite is internships of the teaching staff at advanced production enterprises and leading scientific institutions.

“The classical education should be overlaid with new knowledge, which is acquired during internships at advanced production facilities. The teacher must understand the tasks faced by companies — potential employers of university graduates,” concluded Oleg Valinsky.

Evgeny Charkin noted that the company has interaction with universities, there are educational programmes for specific tasks of the railway, but there is also a need for specialists who will deal with database management, the Internet of Things, research in the field of artificial intelligence, information security.

“The most important task is technological sovereignty. This is where our success in the future lies,” emphasised Evgeny Charkin.

In his speech, Alexander Misharin noted the key areas of interaction between the university and business. In his opinion, the university should select talented students, train a specialist with the required knowledge and competences, plan joint modern educational programmes together with business.

“How independent, sustainable and efficient we will be in implementing the main state programmes depends on engineering training,” emphasized the President of the Russian Academy of Transport.

Sergey Pavlov noted in his speech the uniqueness of the education system established in Russia and the high demand for students from abroad to study at the country’s transport universities, adding that an effective partnership with foreign colleagues starts from the university.

Denis Minkin noted: — *“In a changing world, the task of a teacher is to foresee the future. But in order to look into the future you need not only professionalism, but also a relaxed mind, freedom, which is characteristic of the young. In this regard, it is important to exchange opinions, to discuss where we are going?”*

Valentin Enokaev in his speech noted the comprehensive historical links of the first engineering higher education institution with many sectors of the city economy and not only transport. The construction industry, public utilities, water supply, energy and many, many other things, in which professors, teachers, scientists and graduates of the institute — today — university have proved themselves for two centuries. But time does not stand still and poses new challenges. In order to meet the modern challenges a graduate of the university must be competent in digitalisation, economic analysis, knowledge of the most advanced achievements of their industry.

On **December 2, 2023**, on the final day of the forum, several culturally significant events took place. Thus, the participants of the V Betancourt Engineering International Forum visited the place of the city foundation and the main historical museum of Saint Petersburg — the Peter and Paul Fortress.

In the Peter and Paul Cathedral (the Cathedral of the Holy Apostles Peter and Paul) in the Peter and Paul Fortress of Saint Petersburg there was held a solemn



PGUPS Rector Oleg Valinsky fired a blank shot from the signal cannon of the Peter and Paul Fortress in honour of the 214th anniversary of the founding of the Emperor Alexander I St. Petersburg State Transport University. December 2, 2023



Delegation of PGUPS after the firing of the signal cannon of the Peter and Paul Fortress



PGUPS Rector Oleg Valinsky and students of PGUPS laying a wreath on the tomb of Emperor Alexander I, the founder of the University

and commemorative ceremony of laying a wreath on the tomb of the founder of the St. Petersburg University of Railway Transport, Emperor Alexander I, which is traditionally held annually on the day of the next anniversary of the founding of the University

Forum participants attended the traditional noon shot¹¹ from the Naryshkin Bastion of the Peter and Paul

Fortress, which was performed on this day in honour of the 214th anniversary of the founding of the Emperor Alexander I St. Petersburg State Transport University by Rector Oleg Valinsky.

Yana Ledina, Press Service of PGUPS.

Photo by PGUPS

¹¹ According to a custom introduced under Peter the Great, the cannon mounted on the bastion of the Peter and Paul Fortress signalled the start and stop of work at the city's enterprises and construction sites with blank shots every day, and, if necessary, announced a dangerous rise in the water level of the Neva River. On September 24, 1873 from the Naryshkin bastion of the Peter and Paul Fortress for the first time sounded the noon shot, by which the citizens could now check their watches. To signal the cannonier about the shot, the Peter and Paul Fortress was connected to the clock from the central telegraph station by a special cable. After October 1917 the noon shots were stopped and they were resumed on March 8, 1926. In 1934 the noon shots were cancelled as an anachronism. On June 23, 1957 the tradition was resumed. Nowadays, at the request of various organisations, the right to fire the noon shot may be granted to deputies or individual prominent citizens to mark significant public events.