

PETER THE GREAT  
ST. PETERSBURG  
POLYTECHNIC UNIVERSITY



POLYTECH



Q1-Q2, 2020

INTERNATIONAL  
SPbPU  
REVIEW

BEST  
PRACTICES

Rector of Peter the Great  
St. Petersburg Polytechnic  
University, Academician of the  
Russian Academy of Sciences  
**Andrei RUDSKOI**



Peter the Great St. Petersburg Polytechnic University has a strong partner network, which is expanding every year. The coronavirus pandemic did not become an obstacle to the development of international activities. On the contrary, in this difficult period for the whole world, we were able to find new formats of relationships and initiate new projects. We are constantly in touch with our colleagues from partner universities and companies. We are still open to the world, and we are very pleased that our foreign partners, our friends are on the same wavelength with us. We see how friendly and working relations are in demand across closed borders. This book is our response to closed borders, an example that shows that, no matter what is happening, we are still together. Such a publication will be regular, and we hope that it will allow us to become a little closer, give you more information about the Polytechnic University's life, and provide all of us with inspiration and ideas for new joint achievements.



SPbPU Vice Rector for International  
Relations, Professor  
**Dmitry ARSENIYEV**

Not a single day goes by without receiving news from our foreign partners and friends during this difficult time. It meant a lot to us, but most important thing we all realized is that when we are together, nothing is impossible. Despite the boundaries and distances, as well as time difference, we were able to transfer the project work, meetings and negotiations to an online format. We not only kept in touch but significantly intensified our joint activities. On the pages of this issue you will find stories about successful international activities of the Polytechnic University, which we implement together with our foreign partners. We have something to share, but at the same time, we all understand that only by combining efforts can we get a truly breakthrough result. We will be glad if the materials are of interest and become the basis for our future interaction.

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## RECTOR OF SPBPU TOGETHER WITH LEADERS OF OVER 20 TOP UNIVERSITIES DISCUSSED MASS TRANSITION TO ONLINE EDUCATION



**ANDREI RUDSKOI,**  
Professor, SPbPU Rector  
(Russia)

*The situation which the whole world is now faced with will result in constant changes. Only those who are able to change have the future. The education system is constantly transforming, and a pandemic will become a catalyst for many changes. Various scenarios of the digital transformation of education, a possible symbiosis of full-time and distance formats, and the development of network partnerships are already being developed. We will be ready for them if we join forces now. But our main duty as the heads of leading world universities in this difficult period is, first of all, to take care of the health and wellbeing of our students and staff.*



Pandemic topics can be treated differently. For example, Tsinghua University and UNESCO decided to take quarantine as an opportunity to reconsider the approach to higher education and initiated a Special Dialogue “Online education in the COVID-19: Response and Beyond”. On April 24, an online meeting of the leaders of more than 20 leading universities of the world took place. During the virtual meeting, the participants shared their experience of the mass transition to distance learning. SPbPU Rector, Academician of the Russian Academy of Sciences Andrei Rudskoi became the only representative from Russian universities. He took part in the discussion at the personal invitation of the President of Tsinghua University, Professor Qiu Yong.

Vice President and Provost of Tsinghua University Yang Bin moderated the discussion. The President of Tsinghua University Professor Qiu Yong and the Assistant-Director-General for Education of UNESCO Stefania Giannini made welcoming remarks. The first speakers were followed by the President of Yale University Peter Salovey, the Vice Chancellor of the University of Cambridge Stephen Toope, the President of Imperial College London Alice

» **SPbPU has already successfully developed an online education system**

**SPbPU has been successfully implementing the two most striking cases of practice-oriented learning in a distance format, which is the most difficult and relevant for engineering universities. This is the Synergy International University Network Project, aimed at real-time laboratory work done by students to design intelligent robotic systems and process control with a large amount of data, and an online course and distance laboratory workshop on additive technologies based on SPbPU “Computer Engineering Center”.**



Gast, the Rector of Politecnico di Milano Ferruccio Resta, the President of University of Toronto Meric Gertler, the President of Waseda University (Japan) Aiji Tanaka, and the Chancellor of Washington University in St. Louis Andrew Martin.

The panelists also analyzed cases of online education implementation at the following universities: Australian National University, University of Buenos Aires, University of Chile, University of Exeter (UK), Korea Advanced Institute of Science and Technology, University of Malaya (Malaysia), University of Nairobi (Kenya), etc.

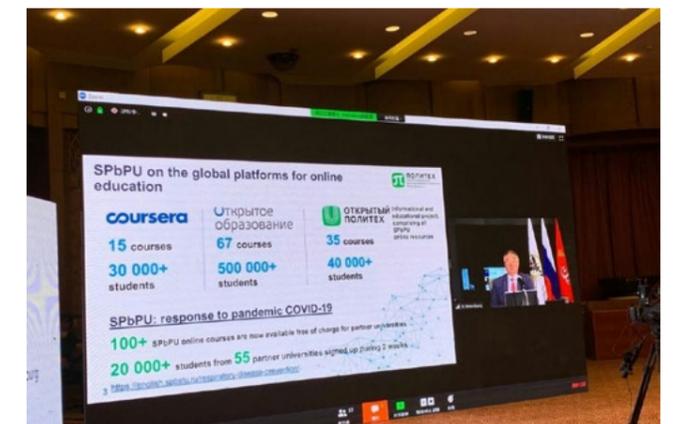
The discussion showed that in the transition to distance learning, most universities in the world act intuitively: there are practically no protocols for this emergency.

The forced transition to the distance format makes the universities revise the principles and approaches in teaching – it is a mistake to teach the same material now in the same ways. Online education assumes other rules, etiquette, and dynamics. In this sense, the experience of Tsinghua University, which switched to online education in February and implements more than four thousand online courses (and even physical education classes, instructing students on health and physical fitness), has become the most interesting and revealing. Algorithms and understanding of further steps are being practiced at those universities that already successfully implement online education, first of all, SPbPU. A high level of internationalization helps as well. SPbPU lecturers can join the international discussion on best practices. So, in late April – early May 2020, SPbPU professors and staff took part in a series of webinars organized by Tsinghua University and dedicated to best practices in developing online courses, ensuring the quality of education, using ICT in education, sustainable development of universities in the field of education, etc.

The discussion showed that in the transition to distance learning, most universities in the world act intuitively. During his presentation, SPbPU Rector Professor Andrei

Rudskoi recalled that a year ago he gave a lecture at Tsinghua University and talked about how rapidly the world is changing and how important it is to combine the efforts of leading universities – drivers of such changes. No one could have guessed then what awaits us just a year later. Professor Rudskoi said that SPbPU took the necessary measures to support more than 34,000 students, including 7,500 foreigners, and tried to create a comfortable atmosphere in dormitories in the period of isolation, as well as regularly conducted disinfection of rooms.

Since March, when the COVID-19 epidemic reached Russia, the Polytech completely switched to online education. Since 2015, the Polytechnic University has chosen a focus on the development of online education. Thus, SPbPU was quite prepared for the situation with switching to an online format. In our experience, regular webinars for teachers and students on the use of online platforms, modernization of information resources and attracting volunteers - these are the things that we have to pay special attention to from the very first days. Moreover, today, taking into account the experience, Polytech is involved in organizing assistance to other Russian universities with a quick transition to distance learning.



ДНИ ПОЛИТЕХА В БЕРЛИНЕ  
POLYTECH DAYS IN BERLIN 2020



FEBRUARY, 6-7, 2020

On February 6-7 of 2020 Peter the Great St. Petersburg Polytechnic University (SPbPU) held the “Polytech Days in Berlin 2020”. The program of the two-day forum includes an exhibition of scientific developments, panel discussions, business tracks. Within this significant event SPbPU in cooperation with European partners presented promising research and innovation projects and opportunities for bilateral investment, based on successful cases of many years of cooperation. The Forum held within the «German-Russian Year of Higher Education Cooperation and Science 2018 – 2020» and it was a finalizing event in a range of SPbPU 120th anniversary celebration.

Russian and European diplomats, politicians, foremost companies and universities supported the event by their participation – more than 400 guests. Program was open by the core panel discussion on the “Sustainable development of Russia - the EU through a dialogue between universities, industry and society”. As the panel discussion showed, this format of communication was a very important component of the international dialogue. This format is in particular demand, because not only it allows us to build direct contacts and multifaceted cooperation between Russia and Europe but also opens up wide opportunities for public diplomacy.

Within the framework of the event faculty members of the Polytechnic presented projects on digital designing and modeling of globally competitive new generation products using advanced manufacturing technologies in various sectors of high-tech industry.

Particular emphasis was given to the joint research and educational projects of the Polytechnic University with key partner universities, such as Leibniz University Hannover, TU Berlin, the University of Stuttgart, City,

University of London, Ecole Polytechnique, Brandenburg University of Technology Cottbus–Senftenberg, TU Hamburg etc.

SPbPU carries out cooperation with partner institutions in the fields of new materials, nanotechnology, energy, telecommunications technology, radiophysics and electronics, biomedicine and biotechnology, etc. Participants of the event discussed the possibilities of collaboration within the framework of strategic partnership: invited professors program, joint laboratories supervised by leading scientists, scholarships for researchers, grants for conducting joint research, new win-win formats of internationalization.

Exhibition of developments of the SPbPU presents products of digital design and globally competitive next-generation modeling using advanced manufacturing technologies. The exhibition also includes university projects developed jointly with key partners – leading universities and companies from Germany, Austria, United Kingdom, France.

In the framework of the Polytech Days in Berlin 2020 the European Alumni Forum was organized specifically for those who studied at Polytechnic University over the years but live abroad but misses the alma mater. The first in the university history meeting of graduates which took place in the very heart of Europe helped them learn more about today's Polytechnic University, a modern and updated school. The meeting in Berlin provided a unique opportunity to communicate with Polytechnic graduates from more than 20 countries.

The Polytech Days in Berlin 2020 has become a very good sign of Polytechnic University's willingness for dialogue and cooperation with the countries of these friends, partners and graduates and the whole world.



ST. PETERSBURG

BERLIN



ANDREI RUDSKOI,  
Professor, SPbPU Rector

“Today, partners and graduates from more than 15 countries have got together here. The geography of the participants of the first large-scale forum in the recent history of Polytechnic University abroad is amazing. Once again, I am convinced that there are many friends of our university worldwide <...> I am certain that this event will mark the beginning of a good tradition of international communication, contribute to greater openness, confidence and understanding, not only in education and science, but and in the relations between our countries in general.”

ANDREI SOBOLEV,  
The trade representative of the Russian Federation in Germany,

“Polytechnic University is a symbol and at the same time a litmus test of today's Russian industry, which is international, aimed at removing borders, establishing mutually beneficial partnerships, and implementing innovative projects.”

Prof. VOLKER EPPING,  
President of Leibniz Universität Hannover

“To succeed in new technological research, you need a lot of people. This time, the research and science is very complex and therefore you need experience from all. Not machines, not universities – it's the researchers, students who cooperate, therefore we need close contact to see the whole picture and therefore you need a lot of experience from every side”





## TIMES HIGHER EDUCATION UNIVERSITY IMPACT RANKINGS 2020



Dr. NIKITA GOLOVIN

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On April 22, 2020 the British Agency Times Higher Education, which main focus of activities is on the development of higher education policies and institutions and their influence on society, has published the world ranking «The Times Higher Education University Impact Rankings 2020». This ranking is a quite new initiative of Times Higher Education – it is published only for the second time – with key focus on assessing universities' engagement in global social and economic development. The ranking is based on the aims of the sustainable development goals (SDGs), formulated by the United Nations for the period up to 2030 and each university, participated in this ranking, was assessed by the impact this particular university has on the process of implementing each of the 17 SDGs. Last year, first-time participant in the Ranking, SPbPU was ranked 85th in the world.

**In second edition – THE University Impact Rankings 2020 – our university significantly improved its position and got 37th place in the world hierarchy ahead of all Russian and many foremost foreign universities. In some particular SDGs Polytechnic University showed even better results appeared in TOP5 of the ranking.**

To be considered in the overall ranking the university must make input in at least four SDGs, including SDG-17 “Partnership for sustainable development” as a must. The total score of the overall ranking calculated by combining the score for SDG-17 and the scores of top three other SDGs. The score for SDG-17 is weighted with 22%, while three other SDGs, included in the university ranking, have weight 26% each. Thus, all universities, in fact, are assessed by the impact within various SDGs, depending on their development priorities. In 2020 766 universities from around the world have passed the minimum threshold (mandatory participation in at least four SDGs) and were included in the overall ranking.

**Why SDGs is valuable and why universities should adopt these goals?** As many experts highlighted, SDGs are a perfect framework for collaboration of various stakeholders – politicians, governments, industries, universities, society, etc. So, SDGs act as a kind of catalyst to address the global challenges.

“The SDGs promote a culture of co-design and collaboration between governments, industry, universities and civil society in tackling these challenges. They promote innovation, not for the sake of innovation itself, but for the public good” – said Prof. Duncan Ivison, deputy vice-chancellor (research) of the University of Sydney, while commenting the new edition of THE University Impact Rankings<sup>1</sup>.

However, SDGs should not be the key and the only measures and drivers of university's strategic development. They have to stimulate actions that will help universities, especially research-intensive universities, to focus the research topics and add value to its results. SPbPU consider SDGs as important characteristics of both education and research; make efforts to provide an input for the developments of these Goals nationally and globally, while priorities it strategic development on technology oriented businesses.

<sup>1</sup> [www.timeshighereducation.com/opinion/why-should-universities-pay-attention-sdgs](http://www.timeshighereducation.com/opinion/why-should-universities-pay-attention-sdgs)



### THE FIVE TOP RANKED INDIVIDUAL SDGS OF POLYTECHNIC UNIVERSITY:



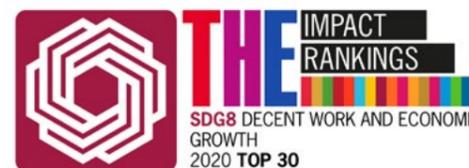
#5 – SDG-7 “Affordable and clean energy”: ensuring universal access to affordable, reliable, sustainable



and modern energy sources for all  
#5 – SDG-13 “Climate action”: urgent measures to combat climate change and its consequences



#21 – SDG-14 “Life below water”: conservation and rational use of oceans, seas and marine resources for sustainable development



#28 – SDG-8 “Decent work and economic growth”: promoting steady, inclusive and sustainable economic growth, full and productive employment and decent work for all



#30 – SDG-11 “Sustainable cities and communities”: ensuring openness, security, resilience and environmental sustainability of cities and settlements



MICHAEL CARUANA,  
Strategic Solutions Director  
Times Higher Education - World  
University Rankings  
(United Kingdom)

*The Times Higher Education Impact Rankings are the only global performance tables that assess universities against the United Nations' Sustainable Development Goals (SDGs) using all 17 SDGs to evaluate the social and economic impact of universities, using specific metrics designed to capture university outputs across teaching and research.*

*Peter the Great St Petersburg Polytechnic University has clearly proven why they are ranked number 1 in Russia, and 37th globally overall, with excellent joint education and research projects involving universities from different countries are one of the most effective demonstrations of the SDG agenda. Specifically, SDG 7 explores both research related to energy, energy usage and policies, and the commitment to promoting energy efficiency in the wider community, here SPbPU performs excellently in this field achieving a global position of 5th.*

*Many congratulations to the SPbPU team and Rector Prof. Andrei Rudskoi.*





## SPbPU INFORMATION CENTER IN MADRID: PANDEMIC NEWS DIGEST



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### New joint programs for postgraduate students with Technical University of Madrid and University of Cadiz

In May 2020, SPbPU and the University of Cadiz entered into an agreement on joint international scientific management of a postgraduate dissertation. Postgraduate student of Polytechnic University Alexander LANKO writes a paper on the subject of construction equipment and technologies. As a result of the signed agreement between universities, he will become the first postgraduate student under the joint scientific guidance of professors from SPbPU and the University of Cadiz. Also in May, agreements were reached on the joint management of postgraduate students on the subject of ion engines between the SPbPU Institute of Physics, Nanotechnology and Telecommunications and the UPM Higher School of Aeronautics. Already in June 2020, Polytechnic University and the University of Cadiz agreed on a second agreement on joint scientific management of the dissertation in the humanities: postgraduate student of the University of Cadiz, Mario ROSANO, writes a work on political science and anthropology.

### From offline events to the online mode

In the first half of 2020, Polytechnic University, together with its Ibero-American partners, planned to hold a big number of joint events. Unfortunately, not all of them could get through in the usual way for example,

### »» SPbPU Information Center in Madrid activities:

- »» 15+ partners from Spain and Portugal
- »» 15+ partners from Latin America
- »» 150+ students from Ibero-American countries
- »» 10+ joint international events with Ibero-American partners each year

the start of a joint student project marathon, a series of open lectures and seminars on energy and materials science, working visits of representatives of companies and universities had to be postponed to a later date.

However, in February Polytechnic University took part in Russia-Cuba meeting of rectors and in the 12th Congress of Higher Education, which took place in Havana (Cuba) in the form of live communication, and in March a series of negotiations and working meetings were held with representatives of the University of Porto and the Polytechnic Institute of Porto. As a result, the parties agreed to conclude a cooperation agreement with the Polytechnic Institute of Porto, to conduct joint events in the field of applied mathematics and mechanics, as well as in the area of service and tourism. The cooperation agreement is currently at the stage of signing.

Since April, joint events have been held online: in this format, took place the virtual meeting of representatives of the Higher School of Service and Trade of SPbPU and the Higher School of Tourism and Hospitality of the Polytechnic Institute of Porto.

In the same month, employees of the Higher School of International Educational Programs of SPbPU held events on the Russian language and culture for students of the University of Granada. And in May, SPbPU took an active part in online events dedicated to the 5th anniversary of the Russian Center at the University of Granada.

### SPbPU Students Project Marathon with partner universities from Brazil and Spain

Grandiose plans are being contrived on the occasion of the International Students Project Marathon: the Federal University of Technology - Paraná (Brazil) has

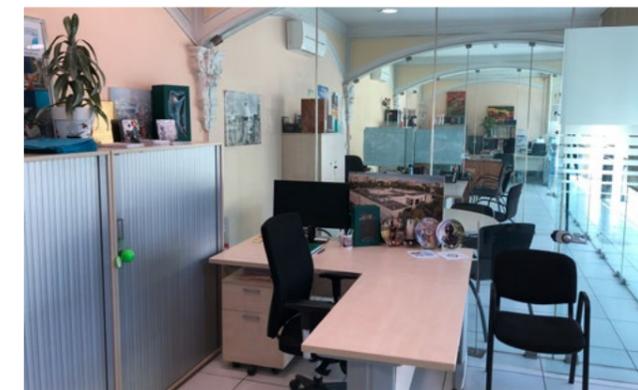
joined the project, with which teams and research areas have already been identified: these are biomedicine and computer modeling in agriculture. Two topics for the Marathon were agreed with the University of Cadiz: the methodology of teaching Russian as a foreign language to Spanish students and the methodology and analytics of Russian-Spanish translation.

**SPbPU Information Center in Madrid is an outpost of the Russian academic and research community at the key point of the Ibero-American space.**

April 19, 2017 in Madrid, in the capital of Spain, Peter the Great St. Petersburg Polytechnic University opened the Information Center. SPbPU became the first among the Russian universities to open its information platform on the territory of Spain.

«We are interested in strengthening partnership in the field of education and research between Spain – as a heart of Ibero-American countries and Russia, and we are striving to mobilize the potential of higher education of both countries, both regions. We consider opening the Information Center of SPbPU in Madrid to be our major investment in the common future»- commented SPbPU Rector Andrei Rudskoi.

The Information Center of SPbPU in Madrid serves as a platform for organizing direct partnership between SPbPU and representatives of industrial companies, scientific organizations and universities in Spain and the overall Ibero-American space. The Center's activities are aimed at providing full information about the university, educational programs and scientific achievements of SPbPU, up-to-date information about events and conferences and the participation of the Polytechnic University in international research and educational projects, as well as organizing and conducting international scientific, educational and cultural events. The coronavirus pandemic has become a test of strength for the SPbPU Information Center, which has been operating since 2019 on the basis of the Higher Technical School of Industrial Engineers of Technical University of Madrid (UPM) - a strategic partner of St. Petersburg University.



InfoCenter SPbPU in Madrid (Technical University of Madrid)



POLITÉCNICA



**MARIA DOLORES HERRERO PALENZUELA,**  
Head of the Department on Cooperation with the Russian Federation, Technical University of Madrid (Spain)

Opening of the SPbPU Information Center at the Technical University of Madrid was a very important event for us and a big step forward in strengthening relations between our universities. I would like to note that such a Center, conducting information work under the leadership of the Russian University, is the first opened on the basis of Spanish University. Implementation of this project is a result of the long-term and serious work of the SPbPU International Cooperation Department headed by the Vice-Rector for International Relations Dmitry Arseniev. What seemed to us a dream yesterday today has already become a wonderful reality. Information Center is a space where our students are able to receive constant, updated information on educational programs, summer schools, research projects, conferences and all issues. It helps to bring closer together not only our universities, but also our cultures and countries.



Russia-Cuba meeting of Rectors, February, 2020



## SPBPU REPRESENTATIVE OFFICE IN SHANGHAI



**LU ZHIYU (CHINA),**  
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**OLGA VASILIEVA (RUSSIA),**  
Deputy Head of International Scientific Cooperation Department  
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The official opening ceremony of the Representative Office of Peter the Great St. Petersburg Polytechnic University took place in the Pudong New Area of Shanghai (PRC) on April 21, 2016. Polytechnic University was the first Russia university to open an official representative office in China.

China and Russian Federation are strategic partners and cooperation in the sphere of science and education is one of the key areas of their strategic collaboration. For this reason, a resolution on the establishment of an SPbPU Representative Office in the major metropolitan city of the PRC was adopted in November 2015.

» **Polytechnic University was the first Russia university to open an official representative office in China.**

**Activities of the Representative Office are focused on organization of broad cooperation among Russian and Chinese universities, companies, and organizations, and also on the involvement of other APR countries in this cooperation.**

Over four years of work, truly impressive results have been achieved. A huge number (more than 120) of events was carried out, including very significant ones,

sounded not only at the regional level, but also at the intergovernmental level (Russian-Chinese Biomedical Forum, the opening of the InterTechLink PuE platform, Days of Russian Language). Brand of Peter the Great St. Petersburg Polytechnic University became well-known among Chinese academic sector and business. Chinese and Russian media regularly issue publications related to the scientific achievements of SPbPU, the implementation of joint projects and educational services. The Polytechnic University captures significant attention from leading Chinese universities, interaction with long-standing partners (for example, Tsinghua University) has sharply intensified, new partnership agreements have been concluded with leading universities - for example, Shanghai Jiao Tong University. The opening of the SPbPU Representative Office in Shanghai, as well as the positive dynamics of Russian-Chinese economic relations, created a positive atmosphere for the active development of the university's research activities in partnership with PRC organizations. In 2019, the share of financial revenues under research contracts with organizations of the PRC reached almost 30% of the total foreign economic research activities of the university, while at the beginning of 2016 this figure was less than 5%.

The establishment of the Representative Office in Shanghai also had a significant impact on the

development of educational cooperation with Chinese partners. If in 2017 a little more than 900 students from the PRC studied at the university's educational program, in 2019 the number of Chinese students exceeded 2,000. Over the past year, more than 400 Chinese students took part in short-term educational programs within the framework of the International Summer and Winter Polytechnic School, 88 students from China passed semester educational programs in the format of included education.

In the beginning of 2020, 100 Chinese students from Tsinghua University, Zhejiang University, Shanghai Transport University, Shanghai Jiao Tong University, East China Polytechnic University and other partner universities of SPbPU successfully completed their studies at the International Polytechnic Winter School at various educational modules. In addition, this year Master's degree students from Xian completed training at Polytechnic University. 44 Master's degree students arrived at Polytechnic University for 3 months to gain additional knowledge in such areas of training as civil engineering, environmental engineering, and electronic control and finally received their certificates.

In Spring the Representative Office of SPbPU in Shanghai happened to be almost at the epicenter of the world coronavirus pandemic. The past few months were quite difficult: all in-person meetings were canceled, communication could be implemented only through video and instant messengers, and nearly all plans have undergone major changes. But a difficult situation for the whole world also showed a unique thing: our Chinese colleagues more than once expressed their readiness to continue cooperation, they confirmed what was said by their deeds, and took all the changes that happened with a true Eastern wisdom.

A series of negotiations with companies and organizations in China took place in these months. The Shanghai Office team discussed the development of cooperation with Santech and Huawei, the shipbuilding industrial



SPbPU Representative Office in Shanghai

company Hiboway (Jiangsu) Technology Development Co., as well as with the NARI Group Corporation. An important topic of almost every business meeting was the interaction between SPbPU and PRC companies during and after the pandemic. All negotiators expressed their readiness for the development of cooperation, as well as an understanding of how important it was right now to prove solidarity and unity of mind.

- » **55+** Scientific Agreements and Projects with Chinese partners
- » **2000+** Chinese students
- » **40+** Chinese Industrial Partners
- » **35+** Chinese Partner Universities



我们只能通过网络和媒体进行交流和沟通。  
и сейчас мы можем общаться только через интернет и средства массовой информации.



## ONLINE EDUCATION FOR SUSTAINABLE DEVELOPMENT



ALLA MAZINA

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SPbPU is a partner of international ERASMUS+ project "Integrating education with consumer behavior relevant to energy efficiency and climate change at the universities of Russia, Sri Lanka and Bangladesh" (BECK). Despite the coronavirus pandemic two Coordination Meetings and two Training of Lecturers and other Stakeholders were organized during this spring 2020 by the project team. 10-12 March 2020 online training of lecturers "Energy Saving, Cultural Heritage and Blended Didactical Innovations in High Education" was organized by University of Bologna, Italy, and 29-30 June 2020 online training "Climate change and constructions" was organized by Vilnius Gediminas Technical University (Lithuania).

There is growing international recognition of Education for Sustainable Development (ESD) as an integral element of quality education and a key enabler for sustainable development. Education has a significant and vital role to play in the global effort to halt climate change and set humanity on a course for sustainable development.

» **SPbPU - leading Russian university by the number of ERASMUS+ projects**

Three ongoing ERASMUS+ projects aimed at online education development. Wider objective of the BECK project is to upgrade the curricula with 16 new harmonized multidisciplinary adaptive MOOCs on environmental protection technology to enhance the quality and relevance of education of students to the global market needs.

SPbPU actively working on development of new educational programs and modules for SDG together with international partners. University participate in 4 Erasmus+ international projects in this field.

Engineering education for sustainable development (EESD) should answer to the specific demands of Sustainable Development Goals. For example, inclusion of the interdisciplinary modules on sustainable development as a broadening modules available across the university, inclusion of sustainability learning outcomes in a wide range of taught programs and MOOCs could improve the quality of education and qualification of graduates.

Climate change is a result of modern human lifestyles and activities: heating in buildings, power consumption, cars and aircraft, industrial companies and other activities in the built environment contribute greatly to climate change. Climate change leads to extreme weather events, such as storms, flooding, droughts and heat waves. In the last decade, the world suffered thrice as many weather-related natural disasters as in the 1960s. One of the possible solutions to these problems is improvement of education in environmental protection technology based on consumer behavior related to energy efficiency and climate change. The main challenge is to consolidate a variety of diverse activities in education quality improvement, such as the delivery of extensive educational programs and capacity building, the continued knowledge sharing, etc.

### MAIN OBJECTIVES OF BECK PROJECT

([project web-site: http://beck-erasmus.com/](http://beck-erasmus.com/))

1. To upgrade curricula of BSc/specialists, MSc and PhD programmes in by adding 16 new multidisciplinary adaptive, recognised and certificated MOOCs on consumer behavior related to energy efficiency and climate change, to enhance the quality and relevance of education in universities to global issues;
2. To transfer European best practices in education (learning and teaching tools, methodologies and pedagogical approaches including learning outcomes and ICT-based practices) to participating universities;
3. To assist competence development of teachers;
4. To develop the Simulated Big Data Interuniversity Networked Affective Educational Centre to encourage use of ICT-based methodologies in education and research/

16 MOOCs in English language will be developed by project partners and published in Simulated Big Data Interuniversity Networked Affective Educational Centre. SPbPU also plans to publish 2 MOOCs on international on-line educational platform COURSERA:

- MOOC "Renewable Energy: Resources and Technologies for Potential Countries Market Players"
- MOOC "Urban Development and Climate Change".

Co-funded by the  
Erasmus+ Programme  
of the European Union



### PROJECT PARTNERS:



**ARTURAS KAKLAUSKAS,**  
Professor, BECK project  
coordinator, Vilnius Gediminas  
Technical University, Department  
of Construction Economics  
and Property Management

Student's interest, stress, learning productivity and academic achievement are quite closely related. In order to cause interest, increase learning productivity and maintain stress in a rational level of a learner it is necessary to constantly change the learning subject with regard to situational and individual interest. For this reason, an Affective Tutoring System for Built Environment Management (ATEN) was developed and introduced at Vilnius Gediminas Technical University in the course of the TEMPUS project "Reformation of the Curricula on Built Environment in the Eastern Neighbouring Area". ATEN can create a learning process tailored to a specific student, taking into account such factors as how much the studies are interesting or difficult and the level of stress (with the help of biometric technologies). This system and methodologies will be used to develop the Simulated Big Data Interuniversity Networked Affective Educational Centre in the frame of BECK project.



BECK Project Team, Vilnius, 2020



## INTERNATIONAL MASTER DOUBLE DEGREE PROGRAM “INTELLIGENT SYSTEMS”



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of “Intelligent Systems” Program  
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This academic year had come to an end with impressive results. On June 19th 2020 students of Intelligent Systems Master's degree program successfully presented their Master's thesis. For the first time thesis presentations in SPbPU were organised on-line. Students presented their work in intelligent control systems development for industry, image processing for transport systems, machine learning and pattern recognition. Three students had completed double degree track and were awarded degrees of both SPbPU and Lappeenranta-Lahti University of Technology. Thesis presentations of students who had chosen double degree tracks with Leibniz University of Hannover and City, University of London are scheduled to September 2020. For students that finished first year of the program new experience will start very soon they will continue their studies in Germany and in Finland.

### International Master Degree program “Intelligent Systems”

The “Intelligent Systems” program is aimed at training highly qualified specialists and meets the international educational standards of leading European universities in priority areas of technological development. The program was developed and improved jointly with European partners in the framework of international projects:



### International program with great opportunities

- » 10+ years of success;
- » 100+ graduates;
- » 50+ graduates got second MSc degree in one of the partner universities

Program joins different scientific areas and modern trends of technology development in IT, cyber-physical systems, applied tasks of industrial automation, robotics and control.

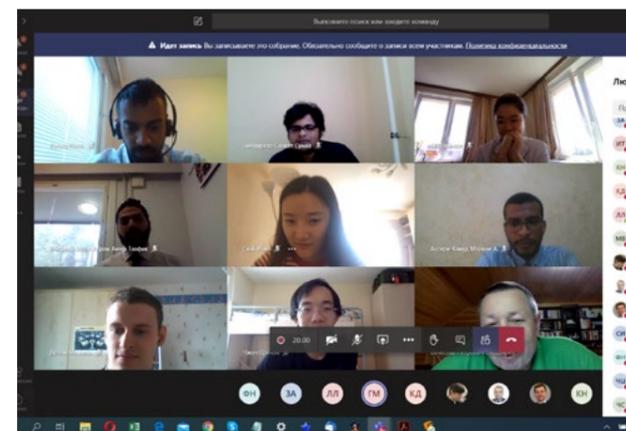
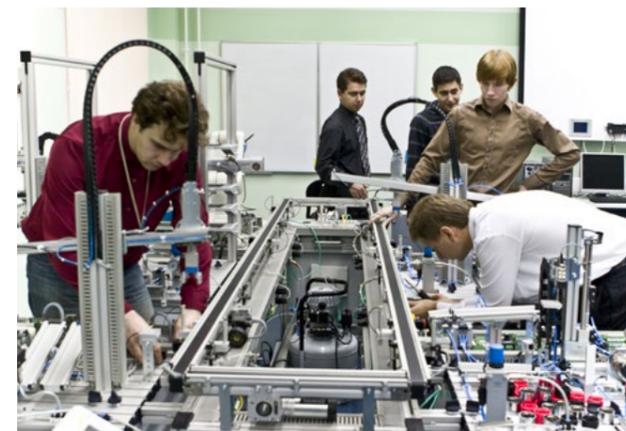
Laboratories are developed and equipped in cooperation with leading companies in industrial automation technologies production – Siemens, Festo, Schneider Electric.

Students can choose individual track option and continue second year in one of the European partner-universities and get Master's degree in Information Science and Computer Engineering (SPbPU) and one of partner-university diploma:

- MSc in Computer and Information Engineering (UK)
- MSc in Mechatronics (Germany)
- MSc in Computational Engineering and Technical Physics (Finland).

Today SPbPU offers 24 Master Degree programs in English, 1 Bachelore Degree program in English and more than 30 joint double degree programs with leading European partner universities:

[english.spbstu.ru/education/programs/programs-in-english/](http://english.spbstu.ru/education/programs/programs-in-english/)



**ULYANA DUDKO**,  
Graduate of “Intelligent Systems”  
Researcher, Institute for  
Transport and Automated  
Engineering, Leibniz University  
of Hanover

The double diploma program was created for students who are not afraid to take a step towards new opportunities and try themselves in an international environment. The program has given me a lot: first of all, it is an opportunity to learn new things on a global scale. While working on a master's thesis, I was already offered the position of researcher at the Institute of Transport and Automated Technology at the Leibniz University of Hanover, where I continue my career in the field of optoelectronics.



**PETER FEDOSOV**,  
Graduate of “Intelligent Systems”  
Head of Stream Data Processing  
(Big Data), TELE2 Russia

Studying at City University London changed me forever. Now I have a goals that I couldn't even think about before. I understood what I want from life! And thanks to the second diploma and a high level of English, I have become a much more sought-after specialist in the international labor market.





## INTERNATIONAL POLYTECHNIC WINTER SCHOOL: STUDIES AND WINTER WONDERLAND



**DARINA KLIMOVA**

Chief coordinator  
of short-term international programs  
Department of International Educational  
Programs and Academic Mobility  
[dklimova@spbstu.ru](mailto:dklimova@spbstu.ru)

International Polytechnic Winter School (IPWS) has arisen as a result of the summer school trend and became an equivalent remarkable feature of higher education today. Generally, Winter School has the same core concept as the Summer School does: getting full immersion into a short study period abroad combining studies, travelling and experiencing another culture, however, they differ in relevant seasonal academic breaks and types of extracurricular activities.

IPWS is in high demand, first of all, due to peculiarities of climate conditions in different parts of the Earth: Russia in the wintertime sparks a notable interest among students from Southern regions. For instance, Andreas DAMOURAS, a student of University of Technology, Sydney who took part in the SPbPU "Civil Engineering" winter course 2020 said: "Since it is very hot in Australia during the local winter months, I wanted to come to Russia namely in winter in order to experience cold and snowy but incredibly beautiful atmosphere of the season."

Talking about perks of educational tourism in particular in wintry St. Petersburg, its world-famous landmarks and iconic attractions are way less crowded in winter than in summer. The wintry city appears in a different romantic image and enchanting atmosphere of festive city illumination with a backdrop of sparkling snow which makes it even more attractive for travelling destination despite the freezing weather. Apart from that a winter school program in St. Petersburg has another added value of a very close city location to Scandinavian and



**ZARINA ASADOVA**

Program Manager  
Department of International Educational  
Programs and Academic Mobility  
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Baltic countries. Students can kill two birds with one stone: visiting cultural capital of Russia and going to Russian Far North, for instance, Murmansk, to discover phenomena of Northern lights and see Aurora Borealis with their own eyes.

An educational component of IPWS is complemented with a cultural and social adventure of local Russian seasonal traditions and fun wintry activities enriched by networking experience with students from across the world. Polytech Winter School extracurricular activities are basically categorized into three types:

- Traditional excursions (e.g. the Hermitage museum);
- Field trips to enterprises included in the curriculum;
- Informal networking events (e.g. Pub Quiz and Wintry event with skating and sleigh riding.)



International Polytechnic Winter School, January 2020

A cultural program helps students to switch over from studies to interact with each other in an informal setting. According to students' feedbacks, that is what is imprinted in their memory and will leave the most wonderful impressions not only about the university but also about the beautiful city and the country. For example, Jordi AERTS, a student of Thomas More UAS, Belgium who took part in the SPbPU "Modern SAP Technologies" winter course 2019 said: "I was most expressed by the Hermitage with its seemingly endless works of art and the astonishing Winter Palace. A Pub Quiz led a lot of people being able to come together and form friendships. This sort of feeling that you're more a group of friends than students/organizers made my stay and that of my fellow students unforgettable."

In the last three years, the IPWS has experienced a remarkable demand-led growth: the number of applications for participation has been boosted from 150 up to over 400. Furthermore, since 2018 the number of winter courses has increased from 4 up to 16 presenting a diverse range of high-quality programs in eight fields of study by the year 2020.

Besides, in order to meet the increasing demand for even more extensive winter programs options for students who come from the farthest regions and even other continents, there have been joint winter programs designed with other leading Russian universities in order to deliver students an advantage of visiting both St. Petersburg and Moscow in one educational trip. These are a multi-optional joint program "Two capitals" developed in cooperation with the Peoples' Friendship University of Russia (RUDN) and an IT course "Machine Learning Theory and Application" designed jointly with the NUST MISIS university.

Talking about facts and figures, let us present an overview of the Winter School participants by geographic region in 2018 and 2020 (Figure 1). The growing demand for programs in the winter period, as well as successful experience of previous SPbPU Summer and Winter Schools, caused the changes in the distribution of students by regions in 2018 compared to 2020.

Additionally, it is worth drawing a parallel with the geographical indicators of the Summer School students (Figure 2). This difference in the distribution of students by regions in Winter and Summer seasons can occur due to long academic break in Asia matching the period of SPbPU Winter School, the desire of students from the Asia-Pacific region to experience Russian winter, mandatory summer internships at students' home universities.

Taking into account the dynamics of Winter School students' distribution by their origin, it is possible to assume an increase in the proportion of students from European countries as well as students from the Asia-Pacific region in the future seasons.

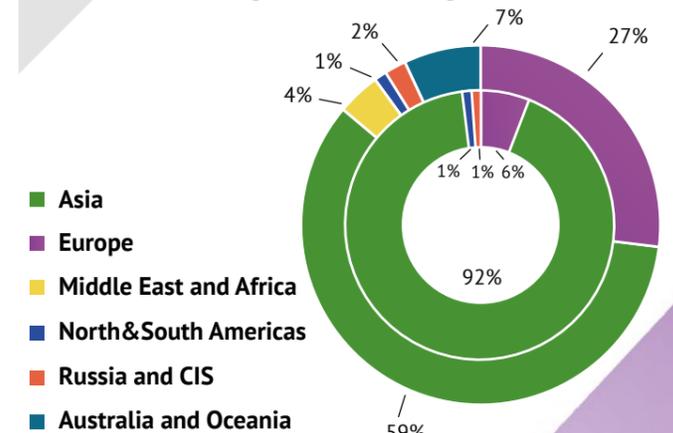
For the moment, our team is ready to meet new challenges of a currently changing world. It is our priority to offer students the most optimal format of educational services: distance technologies that will be tested at the Online International Polytechnic Summer School 2020 will give us experience and insights on how to make the Winter School even better.



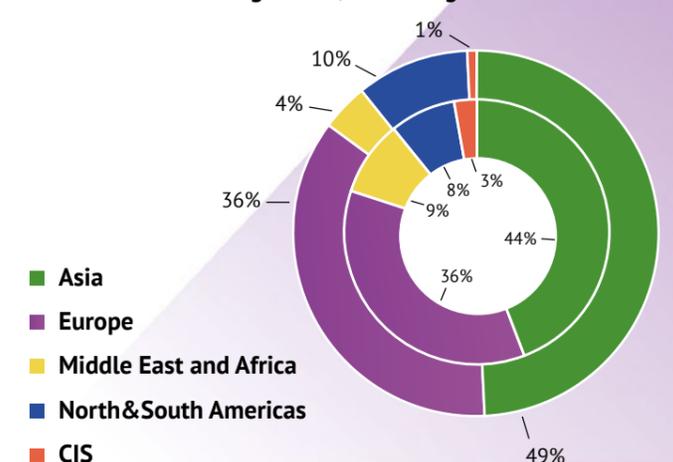
**HEIKKI KÄLVIÄINEN**,  
Professor (School of Engineering  
Science), lecturer of International  
Polytechnic Winter School 2020,  
module "Smart Manufacturing  
and Digital Future"

*It has been my great pleasure to give lectures to such active bright students. The winter school is an excellent place to tell about the most recent developments in computer vision and machine learning. Especially the students can learn by combining the state-of-the-art academic knowledge together with hot topic real-world applications.*

**Figure 1: Winter School students distribution by region Inner ring - 2018, Outer ring - 2020**



**Figure 2: Summer School students distribution by region Inner ring - 2018, Outer ring - 2019**





## POLYTECHNIC UNIVERSITY ALUMNUS SPEAKS ABOUT HIS JOB AT MERCEDES-BENZ AG



**OLGA DOROFEEVA**  
SPbPU International Office PR manager  
SPbPU International Education Office  
[o.dorofeeva@spbstu.ru](mailto:o.dorofeeva@spbstu.ru)

Everyone has one's own secrets of success, but there are common features in them: hard work and determination would most likely help to achieve the desired result. Back in 2004, Nikita KONDRASHOV enrolled at the Faculty of Mechanical Engineering (now the Institute of Machinery, Materials and Transport), the Department of Transport and Technological Systems. Later on, he graduated from a Master's degree program in Germany and an off-campus postgraduate degree program at Polytechnic University, followed by an invitation to work at a global automobile company. Nikita spoke about his way to success in his interview with the representatives of SPbPU International Office.

- Nikita, do you remember why did you choose Polytechnic University?

- Polytechnic University has always been and remains one of the leading technical schools in Russia, and that was exactly why I made this decision. And the actual specialization I chose based on the demands on the labor market.

- What, in your opinion, your education at SPbPU gave you?

- It was the fundamental base, which yet the soviet school of higher education was famous of. The knowledge I got allowed me to enroll of the Master's degree program at a German university, and, later on, get jobs at several car corporations in Germany.

- When did you decide to continue your

education abroad? What countries did you consider?

- I came to this decision by the middle of the fifth grade. It was interesting for me to compare the European and our domestic learning approaches, and I went to Germany within the frame of a student exchange program.

- How different is German education as compared to Russian?

- As a whole, the principles of learning are similar. They also teach lectures at German universities, have practical classes and laboratory works. The major difference is, in my opinion, the practicality approach. In Germany, the curricula are based on practical terms lasting from three to six months. Thanks to that, students get their first professional experience yet before the defense of their diplomas. In fact, many do their diplomas right at

*I am a staff member of the Mercedes-Benz Corporation;  
to be more precise at the Daimler Corporate Group*

the enterprises. By the graduation, many Master's degree holders have already tried themselves in several sections and have up to 18 months of practical experience. It is not infrequent that companies offer permanent jobs to the graduates they liked, and this is great! I was glad to know that the same methods are now practiced in Russia!

- You presently work at the Mercedes-Benz Corporation. How did you get there?

- As many other students, I was writing my Master's degree thesis at the enterprise. This was the BMW Center for Prospective Developments in Munich. After that, I got a job at a design bureau working with the Audi Company. Two years of working in the car industry, persistence and some luck, and now I am a staff member of the Mercedes-Benz Corporation; to be more precise, at the Daimler Corporate Group.

- And what exactly is your job about?

- I work at the department of supply quality control; I verify the technical documentation for the components before their being sent in mass production. I am also monitoring

the manufacturing process of the components supplied to the company, and work on the development of the of the system of quality management at our suppliers.

- Nikita, this is a serious and responsible job. What piece of advice would you give to our present-day students to help them achieve success?

- My advice would be far from original, but it works, I'm sure of that. First, learn foreign languages, the English language at the minimum. I remember how our then dean Yury K. MIKHAILOV advised us, freshmen, about that. Secondly, still a university student, look for the opportunities for internships or get some part-time job in your profession. Then, by the time of graduation, you will already have practical experience, and this is a big plus. And if in addition you are able to operate specific software that would give you serious competitive advantages.

- Nikita, thank you very much for an interesting interview. Good luck to you in your professional career!



**Nikita KONDRASHOV**  
Mercedes-Benz AG

Alumni of SPbPU Institute of Machinery,  
Materials and Transport



## HOW FOREIGN PROFESSORS WORKED AT SPBPU IN THE SPRING SEMESTER



**VLADIMIR KHIZHNYAK**

Head of International Relations Office

Email: [hizhnyak@spbstu.ru](mailto:hizhnyak@spbstu.ru)

The level of faculty members' qualification has a direct impact on the quality of training. Therefore, SPbPU is eager to attract the most qualified personnel by searching not only in the national but also in the global education market.

The Polytechnic University has developed an effective system for attracting and supporting foreign faculty. This system operates on the basis of existing structural units and services of the university. After the introduction of the new technologies, the number of foreign specialists increased to more than 270 people, 12% (2019). The increase of the amount of foreign faculties, along with the improvement of other indicators, contributed to the promotion of SPbPU in the ranking systems. The development of the new system also contributed to an increase in the number of international educational programs in foreign languages, attracting more foreign students and leading professors.



Head of the Russian-Spanish University Center and Pushkin Institute at the University of Cadiz Andres Santana Arribas (Spain)

2020 changed everything. All over the world universities had to switch to an online education mode. Professors have to work in new reality making use of various online technologies, and online education systems. At the Polytechnic University continues to work in new conditions and carries out all of the educational programs remotely keeping the high standards and working to the full extent. Despite the pandemic, the learning process continues as it was planned.

Every year, foreign professors from partner universities from around the world start working at the Polytechnic University. They give lectures, conduct seminars, and supervise students' project activities. This semester, foreign colleagues, like Russian teachers, learn to work in new realities - remotely. This type of cooperation contributed a lot to the educational process and even created new opportunities. We managed to quickly navigate the situation and switch to the online system, and our foreign professors actively joined the whole process and actively switched to online interaction with students.

So, in early May, Wolfgang Müller, professor at the Technical University of Berlin (Germany), began delivering a distance course at the Higher School of Mechanics and Control Processes at the Institute of Applied Mathematics and Mechanics. Associate Professor Petr Toman from Brno University of Technology (Czech Republic) this semester joined the Higher School of Atomic and Thermal Energy of the Institute of Energy. Professor Toman has been working at the Polytechnic University for several years: he actively participates in double degree programs, promotes student mobility and attracts Czech students to the programs of the International Polytechnic Summer and Winter Schools. Associate Professor Hasan Al Araji from the University of



Director of Institute of Energy of Politecnico di Milano Fabio Inzoli (Italy), MSc DD Program "International Business Development"

Technology, Iraq not only teaches at the Higher School of Automation and Robotics of the Institute of Mechanical Engineering, Materials and Transport but also works with Russian colleagues in the field of robotic systems. For now, a series of joint scientific articles by Al Araji and scientists of the Institute of Mechanical Engineering, Materials and Transport Systems have already been published.

Dr. Gabriele Kötschau transfers her knowledge and shares her experience of work in the Hamburg Chamber of Commerce to students of the Higher School of International Relations of the Institute of Humanities.

Professor Olaf Hauer, who is currently the managing partner of the international company iNTG, has been working at the Polytech for the fifth year, and before that he worked for 17 years at BMW AG. At the Higher School of Management and Business of the Institute of Industrial Management, Economics and Trade, Professor Hauer gives courses in leadership and entrepreneurship at the international master's programs "International Business Development" and "Innovative Entrepreneurship". In June, the Polytech course "Basic Skills in Constructive Communication", developed by Olaf Hauer, is launched on the Coursera platform.

Currently, active work is underway at all SPbPU institutes to attract foreign professors to deliver distance learning classes, including the ones under the programs of the Summer School, is conducted online in 2020.

As well, we continue our work on inviting new teachers and leading professors from foreign universities. A meeting of SPbPU Committee on approving new foreign professors to work at the Polytechnic University has been organized in the online mode. And we are looking forward to welcome our new colleagues to work together in the new semester.

To attract foreign specialists, various instruments are used, such as, for instance, Job Opportunities site at the university web portal; other virtual platforms like THEunijobs (which has a university mini-site); recruiting companies, for example, Carfax, Odgers Berndtson; professional magazines; special academic radio programs; foreign partner universities; international job fairs; specialized conferences; personal contacts with universities and companies employees.



Prof. Tamura Naoki, Graduate University for Advanced Studies, SOKENDAI (Japan), co-creator of the joint summer school course "Plasma Physics and Controlled Fusion" and Prof. Danas Ridikas, Head of Physics section of the IAEA, International Polytechnic Online Summer School, July 2020



**HASSAN M ALWAN,**  
PH.D in Mechanical Engineering, University of Technology, (Iraq)

*Distance learning is a good way to communicate with students in this difficult period for the whole world.*

*However, we need new methods and conditions for exams and for working with students of different levels of training. Communication with students is now going through the Google Search CLASSROOM platform. Professors prepare materials for lectures in various formats, including in video. As for the control of knowledge, students prepare homework remotely, but they must come to the university for exams and pass them in writing. Of course, much will change after the pandemic ends. My predictions - distance learning can take up to 50% of the entire educational process. How it will actually be - time will tell. I want to wish all my colleagues, partners and students: now is exactly the moment when you need to stay in contact with each other in order to maintain the educational process in good and healthy conditions. More than ever, the world needs comprehensive cooperation!*



THE UniJob:



SPbPU vacancies:



Visiting Professors Program:





## ERASMUS+ CREDIT MOBILITY



ANNA KOLOTAEVA

Erasmus Coordinator  
a.kolotaeva@spbpu.ru

coordinated interaction made it possible to ensure the safety of the students but also allowed them to continue the education within the Erasmus program regardless of their decision to continue their studies at the home country or the partner university. Both options turned out to be productive and the students successfully completed the spring semester 2020.

We hope that the next period of Erasmus + program will offer new opportunities for talented students and for partnerships development. We remain positive and confident that we will overcome all difficulties in this unprecedented situation caused by the COVID-19 outbreak together with our reliable partner universities. SPbPU partners in Erasmus+ projects are leading European universities:

The beginning of 2020 brought us a lot of opportunities on the one side but also a lot of challenges on the other.

In February 2020, 42 new applications for international mobility funding were prepared and submitted. As 2020 is the final year of the current European Union's Erasmus + Program which realisation period has been 2014-2020 and which has offered to higher education institutions, their staff, researchers and students a lot of opportunities to gain competences and have a personal, socio-educational and professional development through studies, training, work experiences abroad at partner universities. In this project period, SPbPU has reached great results.

The SPbPU Erasmus team has been ready to start the new term with the implementation of the ongoing projects. At the beginning of the spring term, 2020 SPbPU had 56 Erasmus+ Credit Mobility projects in realisations. Which means over 30 Staff Teaching and Training spots and more than 25 scholarships for students. It promised great possibilities to explore the partner universities for staff and students of SPbPU.

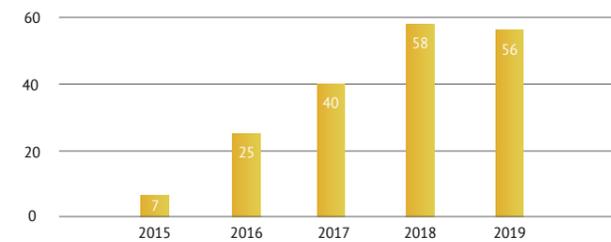
But the consequences of the COVID-19 outbreak have unfortunately negatively affected ongoing and planned activities under the Erasmus+ programme. The SPbPU team together with the great help of the partner universities supported all the students who have already started the mobility period. Some students returned to St. Petersburg but continued their studies remotely. Some students decided to stay at the partner university. Well-



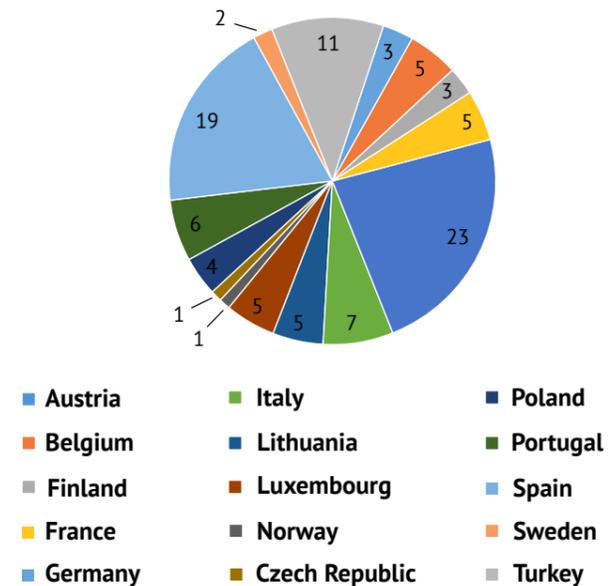
### Success in Erasmus+ Credit Mobility Program: 56 ongoing projects in 2020!

Since Russian Universities take part in the Erasmus+ KA107 Credit Mobility Project as Partner country members, SPbPU has been a leader among Russian universities in terms of the number of successful projects under the Erasmus+ mobility program for several years and in terms of the amount of funding attracted for the development of academic mobility programs with leading European universities.

### Number of successful Erasmus+ Credit Mobility programs

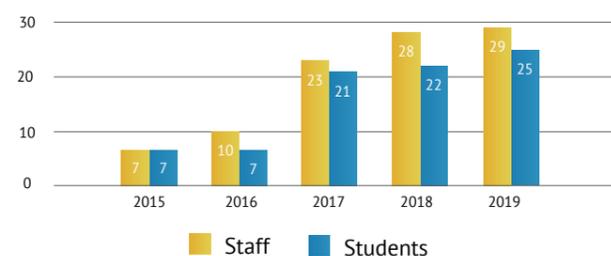


### The map of SPbPU Erasmus partners



Since the implementation of the program, more than 180 students, postgraduates and employees of SPbPU and more than 200 European students, postgraduates, teachers and employees have taken part in the academic mobility between the universities.

The number of students and employees of SPbPU who received Erasmus+ Credit Mobility grants by the year:



Internships and academic mobility programs make a significant contribution to the popularization of science among young talented students and postgraduates who have the opportunity to gain experience of studying abroad and acquire new competencies. By participating in the program, the University increases the availability of international education for talented students, regardless of



OLGA GOLOVAN,  
student at the University  
of Friedrich-Alexander  
(Germany)

We arrived in Germany in early March, just a few days before the well-known events. The semester was supposed to start on April 20th, but we needed to take intensive German courses before it. However, in connection with the spread of COVID-19 in Germany, all kindergartens, schools, universities, and offices began to close down. After a while, the Bavarian government decided to close absolutely all educational institutions and switch to distance learning; all shops were closed, except for grocery and drug stores, cinemas, museums, gyms and libraries. Bavaria declared quarantine on March 21, and Germany as a whole on March 23. As an alternative, we were offered several online platforms where we could choose the courses we liked and learn German ourselves. In my opinion, this, of course, is far from the amount of information and knowledge that we could've gained attending classes, and there is no substitute for live communication with a teacher. However, it's better than nothing. Keep your chins up! For some reason, life has imparted us such tests, and we must succeed with them. We must find advantages even in this situation: we've got a unique chance to live and study in another country, know its culture and customs, make new friends and acquaintances, and see how European countries cope with the global crisis situation. Difficulties are temporary, and the impressions of this trip will stay with us for life!



their economic background, ensures the development of cross-cultural competencies and language skills of future young scientists, and the desire to develop international research projects in the future. Therefore, SPbPU plans not only to continue but also to expand international cooperation with partner universities within the framework of the Erasmus+ Credit Mobility program.



## USE OF SOCIAL NETWORKS DURING A PANDEMIC AS AN EFFECTIVE COMMUNICATION CHANNEL WITH FOREIGN AUDIENCES



**MARIA BOCHAROVA**  
Director of Center of International Recruitment and Marketing  
[bocharova@spbstu.ru](mailto:bocharova@spbstu.ru)

content. Today, they serve as resources with high potential for the commercialization of educational services. 2020 showed the world how important it is to develop remote sites for work and communication with consumers.

During the coronavirus pandemic, SPbPU English-language accounts on Facebook, Instagram and Twitter became essential channels of communication within the university community, external interaction with foreign partners and foreign applicants. The social networks were used to broadcast content from the official websites of the University, making it possible to deliver this information quicker, easier, and clearer for foreign subscribers. Thanks to the daily work in social networks in 24/7 format, the International Office was able to establish a continuous information channel and speedily respond to the needs of account subscribers, providing them with up-to-date information from the University Administration.

Community administrators daily received and processed information from the Degree Programs Office, Admission Office, Passport and Visa Department, Scholarship Department, university's student union and volunteer organizations, dormitories, International Academic Cooperation Department, institutes, and other SPbPU departments. The transfer of subscribers' requests from Instagram and Facebook to university departments made it possible for us to respond to the ins and the outs of international students at the earliest.

During the COVID-19 pandemic, SPbPU's work in English-speaking social networks ensured the implementation of a number of tasks:

- Informing international students about training and paperwork
- Attracting international applicants to study
- Communicating with foreign partners
- Formatting a university community.

Realizing the degree of complexity in recruiting international students for the 2020/2021 academic year, the International Office intensified the advertising impact on the international educational market. During the pandemic, 2 targeted advertising and information campaigns were launched on Facebook and Instagram, one of them was carried out together with Times Higher

**Polytechnic University is a recognized leader in the English-speaking segment of social networks of Russian universities.** Such results were published by the Russian International Affairs Council (RIAC) in its annual report "Electronic Internationalization of Russian Universities" for 2019.

### TOP-1 in RIAC social networks ranking

**The work of the SPbPU International Office in the English-language segment of social networks according to the 2019 results was recognized the best in Russia: SPbPU became the leader of the ranking with 7 out of 8 possible points gained.**

SPbPU International Office staff are regularly invited as experts in the field of promoting educational services. For example, in January 2020 the RIAC portal published an expert article "The use of English-language websites of universities and accounts in social networks in the recruitment of foreign applicants", authored by employees of the SPbPU Center for International Recruitment and Communications.

Social networks are no longer just a platform for leisure

Education. This allowed to obtain:

- More than 1,300,000 ad impressions
- More than 200 targeted requests for training from foreign applicants.

Besides the news and information messages through English-language accounts, the International Office supported foreign subscribers with attractive entertaining and educational content, introduced students and potential applicants to the rich history and scientific achievements of Polytechnic University. This made it possible to morally support everyone in the hard period of the pandemic and remote format of the university's operation. Joint broadcasts, contests and flash mobs, quizzes and polls were regularly held in the feed and in the stories format.

One of the brightest examples of support for international students was the international flash mob "We Are Together" hosted by the Tutor Forces and PolyUnion student club with the assistance of the International Office.



The event was actively supported by the media, Russian and foreign SPbPU partners and, of course, students from various countries. Videos and photos came from Germany, Italy, Poland, China, Morocco, Georgia, Mongolia and Djibouti. Everyone can watch a kind and inspiring video composed from all the materials on the SPbPU website and in the university's social networks.

**We aim at even more active cooperation with our partners in social networks. Join us and subscribe to our accounts!**



**DARIA YARKOVA,**  
content manager of the RIAC portal

*Social networks today are the most affordable and strong channel for distributing content from brand to user. Social networks allow the university to maintain a constant dialogue with its target audiences. A new methodology for measuring the effectiveness of this dialogue was proposed in the 2019 RIAC report, and SPbPU's results were quite impressive. The SPbPU content strategy, implemented on English-language social networks, was ready for qualitative and quantitative analysis and successfully passed 7 out of 8 tests. The RIAC analyzes the best practices and research in the field of SMM, so that universities with strong communicative strategies can use ready-made solutions. Definitely, SPbPU is such a university. To see such results at Russian universities is the best motivation for further research.*





## INTERCLUB AGAINST COVID-19



**PAVEL NEDELKO**

Deputy Director for Students Affairs of the Higher School of International Educational Programs, Head of the Interclub "PolyUnion"  
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that several students were taken to the hospital, the Dormitory was closed for several weeks for observation. Foreign students were kept in isolation. Interclub got to the forefront of the fight against the virus.

**In such difficult conditions, the international students community and the university administration helped to take the situation under control and quickly provide assistance to students in the dorms.**

First of all, it was necessary to resolve the issue with the delivery of food and meet the basic needs. Volunteers of the Polytechnic University organized delivery from the nearest supermarket to the dorms, and then volunteers of the dorms student board and the Interclub brought everything to particular rooms.

Representatives of SPbPU institutes and higher schools administration were as well there to help their students and provided the necessary assistance. For example, the Higher School of International Educational Programs prepared and handed over to foreign students enrolled in the pre-university training program about 100 food-sets in accordance with their needs.

The administration of the Polytechnic University provided the students in the observation with a special financial support – by means of one-time payments. In order to help international students correctly apply for financial assistance and fill in all the documents, the Interclub together with the student community «Tutor Forces» organized a consulting center, where everyone could get the necessary information.

Interclub PolyUnion opened its doors to students of the Polytechnic University in 2018. Since that time, it has become a favorite pastime for foreign and Russian students. It helps to remove language and cultural barriers, and people from all over the world can meet each other.

The Interclub is located in Dormitory # 13 on the territory of the International Campus. Due to the spread of the coronavirus infection COVID-19 and the fact



Finally, in order to support foreign students and not let them get bored, the Interclub activists organized conversation clubs with native speakers and a film club. The events were held online. The flash mob #TogetherWithPolytech, launched on social networks, gained great popularity, thanks to which students were again convinced that they were not alone, that they were together with the Polytech.



**ITRI HANAA,**  
*iPhD student, SPbPU Institute of Industrial Management, Economics and Trade (Morocco)*

*It's hard to imagine a bigger culture shock than leaving the warm climate of north Africa for the chilly winters in St Petersburg, but PolyUnion didn't just help me; it saved my life! It wasn't easy to move to a new country where you don't know the culture or language and PolyUnion helped to break those barriers down. They were not just close friends to me but a family.*

*So, I decided to help other new students and worked for PolyUnion. As a result I was rewarded with a place on the academic council of Peter the Great St.Petersburg Polytechnic University*

Student Event at PolyUnion, January 2020

» Peter the Great St.Petersburg Polytechnic University hosts and organizes a set of scientific conferences and forums that strive to bring together experts and young scientists from various research areas. These events should provide a platform for scientific discussion, for presentation of new results and for networking in research community. All conferences are international; the publications are indexed in Scopus/Web of Science.

## GLOBAL CHALLENGES OF DIGITAL TRANSFORMATION OF MARKETS 2020



SEPTEMBER 24-25, 2020

<http://gdtm.spbstu.ru/>

The online conference.

### Tracks of the conference:

1. Digital transformation challenges in logistics and supply chain management
2. Digitalization of trade networks and global markets
3. Business processes and marketing transformation in age of digitalization
4. HR-management in digital era



## PHYSICS OF DIELECTRICS



OCTOBER 5-9, 2020

<http://dielectrics.spbstu.ru/>

The upcoming conference, organized by Peter the Great St. Petersburg Polytechnic University together with the society of corrosion engineers NACE International, will be devoted to the reliability of equipment of oil and gas industry facilities. Scientists, specialists and engineers from different countries will talk about the latest technologies in the field of corrosion protection, innovative materials for capital construction of infrastructure in the Arctic, the shelf, approaches to monitoring and studying the mechanisms of corrosion.



## “CORROSION IN THE OIL & GAS INDUSTRY” – CORROSION OIL&GAS 2020



OCTOBER 14-16, 2020

<https://corrosionrussia.org/>

### The main topics to be discussed:

- Processes of charge transfer and accumulation in inorganic dielectrics
- Electrophysics of polymer dielectrics and composites based on them
- Dielectrics under extreme conditions
- Physics of nanostructured dielectrics
- The Physical Processes in Glassy Dielectrics



## INTERNATIONAL CONFERENCE ON ELECTRICAL ENGINEERING AND PHOTONICS – EEXPOLYTECH-2020



OCTOBER 15-16, 2020

<https://eexpolytech.spbstu.ru/>

2020 IEEE International Conference on Electrical Engineering and Photonics (EEExPolytech-2020, IEEE Conference Record #50912) is a conference that aims to bring together specialists in Electrical Engineering and Photonics. The topics cover diverse applications in technology fields such as imaging, communication, sensing, and instrumentation, as well as the sciences such as biology and medicine, chemistry and fundamental physics. The conference is designed for researchers to report on the latest findings on Electrical Engineering and Photonics and stimulate scientific exchange among researchers and engineers from industry and academia.



## INTERNATIONAL CONFERENCE ON DIGITAL TECHNOLOGIES IN LOGISTICS AND INFRASTRUCTURE



OCTOBER 25-26, 2020

<http://icdt.spbstu.ru/en.html>

### Conference Tracks

- Digital transformation of logistics and infrastructure
- Supply chain trends
- Digital transformation in procurement and logistics
- Digital logistics of the Northern Sea Route
- Development of seaports in the digital age



## INTERNATIONAL SUMMER SCHOOL-CONFERENCE «ADVANCED PROBLEMS IN MECHANICS»



NOVEMBER 9-13, 2020

<http://apm-conf.spb.ru/>

The main purpose of the meeting is to gather specialists from different branches of mechanics to provide a platform for cross-fertilisation of ideas. The list of problems under investigation is not limited to questions of mechanical engineering, but includes practically all advanced problems in mechanics, which is reflected in the name of the conference. The main attention is given to problems on the boundary between mechanics and other research areas, which stimulates the investigation in such domains as micro- and nanomechanics, material science, physics of solid states, molecular physics, astrophysics and many others.



## PROFESSIONAL CULTURE OF THE SPECIALIST OF THE FUTURE



NOVEMBER 26-27, 2020

<https://pcsf.spbstu.ru/en.html>

The aim of the conference is to provide an interdisciplinary venue to discuss and solve a wide range of problems associated with the future of education and shaping of professional culture of specialists, which will foster further research and an informed dialogue between universities and the society at large.

We invite specialists in humanities, social and engineering sciences.



## FIRE PROTECTION OF MATERIALS AND CONSTRUCTIONS: SPBPU FPM-2020



NOVEMBER, 2020

<http://fpm.spbstu.ru/en/>

### Topical tracks of the Conference:

- Development of fireproofing means for materials and constructions, investigation of their efficiency and performance mechanism;
- Effective technologies of fireproofing of materials and constructions in different objects and areas;
- Methods of fire tests and experimental investigation of fireproofing parameters;
- Calculation/software complexes and engineering approaches for estimation of technical parameters of fireproofing means;
- Quality and durability assessment of fireproofing means: methods and approaches;
- Regulatory and technical issues of application of fireproofing means;
- Certification and approval of fireproofing means, their identification.





## PETER THE GREAT ST. PETERSBURG POLYTECHNIC UNIVERSITY

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