IAIT SPbPU and the Engineering Center “Center for Computer Engineering” (CompMechLab®) took part in “VUZPROMEXPO-2015”

From 2nd to 4th December Technopolis Moscow was housing the III annual national exhibition “VUZPROMEXPO-2015” where the best Russian developments and technologies ready to be industrially introduced were demonstrated. The motto of the forum is “From Idea to Reality”, and it was visited by investors, university researchers, representatives of fundamental and applied science and innovative business. One of the numerous participants of the exhibition was Peter the Great St.Petersburg Polytechnic University represented by the Institute of Innovative Production Technologies (IIPT SPbPU), the Engineering Center “Center for Computer Engineering” (CompMechLab®), the Joint Institute of Science and Technology (JIST SPbPU) and the Institute of Laser and Welding Technologies (ILWT SPBPU).

The primary focus of the exhibition was on cooperation, a great number of participants confirming this fact, among which are: more than 120 higher education institutions, 30 engineering centers, 15 technical platforms, 20 small innovative businesses and more than 100 enterprises of the real sector of the economy that presented their innovations and developments. Apart from the Polytechnic University, the following universities took part in the exhibition: Lomonosov Moscow State University, Moscow State University of Technology «STANKIN» (MSTU «STANKIN»), Bauman Moscow State Technical University, the National University of Science and Technology MISiS, the Higher School of Economics, the Far Eastern Federal University, Kazan National Research Technical University named after A.N.Tupolev, Tomsk State University of Control Systems and Radioelectronics, Northern (Arctic) Federal University, ITMO National Research University, Kazan Federal University, etc. One can mention the following directions of research, the results of which can be practically applied in innovative industry: “Information and Telecommunications systems”, “Life Sciences”, “”The Industry of Nanosystems”, “Sustainable Use of Natural Resources”, “Transport and Space Systems”, “Energy Efficiency, Energy Saving, Nuclear Power Engineering”.

D.V. Livanov, the Minister of Education and Science of the Russian Federation, and Pierre Helg, the Ambassador of Switzerland in Russia opened the exhibition. “It is crucially important that modern universities are not only centers for education and fundamental research, but also centers for developing new technologies and innovations. The importance of innovation is on the rise, we are witnessing the growing activity of our leading universities in relation to establishing contacts with new industrial partners and involving them in innovative projects”, said D.V. Livanov. He added that one of the main goals of the exhibition was to help to introduce Russian developments into the high technology industrial sector.

Indeed, university science is one of the fast growing segments. “Today these are universities that publish more than half of research papers, the number of research fellows and engineers is increasing, and the ties with industry are being strengthened”, explained the Minister of Education and Science. On the first day of the exhibition one of the main events was the presentation of developments from the leading universities taking part in the Program for Increasing the International Competitiveness of Russian Universities (Project 5-100).

The developments of the Institute of Advanced Industrial Technologies (IAIT SPbPU) and its main division the Engineering Center “Center for Computer Engineering” (CompMechLab®) SPbPU, which has a unique experience in computer engineering for the leading Russian and foreign industrial enterprises, were of great interest for the participants of the exhibition and the officials of the Ministry of Education and Science of the Russian Federation. The unique developments of the Institute of Advanced Industrial Technologies of Peter the Great St.Petersburg Polytechnic University caught the attention of A.B. Povalko, Deputy Minister of Education and Science, and S.V. Salikhov, Director of the Department of Science and Technologies of the same Ministry.

Professor A.I. Borovkov, Vice-Rector for Innovative Projects and S.V. Salkutsan, CEO of IAIT SPbPU demonstrated to A.B. Povalko a visualized variant of the Factory of Future, as well as samples of metal parts printed on a 3D printer for the aircraft industry. One of the latest unique developments is a metal holder for the aircraft industry. Owing to bionic design including computer engineering, topology optimization and additive technologies, the mass of the part became 4.39 times as low as before in comparison with the original product made on the basis of the traditional approach.

Factory of Future (FoF) is a cutting-edge industrial site for creating new generation products, which are globally competitive and customized/personalized. It contains a nucleus (“the intersection of sets”) of the basic Technologies of the Future, i.e. key technologies of the National Technological Initiative (NTI): digital modeling and simulation, creating new materials and additive technologies.

At the exhibition special attention was paid to innovative cooperation. One of the important results of the participation of our University in “VUZPROMEXPO-2015” was a long-term cooperation agreement between IAIT SPbPU and the company “Open Technology Academy”*. On behalf of IAIT SPbPU the agreement was signed by A.I. Borovkov, Vice-Rector for Innovative Projects, Academic Adviser of IAIT SPbPU, Director of the Engineering Center “Center for Computer Engineering” (CompMechLab®), and by D.V. Kaysin, General Director of “Open Technology Academy”.

“For IAIT SPbPU it is important to have a partner involved in distributing and exchanging information, popularizing modern achievements in the sphere of science, engineering and the latest manufacturing technologies, as well as encouraging top-class industrial specialists to share their experience with university students. We hope to cooperate efficiently”, commented A.I. Borovkov.

Currently, IAIT SPbPU is a leader in the sphere of developing cutting-edge technologies in Russia focusing on ensuring global competitiveness of specialists, knowledge, the results of intellectual activity, technologies, services, products, and enterprises of high-technology industry in Russia. It is of great interest for us to cooperate with IAIT in order to develop and implement joint educational programs aimed at training and retraining the staff of the leading industries”, said D.V. Kaysin.

On 3rd December, the second day of the exhibition, a cooperation agreement was signed between IAIT SPbPU and the Engineering Center for High Complexity Prototyping of the National University of Science and Technology MISiS (Director Vladimir Pirozhkov). It was decided to join the efforts in the sphere of research, innovative and educational activities related to computer engineering and industrial design.

We will provide further information concerning the developments of the Joint Institute of Science and Technology (JIST SPbPU) and the Institute of Laser and

Welding Technologies (ILWT SPbPU) presented at “VUZPROMEXPO-2015”.

For your information:

JIST SPbPU is the first institute in Russia using a systemic approach to developing, promoting and introducing industrially state-of-the-art technologies. The mission of JIST SPbPU is to modernize the Russian industry and enhancing its competitiveness.

JIST SPbPU is the leading institute in the sphere of developing cutting-edge industrial technologies in our country focused on ensuring global competitiveness of specialists, knowledge, results of intellectual activity, technologies, services, products and enterprises of high-technology industries in Russia. The main division of JIST SPbPU is the Engineering Center “Center for Computer Engineering” (CompMechLab®) (www.fea.ru) possessing a unique experience in implementing computer engineering projects for the leading Russian and foreign industrial enterprises.

In the global matrix of the National Technological Initiative (NTI) JIST SPbPU occupies a special place at the “intersection” of the basic Technologies of the Future (promising activities): digital modeling and simulation, creating new materials, additive production and promising Markets of the Future, which are to be formed by 2035, such as AeroNet, AutoNet, MariNet, etc. (the market value of each of them exceeding 100 bln dollars).

The team of NTI “Cutting-Edge Industrial Technologies” is made up of a project consortium, which currently includes the Foundation “Center for Strategic Developments”, Skolkovo Institute of Science and Technology, JIST SPbPU (including the Engineering Center “Center for Computer Engineering” (CompMechLab®), Skolkovo Foundation, NPO Saturn, JSC, Open Joint-Stock Company NIZHNY NOVGOROD ENGINEERING COMPANY «Atomenergoproekt» (JSC «NIAEP»), Russian Technology Agency, DATADVANCE LLC, PJSC Rostelecom, and some other companies and organizations. The main goal is to implement the long-term vision of “Factories of Future” by 2035.

Factory of Future, FoF is an innovative industrial site for creating global competitive and customized/personalized new generation products. It contains a nucleus (“intersection of sets”) of the basic Technologies of the Future: digital modeling and simulation, new materials and additive technologies.

*”Open Technology Academy” is a Russian on-line educational platform for mastering engineering and managerial competences in demand in various industries. The project was initiated by the Russian Technology Agency and the UNIWEB Company and it is supported by the Agency for Strategic Initiatives.

SPbPU Media Center

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