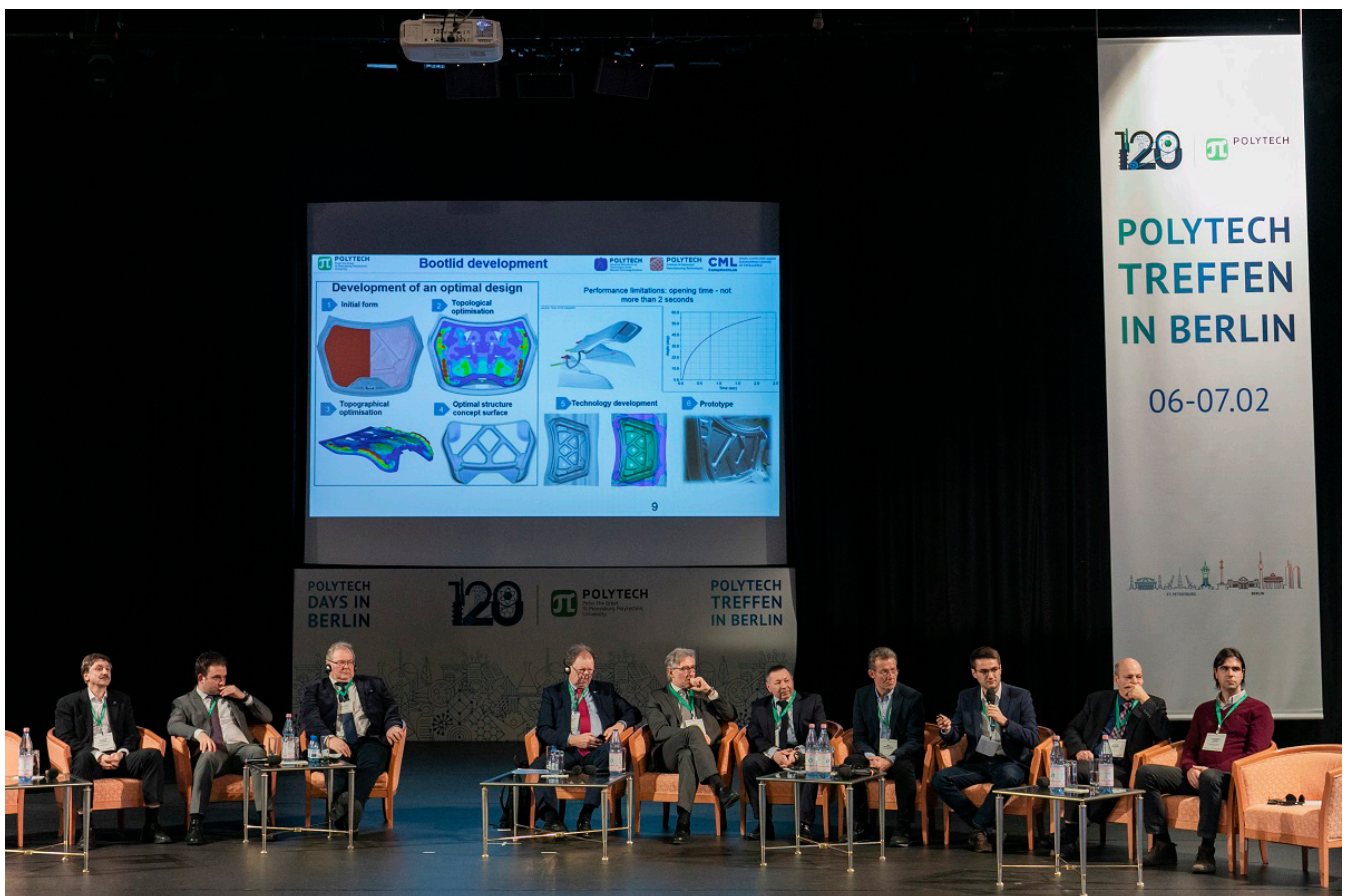


Polytech Days in Berlin: SPbPU NTI Center Held the Track ‘Digital Transformation of Industry’

The NTI Competence Center of SPbPU “Advanced Manufacturing Technologies” demonstrated at the exhibition its developments in the field of advanced manufacturing technologies and organized the key track of the forum “Digital Transformation of Industry”, moderated by SPbPU Vice Rector for Advanced Projects, leader (co-head) of the Technet NTI Working Group, the Head of the NTI Center of SPbPU Aleksey BOROVKOV and the Rector of the University of Stuttgart (Germany) Professor Wolfram RESELL.



Alexey BOROVKOV emphasized that the key direction of the SPbPU NTI Center is to work with industry to create “smart” digital twins of products and technological processes: *“Employees of SPbPU NTI Center are simultaneously carrying out about 100 projects in 10 high-tech industries and different countries, including Russia, Germany, UK, Sweden, France and China. Our task is to develop and / or combine the best world-class technologies in order to design a globally competitive product that takes into account all design constraints - time, financial, production, technological, environmental etc.”*

Wolfram RESSEL, noting the fundamental coincidence of approaches to digital transformation among German and Russian experts, invited the experts from SPbPU NTI Center to participate in the national project ARENA2036, launched at the University of Stuttgart and supported by the German Federal Ministry of Education and Research. The project, designed for 30 years, is focused on the development of the automotive industry based on digitalization.



Dr. Stefan RUDOLF, State Secretary at the Ministry of Economy, Labour and Health Mecklenburg-Vorpommern (Germany), proposed to take the track's topic even broader and form a joint center on digital transformation of industry. The following promising areas for joint development were identified: new materials, additive manufacturing and the development of digital twins. *"On the territory of our federal land we have created a single center of competence, where small and medium-sized enterprises can apply to receive assistance in creating a digital twin in order to increase the efficiency of their activities. But it seems to me that it is important to join the efforts of different project partners from different countries - to work and grow together,"* said Stefan RUDOLF.

As part of the track, two discussions took place. The first was devoted to the formation and development of competencies and included presentations of the results of joint activities of SPbPU and German partners.



Stefan WEIDNER, Executive Director of the SAP University Competence Center of the Otto von Guericke University Magdeburg, and Nikita GOLOVIN, Director of the Polytechnic-SAP International Academic Competence Center of the SPbPU NTI spoke about the experience of cooperation between SAP University Competence Centers.

Klaus SAILER, Director of the Strascheg Center for Entrepreneurship and Sergei SALKUTSAN, Deputy Head of the Directorate of SPbPU NTI Center, spoke about what entrepreneurial universities are and what their role is in promoting the joint creative activity of startups, industry, scientists and politicians.

In particular, Sergey SALKUTSAN explained that currently SPbPU Institute of Advanced Manufacturing Technologies is carrying out only 20-30 students per year in its main area - *“Computer Engineering and Digital Production”*: *“This is a very small number. To scale the educational process, it is necessary to apply new formats of interaction. For example, university mirror engineering centers, which can act as a mechanism for the transfer of advanced technologies and competencies of universities.”*



Within the second discussion focused on advanced manufacturing technologies in the context of digital transformation of production process, four Russian-German reports on joint R&D in various industries were delivered.

The first project was presented by the Head of the “Smart Factory” at the Technical University of Graz (Austria), Professor Rudolf PICHLER and the Director of the SPbPU Higher School of Cyberphysical Systems and Control Vyacheslav SHKODYREV.

Automotive expert Josef NEUHÄUSLER and Director of the project office of the Engineering Center (CompMechLab®) SPbPU Mikhail Aleshin presented 13 years of experience of SPbPU in German and global automotive industry markets.

The experience of SPbPU cooperation in the field of advanced cable composite structures for power engineering and shipbuilding was presented by the Director of Baltiko (Germany), Dirk Büchler and the leading researcher at the SPbPU NTI Center Alexander NEMOV.

The final presentation was made by Dr. of Engineering Sciences, Head of the Department of Computational and Experimental Solid Mechanics of the Institute of Solid Mechanics of the Technical University of Dresden, Professor Markus KESTNER and Deputy Director of the Higher School of Mechanics and Control Processes of SPbPU Institute of Applied Mathematics and Mechanics Artem SEMENOV.

The material was prepared by NTI Competence Center of SPbPU. Translated by
SPbPU International Office

Дата публикации: 2020.02.27

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