

The Polytechnic participated in the Yangtze River Delta Tour

To strengthen Russian-Chinese innovation cooperation, in late November, the Chinese Embassy in Russia and the Jiangsu Provincial Administration organized a tour of leading Russian scientific and technological experts along the Yangtze River Delta.



From Russia, 12 people participated in the event, including academicians of the Russian Academy of Sciences, high-level experts from universities and research institutes. China was represented by academicians of the Chinese Academy of Sciences, officials from the municipal government of Wuxi and the Department of Science and Technology of Jiangsu Province, the Chinese Embassy in Russia and other experts. Polytechnic University was invited to the tour [by its strategic partner](#) — Jiangsu Industrial Technology Research Institute (JITRI), on the basis of which SPbPU Nanjing office operates.

The key event of the tour was the ceremonial meeting of Russian and Chinese experts, which took place in Wuxi on November 21. It was attended by Viktor Barskov, Acting Director of the Institute of Power Engineering, Gong Boven, a postgraduate student of the Graduate School of Power Engineering, and Vladimir Konakov, Chief Research Fellow of the Institute of Advanced Manufacturing

Technologies. At the event, Viktor Barskov made a report on the key research areas of the SPbPU Institute of Power Engineering and spoke about promising research projects.

The Institute of Power Engineering has extensive experience in performing R&D for Russian and foreign industry, so we have a lot to offer our Chinese colleagues, explained Viktor Barskov. One of the promising areas is turbine engineering. Turbine units of our design have unique efficiency and compactness indicators and can be manufactured using additive technologies. The Institute of Power Engineering is ready to develop advanced scientific directions with Chinese partners within the framework of joint projects.



One of such projects is the research of gas turbine units based on supercritical carbon dioxide. This program will be implemented in the next two years by Polytechnic researchers together with colleagues from the Automotive Industry Research Institute of Tsinghua University with the support of the Jiangsu Research Institute of Industrial Technology.

The agreement to launch the project was signed on November 13 by SPbPU Rector Andrei Rudskoi during his visit to China. A team of the Polytechnics consisting of Professor Viktor Rassokhin, Viktor Barskov and Gong Boven will receive funding from the Chinese side to conduct research on the creation of a modern high-efficiency low-power carbon dioxide gas turbine. The joint work involves research

into the possibility of efficient combustion of various fuels, including low-calorie fuels. The scientists will study the parameters, mode and environmental characteristics of gas turbine units using digital twin technology. On November 22, the first face-to-face meeting of the Russian and Chinese project team took place in Nanjing in the format of a project seminar, where the parties approved the plan for the coming year.

The tour continued in Shanghai, where the specialists visited the representative office of the National Innovation Center of Excellence (NICE) in Shanghai. Victor Barskov held talks with Prof. Huang Weiguang, Director of the Institute of High Technology, Shanghai Branch of the Chinese Academy of Sciences. The colleagues discussed the prospects of cooperation in various scientific areas, including the preparation of joint applications for scientific grants and publications, as well as planned the interaction between the institutes and the schedule of further visits.



In addition to business events, the experts visited the largest research institutes of the Yangtze River Delta (Shanghai, Jiangsu, Anhui and Zhejiang provinces). The scientists familiarized themselves with the work and capabilities of Jiangsu Industrial Technology Research Institute and Wuxi Industrial Technology Research Institute. These two institutes function as integrated scientific and technological innovation platforms supporting high-tech projects and companies. One of the priorities is to develop cooperation with Russian universities and scientific

organizations to create joint breakthrough innovations. Visits were also made to the sites of the Jitsui Innovation Center for Applied Integrated Circuit Technologies, Suzhou Industrial Park and other innovation centers. In the near future, SPbPU and the Jiangsu Industrial Technology Research Institute (JITRI) plan to continue expert business trips for the effective development of cooperation between SPbPU's scientific groups and Chinese organizations belonging to the JITRI system.

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