

Supercomputer Center "Polytechnic" Successfully Presented at International Conference ISC'15

The project of Supercomputer Center "Polytechnic" was presented as one of the achievements of the world supercomputer industry at the International Conference and Exhibition SC'15, held from 13 to 15 July in Frankfurt am Main, Germany.



Presentation of the project and a report on the experience of supercomputer technology application at the Polytechnic University were made by the director of SCC "Polytechnic", V.S. Sinepol, and deputy director, E.P. Petukhov. The aims of the Supercomputer Center - one of the most modern in Russia- include improving the efficiency of the fundamental and applied scientific research of SPbPU; training engineers with a high level of competence in the use of supercomputer technology for developing high-tech products; setting up a university-based regional center of competence in the field of using supercomputer technology in knowledge-intensive sectors of the economy (power plant engineering, aircraft engineering, bioengineering, radioelectronics); etc.



According to V.S.Sinopol, SCC "Polytechnic" is a sophisticated and multi-faceted complex, equipped with the cutting-edge computer systems. Most of them are built on the nodes created by RSC group. The peak total computer performance reaches 1.3 petaflops. SCC "Polytechnic" is an innovation for two reasons. It is the first supercomputer cluster based on the newest processors of Intel Xeon E5-2600 v3 family (1336 CPU, 18704 cores x86). In addition, it is the first large implementation of innovative solutions in supercomputer industry – a massively parallel computer system with ultrahigh multithreading of RSC PetaStream, built on a 60-core Intel Xeon Phi processors.



The Supercomputing Center will be available not only for the scientists of the Polytechnic University. Any research organization in the country will be able to use its computing resources and services to tackle important scientific problems in mechanics, hydro- and aerodynamics, electronics, biophysics, biotechnology, and cyber security. So, the head of SCC "Polytechnic" computing department A.V. Shwetsov presented the first results of problem-solving in biophysics at the RSC PetaStream computer, which were obtained together with the colleagues of Petersburg Nuclear Physics Institute named after B.P. Konstantinov. Both the university staff, developers and engineers of industrial enterprises will be able to use the powerful workstations and CAD / CAM-systems provided by the Center for designing new equipment in different industries. The SCC will be a technological base for advanced training of professors and students in informatics, computer science and engineering.

Overall, the presentation of the project was successful and aroused a great interest among specialists of supercomputer industry.

The material is prepared by SPbPU media center

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