01.04.02 Applied Mathematics and Computer Science

High-Performance Computing and Parallel Programming Technologies

Program objective:

training highly qualified specialists in engineering and physical computing and supercomputer modeling, capable of developing algorithms for calculating and analyzing mathematical models of complex physical processes and high-tech engineering systems with their subsequent reproduction in the software code as part of the implementation of the concept of digital twins.

Curriculum features

- fundamental training in the field of physical and mathematical modeling and high-performance computing (gas, hydro and plasma dynamics, mathematical models of continuum mechanics, numerical methods for solving engineering and physical problems, parallel programming technologies, methods of data processing and visualization);
- involvement of highly qualified specialists and experts into computational mathematics from leading research institutes

Future employment opportunities

high-tech enterprises that solve strategic tasks in the rocket-space, transport and nuclear industries as well as in aircraft and shipbuilding.