

03.03.01 Applied Mathematics and Physics

Supercomputer Modeling in Physics and Engineering

Program objective

to train highly qualified specialists who are able to conduct fundamental and applied research, develop and use tools of engineering and physical analysis for the implementation of the concept of a digital twin.

Program curriculum feature

a natural combination of training in

- fundamental physics
- applied mathematics and mathematical modeling
- supercomputer technologies (architecture of supercomputer systems, computer graphics and visualization, computer modeling methods, high-performance computer (HPC) systems and parallel programming technologies),

Graduates are able to conduct research in areas related to theoretical and mathematical physics and mathematical modeling using high performance computing (HPC) applications, i.e. digital twins for solving urgent computationally complex problems.

Career opportunities

mechanical engineering, aviation, aerospace industry, shipbuilding and automotive industry, nuclear and laser technologies