**01.03.02 Applied mathematics and Computer science**

**Program Summary**

**Program title**: High performance computing and parallel-programming technologies.

**Program goals**: to prepare highly qualified specialists – mathematicians, system programmers for scientific research and industrial organizations of the nuclear weapons complex, nuclear and other high-tech branches of industry.

**Duration of full-time program** - 4 years.

**Department**: Department of applied mathematics of SPTI NRNU MEPhI.

**Areas of expertise**: research, design, production, technological, administrative and pedagogical work, with regard to the use of mathematics, programming, information and communication technologies and automated control systems, including the structural units of the research Institute on simulation.

**The objects of professional activity**: mathematical physics, mathematical modelling, numerical methods, probability theory and mathematical statistics, mathematical and software support, computer networks, high-performance computations and parallel programming technologies, programming languages, algorithms, libraries and software packages, products, system and applied software, mathematical and computer methods of image processing.

**Curriculum features**: the curriculum is built on the basis of NRNU MEPhI higher education standards taking into account the professional requirements of the Institute of Theoretical and Mathematical Physics of RFNC VNIIEF. It includes the Humanities, mathematics and natural science courses, as well as special disciplines: differential geometry, tensor analysis and applications, system and application software, and elective courses that include: game theory and operations research, continuum mechanics, hydrodynamics and mechanics of deformable solids etc.

**Companies for internship and graduate employment**: laboratory, research and engineering divisions of RFNC-VNIIEF.