09.06.01 Informatics and Computer Engineering

Mathematical Modeling, Numerical Methods and Software Packages

Graduation department: Applied Mathematics (№ 31)

Program objectives

- Development of mathematical probabilistic models of physics, economic and social processes
- IT services evaluation effectiveness

Competitive advantages

- developing skills in analysis of research and technical information, modeling processes and facilities based on standard packages of numerical experiments and development of techniques for research, descriptions of ongoing research and analysis of results;
- making research reports and publications as the implementation of research results.

Research areas:

- mathematical simulation of physical processes
- supercomputer calculations and parallel programming technology;
- problem modeling in geodynamics, plasma physics, mechanics, etc.
- data processing and analysis
- development of new mathematical methods of data processing and analysis
- machine learning and neural network approaches
- mathematics and statistics, and bioinformatics
- development of methods of DNA and protein symbol sequence analysis
- statistical analysis and modeling of polycrystalline material properties

Practical training and employment opportunities

- State Corporation "Rosatom" organizations
- National Research Centre "Kurchatov Institute"
- Institutes of the Russian Academy of Sciences: Nuclear Safety Institute, “Keldysh Institute”
- Joint Institute for Nuclear Research (Dubna).