01.06.01 Mathematics and Mechanics

Differential Equations, Dynamical System and Optimal Control

Graduation department: Applied Mathematics (№ 31)

Program objective

Future research and academic staff training for MEPhI, Rosatom organizations, National Research Center "Kurchatov Institute", foreign universities, and others

Strategic partners

Departments of State Corporation "Rosatom" and units of the Russian Academy of Sciences.

Competitive advantages of the program

- individual educational and research track, academic mobility opportunities;
- practical training in research groups of the Russian Academy of Sciences and Rosatom State Corporation.

The program promotes the development of skills of independent research activities at high professional level with self-assessment of performed works.

Research opportunities

- mathematical modeling and mathematical physics
- inverse and ill-posed problems
- theory of probability and mathematical statistics
- operations research and systems analysis
- optimization and optimal control
- nonlinear dynamics, computer science and management
- mathematical models of complex systems theory, algorithms, and applications
- mathematical and computer image processing techniques
- mathematical methods and software for information security
- information systems and research methods of mathematical forecasting and system analysis
- mathematical methods of theoretical physics, mathematical methods of data processing
- high-performance computing and parallel programming technology
- computational nanotechnology
- intelligent systems
- software engineering and systems programming.