



ACADEMY
OF ENGINEERING



ARTIFICIAL INTELLIGENCE AND ROBOTIC SYSTEMS

MASTER'S PROGRAMME DEGREE



PROGRAM ADVANTAGES

- ✓ Demand for graduates in various fields of technology and production, the ability to conduct research in the field of creating effective evolutionary computational algorithms, neural networks, expert systems, software for managing anthropomorphic robots and robotic complexes.
- ✓ Graduates are prepared to solve problems in the field of developing algorithmic, software, and technical support for modern automation tools, control systems and information processing in various fields of technology and production.
- ✓ Easy adaptation of graduates in companies of various profiles.
- ✓ The international composition of the study group contributes to building its own network of professional international contacts already at the university.
- ✓ Highly qualified teaching staff. Our teachers are leading experts of the RUDN University, MSTU. N.E. Bauman, Moscow State University M.V. Lomonosov, NRNU MEPhI, National Research Center “Kurchatov Institute”, Institute of Applied Mathematics named after M.V. Keldysh RAS, Institute of Control Sciences named after V.A. Trapeznikov RAS.



STUDYING PROCCESS

120 credits.

Lectures, practical classes and independent work,
several types of internship.



ROBOTIC SYSTEMS

- Design of automated control systems.
- Methodology and research of control problems.
- Design of robotic systems.
- Tools of intelligent systems.



CREATION AND USE OF ARTIFICIAL INTELLIGENCE

- Virtual and augmented reality technologies.
- Computer vision technologies.
- Artificial neural networks in management.
- Big data mining.



DISTRIBUTED INFORMATION TECHNOLOGY

- Distributed Object Technologies.
- Parallel and Distributed Programming.
- Mathematical Foundations of Blockchain Technology.



PROGRAMMING AND MATHEMATICAL MODELING

- Applied problems of mathematical modeling.
- Numerical methods for solving problems of mathematical modeling.
- Workshop on programming technology.
- Mathematical foundations of information security.



INTELLIGENT TECHNOLOGY IN SPACE ACTIVITIES

- Fundamentals of R&D organization and management.
- Computational mechanics of space flight.
- Risk and threat analysis methods for space exploration and use.
- Solar power plants in orbit of the Earth.
- Workshop on the use of Earth remote sensing data and geographic information systems.
- Creating an innovative product.



STUDENTS FEEDBACK



BAKHAREVA ALEXANDRA, MOSCOW

“ Ever since school times, I have been interested in the technical sciences. I knew that I wanted to enter the engineering faculty, but I doubted the choice of direction. The admission campaign committee told me in detail about the existing areas. I liked the one I had chosen. Having finished my bachelor’s degree, I did not doubt for a minute the decision to continue my studies in this area in the magistracy. I have chosen the profile “Intellectualization and optimization of management processes” based on its relevance. Technologies are becoming more and more numerous every day. And our teachers help to understand both the innovations and the history of control systems. Another important fact is that our faculty is part of the Space Technology Institute. For example, practical training took place at the TsNIImash Flight Control Center, where we were told about piloting and automation of spacecraft. This experience has shown one of the directions open for us. The world is actively developing, and RUDN University is successfully keeping pace with the times. ”



SAVENKO ILYA, KIEV

“ Entering a Moscow university will not be easy for a person from another city. But if you choose RUDN, you can safely clear your mind of doubts! When I came to apply, I was very warmly welcomed by the members of the admission campaign committee. Узнав, что я из другого города, мне сразу дали стопроцентную гарантию в предоставлении общежития. Upon learning that I was from another city, I was immediately given a one hundred percent guarantee in the hostel provision. After I was told about many areas at the Academy of Engineering, I got interested in the direction “Management in technical systems”, because it is closely connected with IT technologies. The IT is considered to be the most demanded in our time. After I graduated from the undergraduate program, I entered the magistracy of the same direction and at the same time began to work in the field of my specialty. By the end of the master’s program, I already had a lot of experience, so you can safely enter adulthood after graduating from RUDN University. ”



HEAD OF THE PROGRAMME

RAZOUNNY YURY NIKOLAEVICH



Director of the Academy of Engineering of RUDN University.

Director of the Department of Mechanics and Mechatronics.

Doctor of Technical Sciences, Professor.

Academician of the Russian Cosmonautics Academy Named after K.E. Tsiolkovsky, Academician of the International Academy of Astronautics, full member of the American Institute of Aeronautics and Astronautics.

Co-Editor of Acta Astronautica (UK) and REACH (Germany).

RESEARCH INTERESTS:

Systems Analysis and Synthesis of Complex Technical Systems, Mechanics and Control Processes, Satellite System Design.