Systems and concepts Multi-D control of nuclear installations

Direction: 27.06.01 Management In Technical Systems
Scientific specialty: 05.11.16 Information-Measuring and Control Systems (in industries)
Program: Systems and concepts Multi-D control of nuclear installations
Certificate, degree or qualification: Researcher, Lecturer-researcher
Language of instruction: English
Duration and mode of study: 4 years, full-time
Program curator: Vladimir L. Kishkin

Graduation department: Department of Automatics (#2)

Goals of the Program
Main purpose of the Post Graduate Program is training highly qualified specialists for the enterprises and organizations of SC Rosatom in the field of monitoring, control and automation of nuclear facilities and nuclear power plants.

Characteristics of the scope and objects of professional activity of future graduates
The field of professional activity includes: development of new methods of information managing and processing, search for new technological solutions in designing of monitoring and control systems of technical objects; research in the field of control theory, artificial intelligence methods, control technologies of physical and technological parameters, control and safe operation of technological installations and engineering systems, including physical installations and nuclear power plants.

Objects of the professional activity
The following objects are the main ones for future professional activity of the specialists post graduated from the Program “Control in Engineering Systems”: nuclear facilities, nuclear physics and physical installation and the means for its safe operation; systems of monitoring, control, automation and technical diagnostics of technical objects, physical installations and nuclear power plants, including the information-measuring, executive and control modules, software and hardware of information-measuring systems, control and automation; their mathematical, algorithmic, information and software components; methods and tools for design, modeling, experimental investigation, verification and validation of design solutions, design and creation of equipment of monitoring and control systems of nuclear reactors and power plants using modern instrumentation systems of engineering analysis and design; theoretical and experimental studies of control systems of technical objects for various applications.

Brief description of the curriculum
The main feature of the educational process of preparation is the fundamental physical and mathematical and engineering training, which allows you to master the main basic and special disciplines. The research work of students is carried out in close connection with work carried out at the department and research organizations State Corporation "Rosatom" and other organizations engaged in activities in the field of technical systems, such as VNIIA, VNIIAES, SNIIP, NIKIET. The department graduates receive fundamental training for a wide range of problems, such as the design of control systems and the safe operation of nuclear power plants.

The base of industrial and/or scientific practice and employment
Russian research centres; enterprises of SC "Rosatom", JSC "Concern "Rosenergoatom".