

Area of study:  
**09.04.01 Informatics and Computation**

Program:  
**High-Performance Computing and Quantum Information Processing**

Degree: **Master**

Program length and study mode: **2 years, intramural**

Language: **Russian**

Credits: **120**

Start date: **September 01, 2020**

Location: **Taganrog, Institute of Computer Technologies and Information Security (ICTIS)**

Entry requirements:

bachelor or specialist diploma;  
internal entrance test in the field of Informatics and Computation

### **Program overview:**

The uniqueness of the program is based on a comprehensive approach to the development of components, programming and maintenance of modern and advanced high-performance computers, distributed systems and research systems of quantum information processing.

### **Program structure:**

- Basic module of University and general professional disciplines;
- Module of professional disciplines;
- Module of University academic mobility;
- Module of project activity.

### **Typical units of study may include:**

- High-Performance Computers;
- Quantum Information Processing;
- Architecture, Programming and System-on-Chip Design;
- Modern Technologies of Cross-Platform Software Development;
- Distributed Systems and Computer Networks; Big Data Technologies.

### **Research areas:**

- high-performance computers based on "system on a chip" (SoPC) technology;
- onboard hardware and software systems;
- simulators of quantum computers;
- CLOUD-oriented systems;
- network cluster systems.

### **Careers:**

in research organizations, research and production enterprises, IT-companies involved in the development, production and maintenance of high-performance computers and distributed systems.

The graduates will be able to fulfill the duties and functions of a specialist in research and development, a system programmer, a system analyst, a software developer and a software development manager for various platforms, a specialist in the field of systems on a chip.

### **Get in touch:**

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