



Program track 09.04.01

Informatics and Computer Science ✨

Educational program

Embedded Systems ✨

#Masters_program

The program prepares highly qualified masters of a wide profile. Graduates of this program will be in high demand in the space industry market, as well as among industrial companies engaged in embedded systems in other industries.

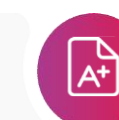
They will have unique competencies in participating in and managing projects, interacting with customers, partners, and foreign colleagues. During their studies, students will improve their English language skills, be able to defend their point of view, independently find answers to questions of interest, and conduct research.

It is also important that students are taught modern knowledge related to the design, creation and support of embedded systems, including for the space industry. Most of the teachers have extensive experience in conducting research and development in this area, and are current employees of research departments.

As a result of training, the graduate becomes a true professional in his field and can choose a future place of work from a wide range of enterprises and companies.



Entrance exams:



Entrance examination in embedded systems

150.000 ₺



Tuition fee per semester

10



Paid places in 2025

2 years



Duration of study

Intramural



Mode of study



Mission

The mission of the educational program is to prepare highly qualified specialists to carry out work on the creation of new high-tech systems.



Benefits of the program

Why is the program promising

01

The project work module helps to gain competencies in working with project and business management

02

The communication module provides international communication skills and engineering philosophy

03

The Formal Methods module prepares students for research and provides mathematical foundations that were missing during their undergraduate studies.

04

R&D module – work on multidisciplinary projects during studies, including master's theses and scientific seminars

Course director

Olenev Valentin Leonidovich

✦ Head of the Aerospace Computer and Software Systems department

✦ PhD

✦ Head of Aerospace R&D Centre

✦ Author of 5 patents

✦ Author of 6 educational and methodological manuals

✦ Laureate of the St. Petersburg Government Prize in the nomination "Educational and methodological support of the educational process aimed at improving the quality of training specialists", 2023

✦ Author of the monograph "Design and modeling of communication systems"



Mail

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Lutsiv Vadim Rostislavovich

- ✦ PhD
- ✦ Professor at the Department 14
- ✦ Author of the patent «Robot cleaner and controlling method of the same»
- ✦ Author of 4 educational and methodological manuals
- ✦ Author of 3 books
- ✦ Medal "Medal of Memory of the 300th Anniversary of St. Petersburg"

Shekhunova Natalia Aleksandrovna

- ✦ PhD, Docent
- ✦ Leading researcher at the Department 14
- ✦ Author of the book "Protected Software"
- ✦ Professor at the Department 14

Suvorova Elena Aleksandrovna

- ✦ PhD, Docent
- ✦ Head of the laboratory "System on Chip Lab"
- ✦ Author of the monograph "Design and modeling of communication systems"
- ✦ Author of the guideline "Architecture of Parallel Computing Systems"
- ✦ Certificate of honor for many years of conscientious work, due to personal contribution to the development of educational and scientific activities of GUAP, 2022

Taubin Feliks Aleksandrovich

- ✦ PhD
- ✦ Leading researcher at the Department 14
- ✦ Author of 13 patents
- ✦ Author of 4 educational and methodological manuals
- ✦ Honorary title "Veteran of LIAP"
- ✦ Medal "Veteran of Labor"
- ✦ Professor at the Department 14



Key special subjects



Processors, microprocessors, systems-on-chip, networks-on-chip, embedded systems interfaces

Embedded systems design in VLSI, VHDL, Specification and Modeling Languages

Computing networks, telecommunications, network standards, smart systems, Internet of things, cyber-physical systems

Computer vision, neural networks and artificial intelligence

Industrial data processing and control systems

High-performance parallel information processing systems

Information and coding theory, multimedia data compression and coding systems

Operating systems and real-time OS for embedded systems



Graduate competencies:

- ✦ As a result of training, each graduate has programming skills, modern communication technologies for on-board networks, masters the electronic component bases for on-board computer networks, can work with artificial intelligence methods, coding methods and information protection.
- ✦ You can become a programmer in the broad sense of the term, which will allow you to choose from a variety of different IT professions. Unlike other areas of study, this area will allow you to work both in software development, including specialized software for embedded systems, parallel, optimized, etc., and work with boards, microprocessors and microcontrollers. In addition, you will have access to vacancies related to the design and creation of computing networks with data transmission of any type.
- ✦ In addition to the regular educational process, research activities at the Aerospace R&D Centre allow you to acquire and improve unique skills in the latest scientific and industrial developments and gain experience working with technologies located at the frontier of science. Here you will be able to develop competencies in modern communication technologies, on-board data exchange networks for space and aviation, software of various levels (drivers, OS, high-level software), and also learn how to create software models and digital twins of communication systems and networks.

Who will you be able to work:

- ✦ Systems Analyst
- ✦ Systems Programmer
- ✦ Programmer
- ✦ Information Systems Specialist
- ✦ Head of Technical Department
- ✦ Research Engineer
- ✦ Lead Programmer
- ✦ Project Manager
- ✦ Research Associate

Partners and employers



ВЫМПЕЛ

Vympel Group



Intel Company

SYNOPSYS®

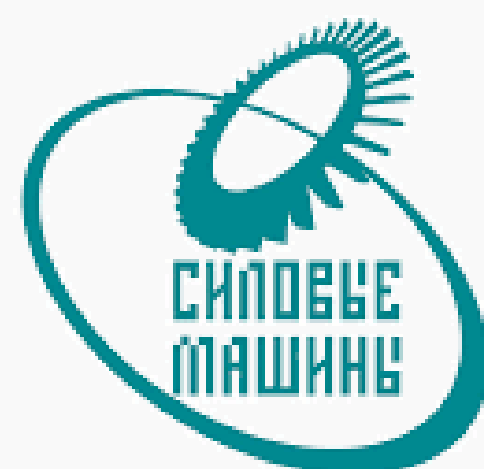
Synopsys



ELVEES

TRANSAS

TRANSAS



Power Machines



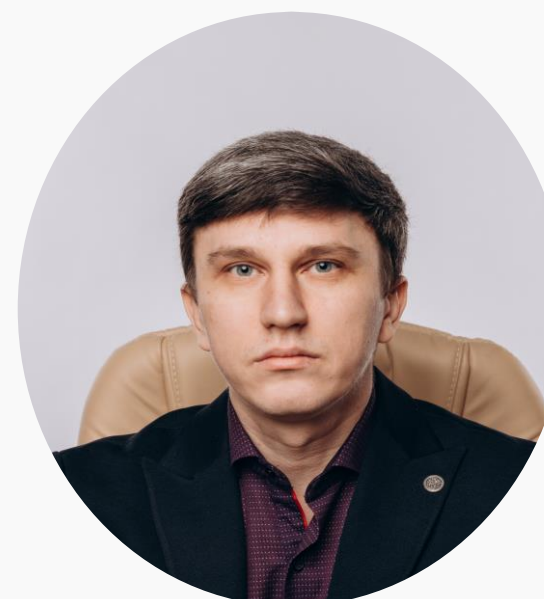
Arm



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ZASLON JSC

**More
information
about the
program**



**Taratun Vitaly
Evgenievich**



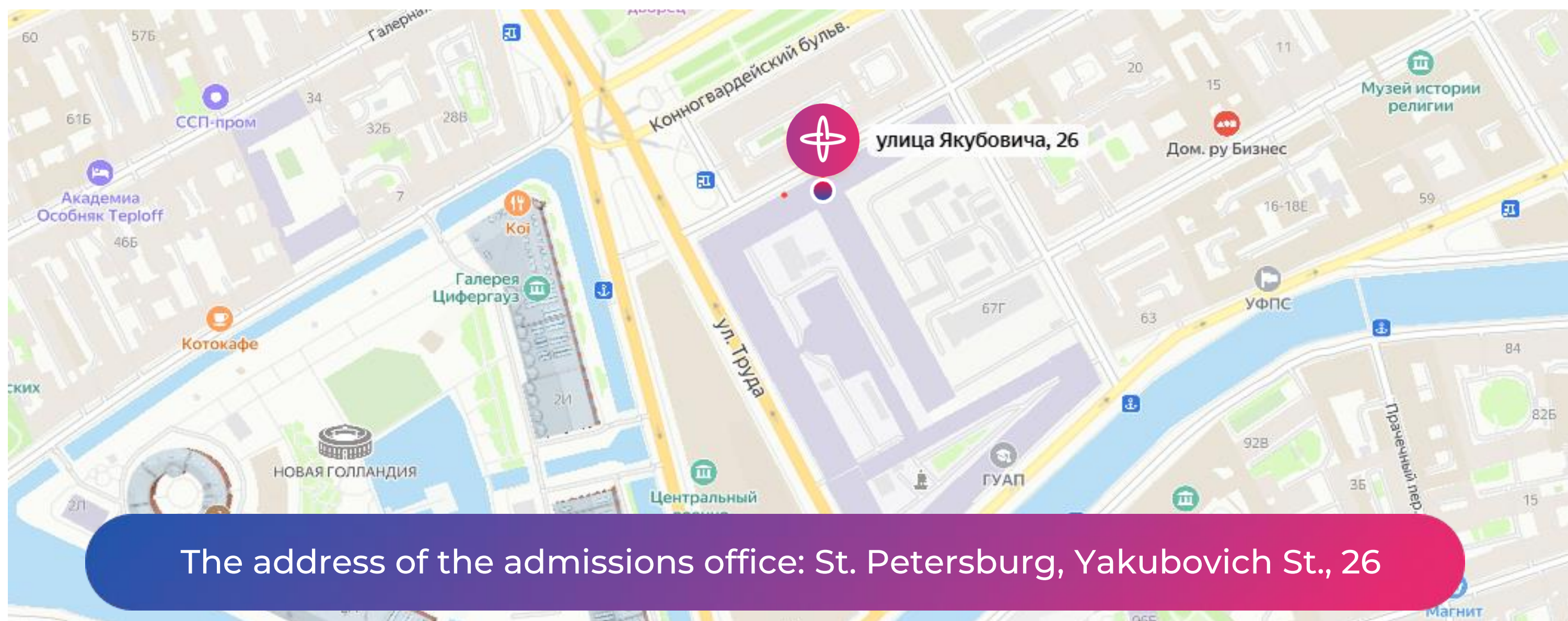
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**Program
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Website for
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