



**Scientific and Educational Complex
Created on the Base
of the Program Systems Institute
of the Russian Academy of Sciences
in Pereslavl-Zalesky**

PSIRAS





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Academic Science

The Program Systems Institute of the Russian Academy of Sciences (PSI RAS) was founded in April 1984 by a decree issued by the USSR government. The foundation aimed at the development of computer science in the country. Professor Alfred Aylamazyan, Doctor of Science, was assigned as director of the Institute. Now the Institute belongs to the Information Technologies and Computer Systems Department of the Russian Academy of Sciences. The Institute consists of five research centers:

- **Artificial Intelligence Research Center** develops expert systems, works on intellectual management of complex dynamic objects, information search on the Internet (ontological approach, multiagent support).
- **Medical Informatics Research Center (Interin Lab.)** works on the technology of building medical information systems in different information environments for corporate clients.
- **Research Center for Multiprocessor Systems** works on the industrial elaboration of the multiprocessor operating system for automated dynamic parallelization of programs; it also creates applications and develops high-level languages for multiprocessor systems.
- **Control Processes Research Center** conducts research on system analysis of regional development strategies and control theory.
- **System Analysis Research Center** investigates mathematical models and optimal processes in microsystems.

Agency-level Science

The Russian Research Institute for Regional Problems (RusRIRP) of the Ministry of Education was founded in 1991. RusRIRP has a tight partnership with PSI RAS; specifically, they form joint laboratories (the BOTIK telecommunication laboratory and the Uchcom Learning Communication laboratory), conduct cooperative research projects aimed at the development of the BOTIK telecommunication system, and collaborate within the framework of the SKIF supercomputer program.

Education

Primary school "Pochemouchka" is an educational institution of general education. The school provides all the necessary conditions for children's growth and development: English classes, computer-assisted and telecommunication learning, swimming-pool. Combining the kinder-garten and primary school form of educational institutions guarantees the implementation of major components of continuous life-long learning where programs, teaching staff, and information harmoniously complement each other.

The Aylamazyan International Children's Computer Center of PSI RAS (ICCC) was founded in 1986. ICCC organizes children's holidays providing them with complementary education all round the year.

Being an Associated UNESCO School, ICCC is actively involved in computer-assisted learning.

The teaching team includes leading scientists of PSI RAS, students and graduates of the University of Pereslavl, leading lecturers from Yaroslavl and Moscow, and colleagues from the USA, Holland, and Belgium.

The Aylamazyan University of Pereslavl got its start in 1993. The founders of the University are PSI RAS, RusRIRP, the administration of Pereslavl-Zalesky, and leading enterprises of the town.

University of Pereslavl offers programs in applied mathematics and computer science, computer science (in economics), and information systems and technologies. The teaching staff includes leading specialists of PSI RAS and RusRIRP.

Postgraduate programs of PSI RAS aim at preparing scientists for Ph.D. and doctorate degrees in the following specialties:

- 01.01.01 — Mathematical Analysis
- 05.13.11 — Mathematical Software for Computing Systems and Computer Networks
- 05.13.17 — Computer Science Theory

The Dissertation Board of PSI RAS was founded in 1994. The Ph.D. and doctorate degrees are awarded in the following specialties:

- 05.13.11 — Mathematical Software for Computing Systems and Computer Networks
- 05.13.17 — Computer Science Theory

Program Systems Institute Based Scientific and Educational Complex: Valuable Results

Realization of Large-scale Research Projects

One of the largest projects conducted by the members of the scientific and educational complex is the SKIF Supercomputer Program of the Union State (Russia&Belarus). The customer and coordinator of the program is the Ministry of Science and Education. The leading developers from the Russian side is PSI RAS. There are twenty contributors from Russia and Belarus including developers from RusRIRP and the University of Pereslavl.

Reorganization of the Pereslavl-Zalesky Infrastructure

Pereslavl is an ancient Russian town located 81 miles northeast of Moscow on the federal Moscow – Arkhangelsk highway. Pereslavl is an administrative area of the Yaroslavl region. The population is approximately 45,000 people, including 28,000 employment age adults.

Having developed several technical solutions, PSI RAS together with RusRIRP networked the town of Pereslavl: all the town's educational and research institutions, libraries, town administration, most enterprises, and hundreds of inhabitants. 85% of the subscribers have permanent high-speed network connections (100 Mbps backbone, 10–100 Mbps at subscribers).

The necessity of solving the communication problem in rural areas gave a fillip to the development of special solutions and building rural net-works in the Pereslavl region.

Interaction of Science and Education

PSI RAS and RusRIRP provide the University with teaching staff and infrastructure (access to local area network and Internet), offer relevant themes for students' research projects, and give them the opportunity to participate in SKIF, BOTIK, and other projects.

In its turn, **the University is a perfect source of specialists for PSI RAS and RusRIRP**. The University also hosts international students' schools and workshops on various subjects and research areas. The University students conduct research activities at PSI RAS and RusRIRP.