

The image features a large, modern, blue-tinted building facade on the left. Overlaid on this is a semi-transparent white banner containing the university's name and logo. The logo consists of a stylized red 'IPEU' monogram. To the right of the main building, there is a collage of six hexagonal images showing various campus scenes: a red and white building, a yellow building with trees, a red running track, a red and white building with a chimney, a grey building, and a classical building with columns.

Ivanovo State Power
ENGINEERING
University



Dear Colleagues!

Ivanovo State Power Engineering University history stretches back more than 90 years. ISPU has always been one of the flagships in training specialists for energy industry and related industries in Russia. Employers have consistently noted the high professional level of ISPU graduates. The latter enjoy high demand in labour market. This is a remarkable achievement of all generations of university teachers and staff. Even in the most difficult times, the university staff following the motto 'Semper in motu' demonstrates the ability to find the optimal solutions to the tasks. This is the crucial factor determining constant positive dynamics of university development.

At present, ISPU is a major scientific, educational and production centre ranked among the top hundred universities in the country. ISPU scientific schools have won RF President grants. The university inventions regularly win top awards at national and international exhibitions and salons. Significant are academic achievements. 18 study programmes developed by ISPU entered a thousand winners out of more than 30,000 programmes in the project «The Best Educational Programmes of Innovative Russia». ISPU dual degrees are recognized in the world on a par with degrees awarded by leading European higher educational institutions. ISPU is an associated member of European consortium EU4M. The production potential of the university has been increasing for the last years due to creating of multi-purpose technology park. It is a platform for venture enterprise development and creation of own implementation companies. ISPU sustainable development affords ground for optimistic forecasts.

Professor **Sergey V. Tararykin**, Doctor of Engineering,
Rector, Ivanovo State Power Engineering University

ISPU TODAY

- Over 7 thousand students
- 9 faculties
- 39 departments
- Military Training Centre
- Engineering College
- 58 Doctors of Science
- 271 PhD holders (Candidates of Science)
- 14 research and education centres
- 3 major scientific schools
- The best scientific technical library in the region
- Sports centre, health centre and summer sports and recreation centre
- Students' television studio

ISPU BOARD OF TRUSTEES

Key activities:

- Assistance in cooperation between the university and leading power engineering companies of Russia.
- Assessment of graduates' education quality in compliance with corporate requirements in energy industry.
- Assistance in quality assessment of graduates' employability and career support.
- Financial aid to upgrade university facilities up to international standards.



Head of the Board of Trustees
Professor **Anatoly Y. Kopsov**,
Doctor of Engineering

ISPU STRATEGIC PARTNERS

To enhance educational process and improve training quality, to encourage and perform academic research Ivanovo State Power Engineering University has concluded a bilateral agreement on cooperation with major energy companies:



- JSC "Russian Grids"
- JSC "Federal Grid Company of Unified energy system"
- JSC "Rosenergoatom Concern"
- JSC "System Operator of Unified Energy System"
- JSC "Interregional Distribution Grid Company of Centre and Volga Region"
- JSC "Generation Company of the Wholesale Electricity Market (OGK-2)"
- JSC "Territorial Generation Company # 2"
- JSC "Territorial Generation Company # 6"
- JSC "Northwest Energy Engineering Centre"

Key Cooperation Activities:

- Target contract training of undergraduate and postgraduate students
- Participation of representatives of the companies in educational process, job fairs, student internship and placement, student involvement at production facilities
- Providing practical training for ISPU teachers at company enterprises
- Professional training, retraining and professional development for engineering staff of the companies at ISPU
- Involvement of ISPU specialists in research activities of the companies to design scientific and innovative policy, to conduct joint theoretical researches, to hold scientific conferences and seminars
- Upgrading of facilities and training and research equipment



ACADEMIC ACTIVITY

- Pre-university training in the form of preparation courses and in ISPU Engineering College
- Full-time and part-time Bachelor, Master and Specialist training which is both publicly-funded and self-funded or company/organization-funded. On 1 January, 2011 the University introduced level system of training (awarding Bachelor's, Specialist's and Master's Degrees) according to Federal State Educational Standards.
- Additional Qualification (Second-Major Training)
- PhD and Doctorate Studies
- Professional development for university teaching staff, specialists and workers of energy industries
- Professional retraining



We offer BEng programmes in:

"THERMAL POWER ENGINEERING"

Thermal power plants
Water and fuel engineering at thermal and nuclear power plants
Industrial thermal engineering
Industrial power supply
Workflow and Production Automation (Thermal Power Engineering)

"POWER ENGINEERING"

Gas and steam turbine power plants and engines

"TECHNOSPHERE SAFETY"

Environmental Engineering



We offer MEng programmes in:

Thermal Power Engineering



Major Employers of Faculty Graduates:

- Kostromskaya State District Power Plant, Ryazanskaya State District Power Plant, Konakovskaya State District Power Plant, Kirishskaya State District Power Plant
- Branches of territorial generation companies (TGC): TGC-1, TGC-2, TGC-4, TGC-6
- Branches of JSC "Rosenergoatom Concern": Kolskaya NPP, Kalininskaya NPP, Leningradskaya NPP, Bilibinskaya NPP
- Russian Federal Nuclear Center, Sarov town
- Moscow joint power company, Moscow city
- JSC "INTER RAO Electrogeneration"
- JSC "Group E-4", Moscow city
- JSC "Saturn – gas turbines", Rybinsk city
- JSC "Proyektmashpribor", Moscow city
- JSC "SeverStal", Cherepovetz city
- JSC "APATIT", Kirovsk town
- JSC "Zarubezhenergoprojekt", Ivanovo city
- JSC "ZiO-Podolsk", Podolsk town
- Company Group "SU-155", Moscow city

DEPARTMENTS:

Department of Process Automation
Department of Industrial Thermal Engineering
Department of Thermal Engineering Theory
Department of Thermal Power Plants

Department of Chemistry and Chemical Engineering
Department of Steam and Gas Turbines



We offer BEng programmes in:

“ELECTRICAL POWER ENGINEERING”

High voltage electrical power engineering and equipment

Electric power stations

Electric grids and circuits

Electricity supply

Relay protection and power grid automation

Electrical devices and systems



We offer MEng programmes in:

“ELECTRICAL POWER ENGINEERING”

High voltage electrical power engineering and equipment

Relay protection and power grid automation



Major Employers of Faculty Graduates:

- JSC “FGC UES”, Moscow city
- JSC “ System Operator UES”, Moscow city
- JSC “IDGC of Centre”, Moscow city
- JSC “IDGC of Centre and Volga Region”, Nizhny Novgorod city
- Branches of JSC “Rosenergoatom Concern”: Kolskaya NPP, Kalininskaya NPP, Leningradskaya NPP, Bilibinskaya NPP
- Russian Federal Nuclear Center, Sarov town
- JSC “Sevzapelektrosetstroy”, Saint Petersburg city
- JSC “Energostroy MN”, Moscow city
- JSC “Ivelectronaladka”, Ivanovo city
- CJSC “Electrostroyontazh”, Domodedovo town
- JSC “Electrocentronaladka”, Moscow city
- JSC “Electrocentromontazh”, Moscow city
- JSC “Severstal”, Cherepovets city
- “GNC RF IFVE ”, Protvino town



DEPARTMENTS

Department of High Voltage Power

Engineering, Electrical Engineering and Electrophysics

Department of Theoretical Foundations of Electrical Engineering and Electrical Technology

Department of Electrical Systems

Department of Electrical Power Stations, Substations and Electrical Equipment Diagnostics

Department of Automatic Control in Electric Power Systems



We offer BEng programmes in:

"MECHANICS AND MATHEMATICAL MODELLING"

Experimental mechanics and computer modeling in mechanics

"ELECTRICAL POWER ENGINEERING"

Electromechanics

Electric drive and automation

"DESIGN AND TECHNOLOGY SUPPORT FOR ENGINEERING INDUSTRIES"

Machine-building technology

Marketing of technological equipment and tools in engineering industries

"ELECTRONICS AND NANOELECTRONICS"

Industrial electronics

"TECHNICAL SYSTEMS CONTROL"

Systems automation and control

We offer MEng programmes in:

"ELECTRICAL POWER ENGINEERING"

Electromechanics

Electric drive and automation

"TECHNICAL SYSTEMS CONTROL"

Systems automation and control

"ELECTRONICS AND NANOELECTRONICS"

Industrial electronics



Major Employers of Faculty Graduates:

- Branches of JSC "Rosenergoatom Concern":
 - Kolskaya NPP, Kalininskaya NPP, Leningradskaya NPP, Bilibinskaya NPP
- CJSC "Moselectromash", Lobnya town, Moscow Region
- JSC "Privod", Lys'va town
- JSC "ELDIN", Yaroslavl city
- JSC "Machine-Building Plant" (ELEMASH), Electrostal town
- CJSC "Plant of Electrtechnical Equipment", Velikie Luki town
- JSC "Saturn – gas turbines", Rybinsk city
- Russian Federal Nuclear Centre, Snezhinsk town
- LLC PO "Leningrad Electric Machine Production Factory", St. Petersburg city
- Russian Federal Nuclear Centre, Sarov town
- JSC "Solikamskbumprom", Solikamsk city
- JSC "Safonovo Electric Machine Plant", Safonovo town
- JSC "Kolomensky Plant", Kolomna town
- JSC "KRANEKS", Ivanovo city
- JSC "Strommachine", Kohma town
- JSC "Rosenergoatom Concern" branch "Balakovskaya NPS", Balakovo
- JSC "OGK-6" Branch Kirishskaya State District Power Plant, Kirishi town
- JSC NPP "Kaluzhsky Instrument Making Factory 'Taifun'", Kaluga city
- JSC "Stekloholding", Gus Khrustalny town

DEPARTMENTS

Department of Theoretical and Applied Mechanics
 Department of Electronics and Microprocessor Systems
 Department of Electric Drive and Industrial Plants Automation

Department of Electromechanics
 Department of Applied Mathematics
 Department of Technology for Machine Building



We offer BEng programmes in:

"THERMAL POWER ENGINEERING"
Power Engineering of Thermal Technologies
"TECHNOSPHERE SAFETY"
Life Safety in Technosphere



We offer Specialist programme in:

Nuclear Power Stations: Design, Operation and Engineering
Specialization "Design and Operation of Nuclear Power Stations"

Major Employers of Faculty Graduates:

- Branches of JSC "Rosenergoatom Concern": Kolskaya NPP, Kalininskaya NPP, Leningradskaya NPP, Bilibinskaya NPP
- Russian Federal Nuclear Centre, Sarov town
- Russian Federal Nuclear Centre, Snezhinsk town
- JSC "Severstal", Cherepovets city
- JSC "Saturn – gas turbines", Rybinsk city
- JSC "NPO Saturn", Rybinsk city
- JSC "Machine-Building Plant" (ELEMASH), Electrostal town
- JSC "MK Kraneks", Ivanovo city



DEPARTMENTS

Department of Nuclear Power Stations
Department of Life Safety
Department of Physics
Department of Power Engineering of Thermal Technologies and Gas Supply
French Language Department

We offer BEng programmes in:

“TECHNICAL SYSTEMS MANAGEMENT”

Technical systems management and IT

“APPLIED MATHEMATICS AND INFORMATION SCIENCES”

Mathematical modelling and Computational mathematics

“IT AND COMPUTER SCIENCE”

High performance computer systems based on mainframe

“APPLIED INFORMATION SCIENCES”

Applied information sciences in information sphere

Applied information sciences in social communication

“SOFTWARE ENGINEERING”

Software and information systems development



We offer MEng programmes in:

“IT AND COMPUTER SCIENCE”

High performance computer systems

“SOFTWARE ENGINEERING”

Corporate information systems

“TECHNICAL SYSTEMS MANAGEMENT”

Technical systems management and IT



Major Employers of Faculty Graduates:

- Branches of JSC “Rosenergoatom Concern”: Kolskaya NPP, Kalininskaya NPP, Leningradskaya NPP, Bilibinskaya NPP
- JSC “INTER RAO Electrogeneration”
- JSC “OGK-3”
- NPO “Saint Petersburg Electrotechnical Company”, Saint Petersburg city
- JSC “Electrocentraladka”, Moscow city
- JSC “UES Engineering Center”, branch “ORGRES Firm”, Moscow city
- Russian Engineering and Production Company “Electroavtomatika”, Moscow city
- JSC “Electrocentromontazh”, Ivanovo city
- JSC “Informatika”, Ivanovo city
- LLC “Neofit”, Ivanovo city
- Ivanovo IT Centre
- LLC “Consultant-service”, Ivanovo city
- Administration of Ivanovo city and municipalities in Ivanovo Region
- JSC “Zarubezhenergoproject”, Ivanovo city
- JSC “Machine-Building Plant” (ELEMASH), Electrostal town
- JSC “Proekt mashpribor”, Moscow city
- JSC “TGK-6”

DEPARTMENTS

Department of Information Technology
Department of Computer Software
Department of Higher Mathematics
Department of Control Systems

Department of High-Performance Computer Systems
Intensive English Learning Department
Department of Design and Engineering Graphics



WE OFFER BACHELOR PROGRAMMES IN:

"MANAGEMENT"

Financial management
Production management
Marketing

"SOCIOLOGY"

Marketing and advertising sociology
Expert analysis in management structures

"ADVERTISING AND PUBLIC RELATIONS"

Advertising and Public Relations in industries (electrical
power engineering)
Advertising and Public Relations in business



WE OFFER MASTER PROGRAMMES IN:

"MANAGEMENT"

Public financial management
Energy business management



Major Employers of Faculty Graduates:

- JSC "IDGC of Centre and Volga Region", Moscow city
- JSC "TGK-6"
- JSC "OGK-3"
- Government of Ivanovo Region
- Ivanovo City Administration
- Project-2000, Ivanovo city
- "Kangaroo" Group, Ivanovo city
- International Marketing Centre "Ivanovo", Ivanovo city
- "Neurosoft" company, Ivanovo city
- Sberbank of Russia
- Bank "Ivanovo", Ivanovo city
- Moscomprivatbank
- Investtorgbank



DEPARTMENTS

Department of Management and Marketing
Department of Economics and Business organization
Department of Public Relations and Mass Media
Department of Sociology
Department of General Economic Theory
Department of Philosophy
Department of Russian History and Culture
Department of Foreign Languages
Department of Physical Education

FACULTY OF PART-TIME AND DISTANCE LEARNING

WE OFFER BACHELOR PROGRAMMES IN:

“ELECTRICAL POWER ENGINEERING”

Electricity supply

Electric drive and automation

“THERMAL POWER ENGINEERING”

Thermal power plants

Industrial thermal engineering

“ELECTRONICS AND NANOELECTRONICS”

Industrial electronics

The faculty of part-time and distance learning provides fee-paying training in virtually all programmes and specialities implemented as full-time in the respective faculties.

FACULTY FOR INTERNATIONAL STUDENTS



The Faculty for International Students (FIS) was established in 1993. Currently the Faculty provides full-time training for 75 international students and distance learning for 15 international students. Students from 25 countries, including CIS countries, study at the University: Angola, Zambia, Yemen, Kenya, Congo, Cote d'Ivoire, Chad, Guinea-Bissau, Botswana, Ecuador, Syria, Palestine, Vietnam, Turkey, Azerbaijan, Armenia, Belarus, Kazakhstan, Moldova, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. Admission to PhD programmes is open. Last year four PhD international students successfully defended their PhD theses.





MILITARY DEPARTMENT

The military department was established on 1 September, 1939. The department provides training for second-year, third-year and fourth-year students from all faculties studying full-time. The department trains specialists for Army Signal Corps of the Russian Federation. The following specialities are available:

- use of military units specialized in satellite communication;
- use of military units specialized in tropospheric radio relay communication;



- use of military units specialized in electrically conductive means of communication.

Admission is open to RF citizens willing to undergo military training. The admission requirements are good health and successful passing of selection procedure. The course of training runs 2,5 years. The students are entitled to additional education maintenance allowance. Under the order of RF Ministry of Defence the students who take the course of training, undergo the training period in Armed Forces and successfully pass the state examination in military training are conferred the rank of 'Lieutenant Reserve'.



CENTRE FOR MILITARY TRAINING

Under the RF Government Provision #275-p, 6 March, 2008 "On military training centres, military training faculties and departments in Higher Educational Institutions" Military Training Centre was established in ISPU on 1 September, 2008 on the basis of Military Department.

The Centre trains officers for Army Signal Corps of Russian Federation. The following specialities are available:

- use of military units specialized in satellite communication;
- use of military units specialized in tropospheric radio relay communication;
- use of military units specialized in electrically conductive means of communication.

The course of training runs 4 years. The students are entitled to additional education maintenance allowance.

On graduation from the university and military training centre, the graduates are conferred the rank of 'Lieutenant' and are obliged to serve 3 years in RF Armed Forces in officer positions.



Key activities:

- Concluding agreements with employers on cooperation in student professional training and placement
- Cooperation with enterprises on young specialists' employment
- Arrangement and organization of annual job vacancies distribution (preliminary and final) for young specialists, ISPU graduates. Representatives of industrial enterprises, organizations and companies are invited.
- Organization of job vacancy fairs, enterprise presentations and student-employer meetings
- Cooperation with local bodies including territorial body of state employment service, social organizations and associations concerned with enhancing of graduates' employability on labour market

POSTGRADUATE AND POSTDOCTORAL STUDIES

PhD PROGRAMMES (FOR CANDIDATE'S DEGREE):

TECHNICAL SCIENCES

- Friction and wear in machines
- Technology and equipment of mechanical and physical-technical treatment
- Electromechanics and electric apparatus
- Electrical materials and products
- Electrical systems
- Theory of electrical engineering
- Information-measuring and control systems (machine building)
- System analysis, information control and processing (power engineering, regional management and industry)
- Automation and Control of technological processes and production (in industry)
- Management in social and economic systems
- Mathematical support and software for computers, computer systems and networks
- Design automation systems (electrical and power engineering)
- Mathematical modelling, numerical methods and software systems
- Power engineering systems
- Electrical power stations and systems
- Nuclear power plants: design, operation and decommissioning
- Industrial thermal power engineering
- High-voltage engineering

- Thermal power stations, their systems and plants
- Processes and devices of chemical technologies
- Labour safety (for power engineering and machine building)

PHYSICAL AND MATHEMATICAL SCIENCES

- Dynamics and strength of machines, devices and equipment
- Condensed-matter physics
- Thermophysics and thermology

PHILOSOPHICAL SCIENCES

- Philosophy of Science and Technology

ECONOMIC SCIENCES

- Economic theory
- Economics and national economy management
- Finance, monetary circulation and credit

SOCIAL SCIENCES

- Theory, methodology and history of sociology

DOCTORATE DEGREE PROGRAMMES:

- Electrical systems
- Automation and Control of technological processes and production
- Electrical power stations and systems
- Industrial thermal power engineering
- High-voltage engineering
- Thermal power stations, their systems and plants

Key activities:

- Professional development of teaching staff in priority areas at ISPU
- Professional development of teaching staff in priority areas at universities of Ministry of Education and Science of the Russian Federation
- Short-term seminars as a form of professional development for deans and heads of departments which provide for the exchange of experience of scientific, educational and organizational work
- Professional retraining of specialists under the programmes of Continuing Professional Education. The programmes meet both the requirements for specialists (ISPU licences) and the qualification requirements for specific professions and positions.



INSTITUTE FOR PROFESSIONAL DEVELOPMENT AND RETRAINING IN POWER ENGINEERING

Key activities

- Professional development for managers, specialists and workers of generation, grid and industrial enterprises
- Attestation training and knowledge control for managers, specialists and members of attestation commissions in power engineering companies
- Training for workers of dangerous industrial facilities (in study fields "New Profession" and "New Position")
- Professional retraining of graduate specialists (in study fields "Additional Qualification" and "New Type of Professional Activity")
 - Training of management staff and specialists lacking special education and responsible for operative condition and safe operation of thermal and electrical power plants
 - Development of methods and future directions of professional training, study programmes and their scientific and information support, electronic and technical means of training





Президентская программа
подготовки управленческих кадров

Информационный сайт Комиссии по организации подготовки управленческих кадров
для организаций народного хозяйства Российской Федерации

PRESIDENTIAL PROGRAMME FOR MANAGEMENT PERSONNEL TRAINING FOR THE RUSSIAN ECONOMY

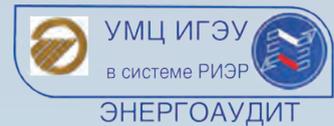
ISPU has been implementing the programme since 1998.

The programme aims to improve the system of enterprise management and enhance their efficiency.

The programme provides professional retraining for senior and middle managers in:

- "Management". Specialization: "Management for small and medium-sized businesses".
- "Marketing". Specialization: "Marketing for small and medium-sized businesses".
- "Finance". Specialization "Financial management".

ISPU TRAINING CENTRE FOR VOLUNTARY CERTIFICATION IN THE FIELD OF RATIONAL USE AND CONSERVATION OF ENERGY



Ivanovo State Power Engineering University is an authorized centre in RUER System which trains specialists for energy audit in compliance with modern requirements for energy-efficiency in power engineering and housing services. The study programmes offered have been certified by RUER System:

- Energy audits of heat and fuel-consuming devices and networks aiming to improve energy efficiency and conservation
- Energy audits of electrical installations and networks aiming to improve energy efficiency and conservation

CENTRE OF DISTANCE LEARNING IN THE FACULTY OF ECONOMICS AND MANAGEMENT

The Centre offers additional vocational study programmes administered by the Faculty of Economics and Management. They are aimed at managers and staff of various enterprises and organizations, state and municipal civil servants, students and postgraduates. The training is provided via distance learning technologies regardless of students' whereabouts. The acquired qualification is confirmed by the certificate.

Study programmes:

- Business-information analysis for effective management decision making
- Ensuring personal data security during its processing in information systems
- Efficiency assessment of investment projects in energy sector
- Improving the quality of management in public administration through the use of CAF model

“Nuclear power and thermal physics”

- Nuclear Power Stations and Plants
- “Design and technological software for engineering industries”
- Machine-building technology



After the college, graduates of the programme “Design and technological software for engineering industries” are able to continue training in the same field of study in ISPU by reduced programme. The admission is on competitive basis by entrance examinations results.

UNDERGRADUATE ADMISSIONS CENTRE

Main goals:

- To help the entrants to make a conscious and informed choice of speciality
- To provide profound background knowledge of main subjects for further successful study in the university (mathematics, physics, Russian language, foreign languages, engineering graphics, computer science, programming, history, social studies and chemistry)
- To offer preparation courses for the Unified State Examination in the disciplines mentioned above



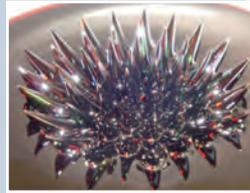
Exam Preparation Courses:

- for school students of 11th forms from Ivanovo city – evening courses (8, 6 or 3,5-month long)
- for school students of 11th forms from other cities and towns – part-time courses (9-month long)
- for school students of 10th forms from other cities and towns – part-time 2-year courses with extended study programme
- for all-comers – individual study programme for all above mentioned disciplines

Key research areas

Nanodispersed magnetic fluid systems and equipment

- Basic and applied research on the development of scientific bases of non-magnetic material separation technology
- Development of pilot lots of nanostructured ferromagnetic fluids with different properties for use in various devices



Microprocessor system for industrial process control

- Creation of energy-efficient electrical mechatronic systems and modules based on finite element simulation and real-time synergistic control
- Development of control principles for polymer optical fiber production based on systems with variable structure
- Development of new methods and algorithms for automatic control and intellectualization of automatic process control systems at electrical plants



Energy-saving, environmental safety, thermal and electrical power reliability

- Improvement of operational reliability and safety of nuclear power plants using modern scientific and technical equipment on the basis of full-scale simulators
- Development of systems ensuring the elimination of thermal and hydraulic imbalance of heat and water supply pipe networks
- Development of energy audit techniques for companies, registration of energy passports
- Development of automated information system for fuel energy balance in the regions
- Development of the fundamentals of data processing and chemical control of water coolant units on the basis of energy-efficient and resource-saving technologies
- Study of surge at arcing ground fault to increase electrical networks reliability



Diagnostic systems for electrical equipment

- Basic research on the development of resonant vibration diagnostic methods for power equipment
- Applied research on the development and maintenance of "Diagnostics" software systems to ensure reliable operation of power equipment



Advanced control systems for metal cutting equipment and robotic technical complexes

- Applied research on the development of integrated digital NC system and asynchronous electric drive for metal cutting machine tools with the use of advanced processing technology

Electric drives and high precision control system

- Research on the development of a new

generation of electric drives with high precision control and software for EPV-series frequency inverters

Information and telecommunication systems

- Informatization of Russian regions. Creation of software platform of automated information system for regional government

Information support of decision making in power engineering

- Research in information support methodology of decision-making in power engineering

Geographic information systems and technology

- Research in the field of spatial modelling of distributed technical systems
- Development of models, methods and software tools to support decision-making based on geographic information systems



Computer training and simulation systems

- Research on improvement of operational reliability and safety of nuclear power plants using modern scientific and technical equipment on the basis of full-scale simulator VVER-1000 and power units of thermal power stations

Energy-efficient and energy-saving thermal processes and technology

- Applied research on development of effective modes of blast furnace gas cleaning in blast furnace
- Research on thermal processing of solid waste for further production of fuel gas and energy

Dynamics and vibration diagnostics of complex mechanical systems

- Basic and applied research on the development of resonant vibration diagnostics, identification and rehabilitation of biomechanical objects and the development of methods to improve working conditions at industrial enterprises
- Research in vibration monitoring of rotary power equipment
- Calculation of the state of spatial frame structures with memory effect

SCIENTIFIC SCHOOLS

The university has three leading scientific schools recognized by the Russian Academy of Natural Science:

“Research and development of information and control mechatronic systems”

The founder of the scientific school is **Sergey V. Tararykin**, Doctor of Engineering, Professor, Head of the Department of Electronics and Microprocessor Systems, Honoured Scientist of Russian Federation, Honoured Worker of Higher Professional Education of the Russian Federation, Honorary Professor of Higher School of Mechanics and Microtechnology, Besancon (France), Rector of ISPU.

Three times the scientific team has been awarded grants of the President of the Russian Federation to support the leading scientific schools.

“Theory and technology of control systems (multi-functional automatic process control systems) of power units at electrical plants”

The founder of the scientific school is **Yuri S. Tverskoy**, Doctor of Engineering, Professor, Head of Department of Control Systems, member of the Academy of Engineering Sciences named after A.M. Prokhorov, Honorary Worker of Higher Professional Education of the Russian Federation, the CIS Honoured Power Engineer, member of the Scientific and Technical Council of RAO UES Engineering Centre.

“Research of team work in organizations”

The founder of the scientific school is **Alexander M. Karyakin**, Doctor of Economics, Professor, Dean of the Faculty of Economics and Management, Corresponding Member of the Russian Academy of Natural Sciences.

RESEARCH CENTRES AND DEPARTMENTS

In order to improve the competitiveness of the university, to conduct innovative researches meeting the modern requirements of country development strategy, ISPU created and successfully operates scientific implementation structures that produce innovative high-tech products:

1. Fundamental Research Laboratory of Applied Ferrohydrodynamics.
2. Fundamental Research Laboratory of vibration diagnostics and vibro-protection.
3. Industrial Research Laboratory of Energy and Resource Saving.
4. Teaching and Research Centre for technological and environmental safety in energy sector.
5. Research Institute of Electronic Technology.
6. Teaching and Research Centre of simulators in energy sector.
7. Centre for design and reliability of electrical equipment.
8. Teaching and Research Centre of industrial thermal power engineering.
9. Centre for energy-efficient technology.
10. Teaching and Research Centre of heat and mass transfer.
11. Student Design and Engineering Studio.
12. Cadastre Centre.
13. Centre for Information Technology.
14. Department of information technology in power systems.

TECHNOPARK

On the basis of three innovative areas of research and development work in the sphere of machine tool industry and nanotechnology ISPU created “Technopark”, which aims at technology transfer, scientific and technical assessment of projects, scientific, methodical, information and industrial support of research and development in the field of high-tech business.

The university established three small innovative companies:
LLC "Centre of Energy Technology";
LLC "Small Innovative Enterprise of Energy-Efficient Technology";
LLC "Mechatronics"



RESEARCH AND TRAINING CENTRE

To integrate training and research, to involve leading research and teaching staff, students and postgraduates in fundamental research and experimental design work with the use of modern scientific and educational equipment, the university set up 14 research and training centres (RTC):

1. Research and training centre for high technology in thermal and nuclear power.
2. Research and training centre of nanodispersed magnetic fluid systems "Polus".
3. Research and training centre of NPC systems and robotics.
4. Research and training centre "Chemical technology in energy sector".
5. Research and training centre for modelling and diagnostics of complex structure medium and systems.
6. Russian Research and Training Centre for V.S.Solovyov heritage.
7. Research and Training Centre "Energy-efficient and energy-saving thermal processes and technology".
8. Research and Training Centre "Distributed information systems and technology".
9. Research and Training Centre "Electromechanotronic technology of automation and energy-efficiency".
10. Regional Research and Training Centre "Budgeting based on the concept of quality".
11. Regional Research and Training Centre "Higher Education in Russia: Past and Present".
12. Research and Training Centre "Mathematical modelling of economic and technological processes in energy sector".
13. Regional Research and Training Centre of computer modelling and design "Tempo".
14. Research and Training Centre "Energy-efficient technology for thermal power plants".

The most significant scientific developments of ISPU were displayed on major international exhibitions, including the International Exhibition of Inventions, New Techniques and Products (Geneva, Switzerland), the International Salon of Inventions "Lepine Competition" (France), Moscow Salon of Innovations and Investments, International textile-industry forum "The Golden Ring" (Ivanovo), International Forum and Exhibition on Nanotechnology (Moscow), etc. Since 2003, the university has been participating in the International Innovation salon "Eureka" (Brussels, Belgium) on an annual basis. In recent years ISPU scientific achievements have been awarded 27 gold and 2 silver medals and 29 Laureate diplomas.



INTERNATIONAL ACTIVITY

ISPU international collaboration with universities and research organizations of different countries is promoted in the following directions:

- Academic cooperation and joint scientific research
- Training specialists for foreign countries

Since 2010 ISPU has been participating in the Consortium of European Universities which provides training for Master's Degree in Mechatronic Engineering (EU4M-Consortium). The programme Erasmus Mundus Masters Course in Mechatronic and Micro-Mechatronic Systems brings together universities in Germany, France, Spain, Russia and Egypt. Under this programme the students are offered a two-year master's course in two universities of the Consortium. The course is taught in local languages of partner universities. Various tasks fulfilled during the master's course are aimed at solving real engineering problems which the students encounter during their internship in European enterprises.

ISPU collaborates with the National Higher School of Mechanics and Microtechnology (ENSMM) Besancon, France. The cooperation involves student exchanges, lecturer exchanges, internships, joint scientific supervision of PhD students, master's and PhD theses defence. The City of Besancon established an annual scholarship for ISPU students. In September 2011, after establishing similar educational and research missions the two universities signed the agreement of double degrees in mechanical engineering, microtechnology, electronics and automation.

Two educational programmes of ISPU, "Nuclear Power Stations and Plants" and "Industrial Electronics", became the first programmes in Russia which were accredited and recognised in 16 European countries participating in the project EUR-ACE. In 2012, ISPU successfully passed the external audit and achieved the European Foundation for Quality Management (EFQM) "Recognised for Excellence".

12 ISPU students were awarded master's degrees and 3 defended PhD theses in the universities of France and Germany.

Cooperation with US educational institutions began in 1991. Over the years, more than 60 students of economics have completed training at leading American universities and have been awarded bachelor's, master's and PhD degrees.

At present ISPU performs international scientific activity in cooperation with the following countries: the USA, France, Norway, Germany, Israel, Great Britain, Hungary, Poland, Kazakhstan, Lithuania and Tajikistan. The spheres of collaboration include thermal engineering, energy efficiency, electrical and mechanical engineering, electronics, GIS technology, applied mathematics, economics and management and foreign languages.

In 2008 the educational and scientific centre for energy efficient technologies De Dietrich was established in ISPU with the support of French company De Dietrich Thermique and the National Institute of Applied Sciences (INSA) in Strasbourg. The main objectives of the Centre are the following: the development and improvement of modern equipment and automation means, the creation of innovative systems for production, distribution and consumption of thermal energy in accordance with the European standards of energy efficiency and environmental friendliness. Every year 400 students are trained in the Centre laboratories and approximately 300 specialists from Russia, Belarus and Kazakhstan undergo traineeship at the Centre.



ISPU established the Russian-French cultural centre which aims to promote the French language and French culture in the region and provides information on study opportunities in France. The centre offers French language courses.



Publishing is one of the priorities of Ivanovo State Power Engineering University. In the last 5 years the university has published about 1,052 items of scientific, academic and methodological literature. The publishing work is done in accordance with the plan of university methodical commission. The printing is carried out in the university printing house.

Currently 70% of books are printed by the Department of offset printing UIUNL. Publishing department of UIUNL performs pre-press of authors' materials and reproduction of original models by

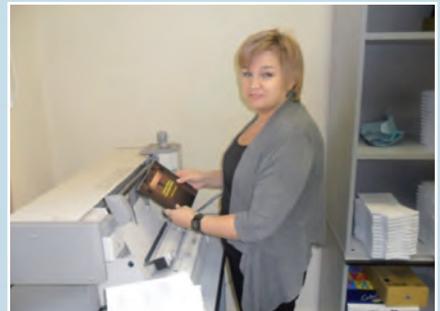


means of offset printing. Qualified staff in the editorial and production departments contribute to the quality and improvement of printed product design. The university publishing and printing facilities provide opportunities to master the production of full-colour publications.

Among the publications, a central place is occupied by scientific literature (the works of University leading scientists) as well as conference materials (of various conferences held at the University): International Scientific and Technical

Conference 'Status and prospects of electrical technology development' (Benardos Readings), International scientific conferences hosted by Russian research and educational centre of V.S.Solovyov heritage studies ('Solovyovsky seminar'), International Scientific and Practical Conference 'Innovation, technology and economy', International Conference on Nano-dispersed Magnetic Fluids in Plyos, Regional Conference for students and postgraduates 'Energy', International Scientific and Practical Conference 'Power Equipment Efficiency Improvement'.

Since 2001 the University has published the journals 'Vestnik of Ivanovo State Power Engineering University' and 'Solovyov Studies', which contain the materials of fundamental and applied research, advanced engineering solutions, hypotheses and scientific disputes. The journals are included in the list of leading reviewed scientific journals and publications approved by Higher Attestation Commission (VAK RF) for publication of



theses results of advanced degrees of Candidate and Doctor of Science, they are included in Russian Scientific Citation Index (RINZ) and Ulrich's database (USA).

Scientific publications and training manuals and coursebooks by ISPU authors have been awarded diplomas of prestigious international and regional competitions such as 'University Book' and 'University Book - The Golden Ring'.



"Give me a library, and I will build a university about it"
Benjamin Ide Wheeler

ISPU library is a part of unified academic, scientific and educational university system. It is a modern information and cultural centre. Library readers have access to different information sources:

- The fund of information resources and documents on traditional and modern storage media (775,000 copies)
- E-catalogue (93,000 bibliographic records)
- Electronic databases: Theses manuscripts and theses abstracts, ISPU teaching staff publications, Analytical journal classification (MARS project), legal-reference system Consultant Plus, the information system of technical standards and regulations NORMA CS
- Digital Library
- Internet, etc.

The library consists of nine departments which are equipped with modern information technology and are able to serve approximately 23,000 readers per year. Over 720,000 books and other documents are lent out to the readers every year.

ISPU Library is a Member of the Russian Library Association (RLA), a Member of two library consortia RUSLANet and ARBICON (Association of Regional Library Consortia). It is also a methodological centre of university libraries in Ivanovo region.



Educational work is an integral component of specialist training in Ivanovo State Power Engineering University. It is carried out as both co-curricular and extra-curricular activities. The main goal is to develop student's personality, to expand opportunities for their cultural and spiritual growth, to form strong proactive stance, patriotism and opposition to various manifestations of extremism, to introduce them to healthy way of life.

Educational work involves deans, departments, students and postgraduates' union, department for educational work, library, student councils at the halls of residence and Humanities Centre.

DEPARTMENT FOR EDUCATIONAL WORK

The Department for Educational Work aims to develop students' intellectual, spiritual, moral, legal, environmental and aesthetic culture and implements complex programmes of events. Among them are 'The one who remembers knows no defeat', 'You are part of my soul, my city', 'In the XXI century without drugs', 'To Prevent Trouble', 'Do not ruin your life', 'We choose life', 'Life is worth living', etc. The students take part in poster competitions, meetings with artists, musicians and scientists, representatives of healthcare, clergy and police. The Department organizes round table talks between students and the university staff, arranges literature and thematic exhibitions, shows documentaries and feature films and initiates a variety of events.



the project 'Light Your Star' aiming to develop the students' creative abilities, in literary and musical evenings, conferences, online quizzes, contests and game programmes, in meetings with interesting people, the ISPU student has become a versatile personality. The ISPU student is able to combine studying with research, sport and amateur art.

A lot of attention is paid to first-year students' adaptation to university life. To achieve this, an annual information booklet 'Hello, fresher' is published and some special social events are held like 'Fresher's Month', 'Festival of Knowledge', Student Welcome Ceremony, psychological and communicative training 'Rope Year'.

Through active participation in various events, such as 'Student Winter' and 'Student Spring' festivals, in



CENTRE OF HUMANITIES TRAINING

Humanities Centre brings together creative people of the university. Literature Club holds meetings with writers and poets who contribute to literary and poetic almanac 'United Circle' as well as university staff and students. The presentations of two almanacs (2008, 2010) have been made. Six books of poetry and memoirs of university veterans have been published.

For more than fifteen years the subscription/season ticket 'Student Philharmonic' has enabled the students to attend concerts of musicians from Ivanovo Philharmonic Hall and Music College students. Dozens of art exhibitions of students and professional painters were arranged in Art Salon. The exhibitions were supported by Ivanovo branch of Artists Union of Russia.

Socially active students are united in the club 'Political Olympus' which initiates meetings with famous politicians, arranges student annual trips to the State Duma of Russian Federation to participate in public debates on youth issues and in TV shows 'Honest Monday' and 'Duel' on NTV Channel.

Preserving the traditions of patriotic education, the Humanities Centre holds honouring of the Great Patriotic War veterans. To commemorate the events of the Great Patriotic War, the Centre organizes rallies and laying of wreaths and flowers at war memorials and military burial places.



MUSEUM OF ISPU HISTORY AND DEVELOPMENT

The Museum of Ivanovo State Power Engineering University History and Development dates back to 1978, when the room of revolutionary, military and labour glory was opened. Now the museum includes the historic hall and the hall of military glory. The historic hall houses exhibits on the university creation and development, its achievements and growth



prospects, exhibits devoted to university alumni and an exposition on the history of power engineering in Ivanovo region. The hall of military glory is dedicated to the memory of those who defended their homeland in the wars of the XX century, it is also devoted to the history of ISPU military department. Museum windows display unique documents of 1920-1930s, photographs, books, military awards, objects of the Great Patriotic War, personal belongings and graduates' gifts.

Students, staff, alumni, guests of the university and school students regularly visit the museum. It has become an established tradition for first-year students to visit the museum at the beginning of their first academic year. The Museum hosts art and thematic exhibitions, meetings with veterans and book presentations.

The museum promotes patriotism, respect for the history and university traditions, it creates a sense of belonging to a large family of power engineers and pride in their university.



STUDENT CLUB "ELECTRON"

"Electron" Club aims to develop students' personality and their art skills, to encourage students' cultural and social activity.

The club offers:

- STEM, student pop miniature theatre;
- Music Ensemble;
- Dance Ensemble;
- Sports Dance Ensemble;
- Designer group.

Annually the club organizes over 20 concerts, including Student Welcome Ceremony, the Day of Power Engineer, interdepartmental amateur arts festivals 'Student winter', concerts for ISPU veterans, city and region residents. Club members have become the winners and laureates of regional and All-Russia festivals of university amateur groups 'Student Spring'.



STUDENT TELEVISION STUDIO



The studio is available to all creative ISPU students willing to learn the skills of directing, producing, presenting, camera operating and video editing. Projects created in ISPU student television studio participated in various All-Russia festivals and competitions, they won first, second and third prizes in various categories and were awarded with Laureate diplomas and certificates.





Ivanovo State Power Engineering University pays considerable attention to healthy lifestyle of its students and staff. The University promotes physical culture and sports and carries out systematic educational work on the study of health issues and encouraging healthy lifestyle.

Good facilities have been created for physical culture and sports promotion.



ISPU sports centre incorporates eight specialized gyms and necessary infrastructure, an indoor athletics arena, a stadium with 400m outdoor athletics track, sectors and a football pitch, an indoor shooting ranges.

The students are engaged in physical education and sports both during the educational process and in their free time in 16 sports clubs. For university teachers and staff group classes are organized in volleyball, badminton, aerobics, yoga, athletic gymnastics and table tennis.

For recreation and health improvement among students and ISPU staff members as well as for growth and development of student-athletes the University

established the summer sports camp 'Rubskoye Lake'. Every year the camp serves 350 students and 170 members of staff. The guests have at their disposal a stadium with an athletics track and a football pitch, tennis courts, basketball, volleyball and badminton courts, a sauna and a boat station.

Over the past five years the university has trained 8 World-class athletes, 51 Russian Masters of Sport, 210 candidates for master of sport and 1st grade athletes. Every year ISPU athletes participate in various international and national competitions achieving high scores.



For recreation and health improvement among students and ISPU staff members as well as for growth and development of student-athletes the University



UNIVERSITY MEDICAL CENTRE



ISPU boasts Comprehensive Medical Centre which was created to carry out diagnostic, therapeutic, recreational and advisory work. An integral part of the Centre is the health centre of general therapeutic profile,



which offers treatment to over 1,000 students and about 200 members of staff in 14-shift system every year.

The health centre provides patients with the following types of treatment: electro and phototherapy, massage, physical therapy, acupuncture, manual therapy, autogenic training, laser therapy, water therapy, medication, oral hygiene and diet food three times a day.

In 2009 ISPU Health Centre ranked first in the All-Russian competition for health promotion and health care for university students.



The University is seeking to exploit great theoretical and practical potential of medical institutions in Ivanovo city, signing contracts with Ivanovo polyclinics for providing medical treatment and services. ISPU staff and students are offered resort-and-spa treatment in various regions of the Russian Federation.

CAMPUS



Ivanovo State Power Engineering University has four halls of residence which can accommodate 1580 students. They offer shared rooms for up to 4 people. There is a large canteen. Each student is given the opportunity of accessing the university local network and broadband Internet. The halls of residence provide specially equipped facilities to prepare for classes. Some leisure and sports

facilities are offered: common rooms and lounges, sports rooms with fitness and table tennis equipment, stadium and outdoor playing fields in residence courtyards. Sporting competitions are held annually between the halls of residence in 5 different sports.



Each hall of residence has its own Student Council.

HISTORY AND MILESTONES

1918 – Riga Polytechnic University transferred to Ivanovo-Voznesensk. Ivanovo-Voznesensk Polytechnic University established.

1930 – Ivanovo Power Engineering University formed on the basis of mechanical engineering faculty of Ivanovo-Voznesensk Polytechnic University. P.I.Plekhanov appointed Rector.

1931 – The University was headed by Y.F.Kedrov. The construction of Building “A” started.

1933 – Two faculties, Faculty of Heat Engineering and Electro-technical Faculty, established. F.Y.Okhotnikov takes up the post of Rector.

1938 – A.N.Zverev appointed Rector. Due to the 20th anniversary of the Great October Socialist Revolution the university was named after V.I.Lenin.

1941 – At the beginning of World War II 330 students and teachers went to the front. All the halls of residence and half of the “A” Building turned into hospitals.

1947 – Power Engineering Faculty established. Heat Engineering Faculty renamed Heat-and-Power Engineering Faculty.

1963 – Building “B” dedicated.

1965 – Sports training centre and sport-and-recreation summer camp on Rubskoye Lake dedicated. A hall of residence for 940 people constructed.

1970 – The university was headed by Prof. Y.B.Borodulin, Doctor of Engineering Science.

1972 – Health centre launched. The construction of Building “C” started.

1980 – Ivanovo Power Engineering University awarded ‘Badge of Honour by the Decree of the USSR Supreme Soviet Presidium.

1986 – Prof. V.N.Nuzhdin, Doctor of Engineering Science, assigned to the post of rector.

1991 – Three faculties established: Faculty of Economics and Management, Faculty of Engineering and Physics and Faculty of Computer Science.

1992 – The university granted the status of State Engineering University.

1993 – The Faculty for International Students established.

2001 – The Interuniversity Faculty of Further Education and Training established.

2005 – Nuclear Power Station ‘Kalininskaya’ donated a full-scale power-generating unit simulator to ISPU. The Interfaculty Simulator Centre created.

2006 – Prof. S.V.Tararykin, Doctor of Engineering Science, elected Rector.

2007 – Sports and Recreation Centre reconstructed. Athletics arena opened.

2008 –International Russian-French Study Centre of Energy Efficient Technologies “ISPU – De Dietrich” established. ISPU successfully passed external audit and achieved the European Foundation for Quality Management (EFQM) Committed to Excellence.

2009 – Specialities “Industrial Electronics” and “Nuclear Power Plants” accredited and awarded the first EUR-ACE Label in Russia.

2010 – ISPU became an associated member of the EU4M Consortium.

2011 – ISPU introduced three-level system of training awarding Bachelor, Specialist and Master Degrees according to Federal State Education Standard.

2012 – ISPU successfully passed external audit and achieved the European Foundation for Quality Management (EFQM) Recognised for Excellence.