



**MOSCOW STATE UNIVERSITY
OF CIVIL ENGINEERING
(National Research University)**



Moscow State University of Civil Engineering



Moscow State University of Civil Engineering

was founded in **1921** as Moscow Institute of Civil Engineering.
In **1993** it achieved a new status – University.

In **2010** the University was given the status of «National Research University»,
equally effectively implementing educational and academic activity on the basis
of the principles of integration of science and education.

MGSU today:

- one of the largest world centres of building science and education
- Head of International Association of Civil Engineering Institutes
- Member of the European Association of Civil Engineering Universities and Faculties (AECEF)
- Member of the European Civil Engineering Education and Training (EUCEET)
- Member of the European Association of Engineering Universities (SEFI)
- Member of the American Society of Civil Engineers (ASCE)
- Member of the International Society for Computing In Civil and Building Engineering (ISCCBE)

6 December 2013 Rector of MGSU was elected Volkov Andrey Anatolievich



Rector
Andrey A. Volkov

DSc, Professor, Director of Development programmed NRU, Corresponding member of the Russian Academy of Architecture and Construction Sciences



University consists of 9 Institutes:

- Institute of Construction and Architecture
- Institute of Hydraulic Engineering and Power Plant Construction
- Institute of Environmental Engineering and Mechanization
- Institute of Economics, Management and Information Systems in Civil Engineering and Real Estate
- Institute of Basic Sciences
- Institute of International Education and Language Communication
- Institute of Housing and Municipal Complex
- Institute of Advanced Vocational Education
- Institute of Distance Education

Duration of studies:

Full time:

Bachelor – 4-5 years

Engineer – 5- 6 years

Master – 2 years

PhD – 3 years



➤ **Part time** – 5,5-6 years

➤ **Distant education** – 4-5,5 years



Bachelors (Bachelor's degree (BSc)):

“Civil Engineering”

Training programmes:

1. Industrial and civil engineering
2. Building design
3. Production and implementation of building materials, products and structures
4. Urban construction
5. Value engineering
6. Industrial and civil engineering
7. Hydraulic engineering
8. Water supply and water disposal
9. Mechanization and automation in civil engineering
10. Mechanical equipment and technological enterprise complexes of building materials, products and structures
11. Heat and gas supply and ventilation
12. Expertise and real estate management
13. Highways and aerodromes

14. Technical exploitation of objects of housing-and-municipal complex
15. Urban construction

“Informatics and computing technology”

Training programme:

1. System techniques and automatization of design and management in construction

“Applied mathematics”

Training programme:

1. Appliance of mathematics methods for solving of engineering and economical problems

“Applied mechanics”

Training programme:

1. Mathematics and computing modeling of mechanical systems and processes



“Urban Planning”

“Standardization and Metrology”

“Technosphere protection”

Training programmes:

- Fire safety

“Architecture”

“Environmental Engineering and Water Use”

Training programmes:

- Complex use and protection of water resources

“Technosphere Protection”

Training programmes:

- Engineering environment protection

“Land Transport and Technological Complexes”

Training programmes:

- Weight-handling, building and road machines and equipment

“Hotel business”

“Economics”

Training programme:

- Economics of enterprises and organizations

“Management”

Training programmes:

- Production management
- Financial management

“Control in technical systems”

“Automation of technological processes and production”

Training programme:

- Automation of technological processes and production in construction

“Land transport and technologic complexes”

“Chemical technology”

“Technology of the art material work”

“State and municipal management”

“Commerce”



Specialists (Civil Engineering (CEng)):

“Construction of Unique Buildings and Construction”

Training programmes:

- Construction of high-rise and wide-span buildings and construction

“Construction of Unique Buildings and Construction”

Training programmes:

- Construction of thermal and atomic power industry buildings
- Construction of hydraulic buildings of enhanced responsibility
- Building of underground construction

“Land Transport and Technological Means”

Training programmes:

- Weight-handling, building and road machines and equipment



Masters (Master's degree (MSc)):

“Civil Engineering”

Training programmes:

1. Theory and design of buildings and constructions
2. Theory and practice of organizational-technological and economic solutions
3. Architectural and building materials science
4. Wall, insulating and finishing materials
5. Urban planning, architectural and constructive principals of design of the available environment
6. Reconstruction and restoration of buildings and constructions
7. Physics of environment and functional bases of design of energy efficient and comfortable buildings
8. Forming of three-dimensional system in urban design
9. Polymeric building materials
10. Nanomodified building composition materials of general construction and special purpose
11. River and underground hydro-technical constructions
12. Marine-hyrotechnical structures and waterway construction
13. Design, construction and reconstruction of the underground structures
14. Bases and foundations of buildings and structures
15. Mechanics of soils in the design of buildings and structures
16. Organization, technology and safety in construction of thermal and atomic power stations
17. Construction of nuclear plants
18. Special building materials for energy construction



19. Engineering surveys in construction
20. Water supply of cities and industrial enterprises
21. Water removal and wastewater treatment
22. Complex mechanization and automation in civil engineering
23. Buildings and complexes microclimate providing systems
24. Development in investment and construction sphere
25. Surveying: system analyses of land property complex management
26. Judicial construction, technical and value expertise of real estate properties
27. Provision of quality, safety and resource saving during using and reconstruction of objects of housing and utilities infrastructure in complex

“Architecture”

Training programmes:

1. Architectural and constructive design of buildings and constructions. Theory and practice

“Economics”

Training programme:

1. The economy of the investment and construction sphere

“Management”

Training programme:

1. Financial management at the enterprises of the investment and construction sphere

“Informatics and computing technology”

Training programme:

1. Modeling of automated information processing systems, management and design in the construction

“Applied mechanics”

Training programme:

1. Mechanics of deformable solid body

“Chemical and biotechnologies”

“Economics”

“State and municipal management”

Institute of International Education and Language Communication



The primary function of the Institute - presentation of the Moscow State University of Civil Engineering (MGSU) in the international market of educational services.

The Institute coordinates the education of foreign citizens at all levels and directions of educational programs implemented in MGSU.

The Institute includes two departments:

- Russian as a foreign language department
- Department of foreign languages and professional communication

The Institute also runs programs of pre-university education - "Russian language for Foreigners" and "University Admission Preparation".

More than 3 500 engineers and PhD and Doctors of Science from 108 countries of the world have been educated at MGSU.

Institute of International Education and Language Communication

Annually, the University carries out exchanges of students for practical training with:

- Wrocław University of Technology (Poland)
- Białystok Technical University (Poland)
- Donbas National Academy of Civil Engineering and Architecture (Ukraine)
- Ecole Speciale des Travaux Publics (France)
- Eindhoven University of Technology (Netherlands)
- University of Maribor (Slovenia)

The best MGSU students are sent for internships to the largest construction companies:

- Alpine (Austria)
- Strabag (Austria)
- MC-Bauchemie (Germany)
- Vermogen und Bau Baden-Wurttemberg (Germany)
- Bouygues (France), Statens Fastighetsverk (Sweden), etc.



Institute of International Education and Language Communication

Master-degree and post-graduate students of our university take internships at the:

- Ecole Speciale des Travaux Publics, ESTP (France)
- Bauhaus-University Weimar, Germany
- Berlin Technical University, Germany
- Czech Technical University in Prague (Czech Republic)

Every year the best MGSU students are sent to the summer schools of the:

- Warsaw University of Technology (Poland)
- Ecole Speciale des Travaux Publics (France)
- University of Maribor (Slovenia)
- Bauhaus-University Weimar (Germany)
- University of Cambridge (United Kingdom)





JOINT DEGREE PROGRAMS

Currently, MGSU offers 12 **JOINT DEGREE PROGRAMS**.

The Institute of International Education and Language Communication offers **Bachelor's degree (BSc)**: education in two joint educational programs in **"Construction"** with **"Information and Construction Engineering"** profile together with:

- **Berlin Technical University (Germany)**
- **International Center of Lomonosov Moscow State University (Switzerland)**

International Center of Lomonosov Moscow State University (Switzerland)

Bachelor degree educational programmes in:

➤ **"Economy"**

Training profile:

"Economics of enterprises and organizations"

➤ **"Management"**

Training profile:

"Financial management "

➤ **"Construction"**

Training profile:

"Information and civil engineering"

➤ **"Architecture"**

In 2014 it is planned to implement the following joint educational programmes with:

Bialystok Technical University (Poland)

**Master degree educational program in
“Construction”**

Training profile:

“Water supply and water disposal”



Mikkeli University of Applied Sciences (Finland)

**Bachelor degree educational program
in “Construction”**

Training profile:

“Heating and Ventilation”



Università degli Studi Guglielmo Marconi (Italy)

Bachelor degree educational programmes in:

➤ **“Construction”**

Training profile:

“Industrial and civil engineering”

➤ **“Economy”**

Training profile:

“Economics of enterprises and organizations”



Le Quy Don Technical University (Vietnam)

Engineer degree educational program in:

➤ **“Construction of Unique Buildings and Construction”**



Education in English language in MGSU

Institute of Construction and Architecture:

- Construction of wood and plastics
- Integrated security in construction
- Design of buildings and urban planning
- Architecture of civil and industrial buildings
- Nanotechnology
- Descriptive geometry
- Engineering graphics

Institute of Economics, Management and Information Systems in Civil Engineering and Real Estate

- Sociology
- Energy management
- GIS in renewable energy
- Informatics
- Psychology and pedagogy
- Finance
- Economy
- Development in the construction and real estate



Institute of Hydraulic Engineering and Power Plant Construction

- Environmental safety in construction

Institute of Environmental Engineering and Mechanization

- Heating
- Heat supply and ventilation
- Wastewater , wastewater treatment

Institute of Distance Education

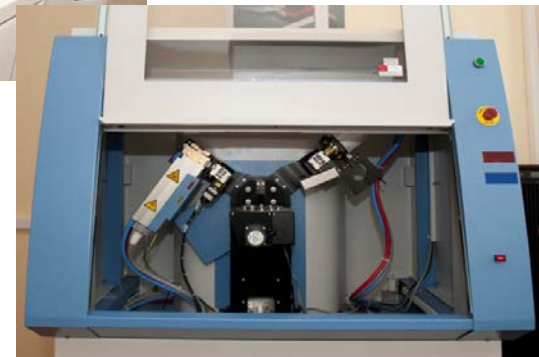
- Information technologies in construction
- Mathematics
- Physics
- Philosophy
- Chemistry
- Resistance of materials
- Corrosion of building structures
- Physic-chemical basis for the assessment of the status of real estate objects
- Probability theory and mathematical statistics
- Mathematical analysis



SCIENTIFIC RESEARCH INSTITUTES and CENTRES of MGSU

- SCIENTIFIC RESEARCH INSTITUTE OF BUILDING MATERIALS AND TECHNOLOGIES
- INSTITUTE OF INTEGRATED SAFETY IN CONSTRUCTION
- INSTITUTE OF EXAMINATION AND ENGINEERING
- SCIENCE EDUCATION CENTER OF COMPUTER SIMULATION OF UNIQUE BUILDING STRUCTURES AND FACILITIES
- SCIENTIFIC AND EDUCATION CENTER «NANOTECHNOLOGIES»
- SCIENTIFIC AND EDUCATIONAL CENTER FOR INFORMATION SYSTEMS INTELLECTUAL AND AUTOMATION IN CONSTRUCTION
- SCIENCE EDUCATION CENTER OF ENGINEERING RESEARCH AND MONITORING OF BUILDING STRUCTURES
- SCIENTIFIC EDUCATIONAL CENTER «WATER SUPPLY AND WATER-REMOVAL»
- SCIENTIFIC EDUCATIONAL CENTER «GEOTECHNICS»
- SCIENTIFIC RESEARCH CENTER «TRANSLUCENT STRUCTURES»
- TESTS OF THE STRUCTURES
- INDUSTRIAL SCIENTIFIC RESEARCH LABORATORY OF THE OFFSHORE OIL AND GAS HYDRAULIC STRUCTURES
- SCIENTIFIC RESEARCH LABORATORY «INSPECTION AND RECONSTRUCTION OF BUILDINGS AND STRUCTURES»
- EDUCATIONAL RESEARCH AND PRODUCTION LABORATORY OF AERODYNAMIC AND AEROACOUSTIC TESTS OF BUILDING CONSTRUCTION

SCIENTIFIC RESEARCH INSTITUTE of BUILDING MATERIALS AND TECHNOLOGIES



- creation of new effective building materials and technologies
- development of technologies of structural materials and products
- research in the field of energy saving, energy efficiency of buildings and constructions
- testing and quality control of building materials and products
- development and application of modern physico-chemical methods of assessment of the state of building structures and remedies
- research in the field of dry building mixtures

SCIENTIFIC and EDUCATIONAL CENTRE «NANOTECHNOLOGIES»



- research in the field of development of nanomaterials and nanotechnologies and their implementation in the construction industry

INDUSTRIAL SCIENTIFIC RESEARCH LABORATORY OF THE OFFSHORE OIL AND GAS HYDRAULIC STRUCTURES



- investigation of wave pressures on marine and storages structures
- study of ice loads on offshore structures
- investigation of deformation and stability of marine structures on soil Foundation

INSTITUTE OF INTEGRATED SAFETY OF CONSTRUCTION



- **product certification on conformity to requirements of fire safety**
- **development of projects aimed at increasing of explosion stability of buildings and constructions**
- **developing of research and design in the field of fire safety**
- **risk assessment on dangerous industrial objects**
- **research in the field of explosion stability of buildings and constructions**
- **inspection, examination and certification tests of products and design in the field of industrial safety**
- **examination of the conformity assessment of buildings and structures to BREEAM international standard**

SCIENTIFIC and EDUCATIONAL CENTER «GEOTECHNICS»



- solving of urgent problems of the teoretical and applied geomechanics and geotechnology
- laboratory tests of soils
- computer modeling of stress-strain state of soil massifs in difficult engineering-geological conditions
- design of underground structures of buildings and constructions
- scientific support in construction of underground structures of buildings and constructions

EDUCATIONAL-SCIENTIFIC and INDUSTRIAL LABORATORY FOR AERODYNAMIC AND AEROACOUSTIC TESTS OF BUILDING STRUCTURES



- aerodynamics and aeroacoustics of structures, buildings and constructions
- use of renewable energy sources in urban areas



**THE PROJECTS
EXECUTED WITHIN THE TERRITORY OF THE RUSSIAN FEDERATION AND
ABROAD**

The OLYMPIC VILLAGE, SOCHI



- structural analysis
- development of the construction documents
- site control of building materials

The BIG ICE RINK, SOCHI



- structural analysis
- site control of materials

The BOBSLEIGH TRACK, SOCHI



- expert supervision
- site control of materials

The COAST LINE of the IMERETINSKAYA LOWLAND, SOCHI



- scientific and technical support of the design
- site control of materials

TRACK for FORMULA 1 COMPETITION

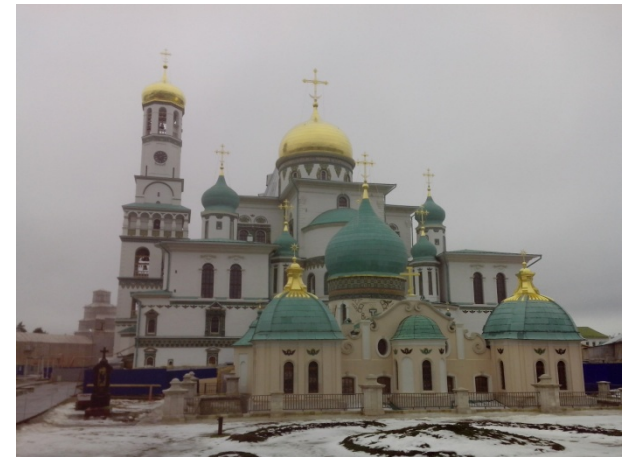
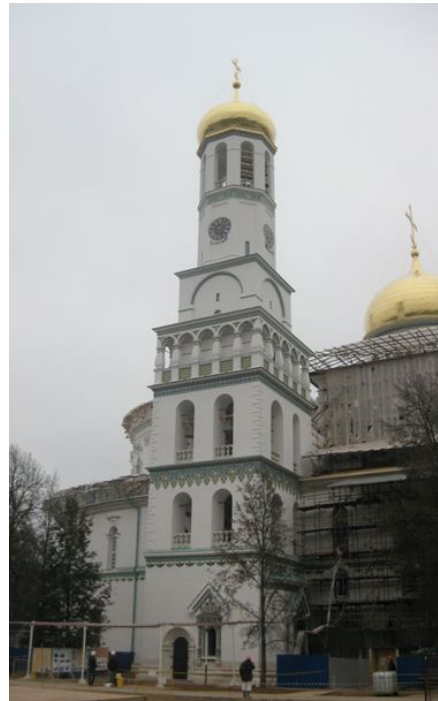


- design of a road foundation erected on fen soils
- scientific and technical support

The VOSKRESENSKY NEW JERUSALEM MONASTERY



1941



2014

- expertise of the project documentation
- monitoring of the iconostasis
- scientific and technical support of the reconstruction

The AIR-TERMINAL COMPLEX SHEREMETYEVO-3



The MOUNTAIN SKIING CENTER «SNEJ.COM»



- structural analysis
- monitoring

The BRIDGE over the SHIP CHANNEL



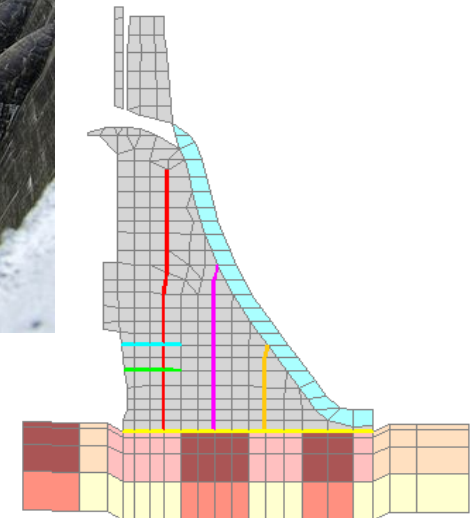
- aerodynamic and aeroacoustics tests: elastic model test

The NEW VORONEZH NUCLEAR POWER PLANT -2



- design
- process simulation
- development of the technical specifications
- scientific and technical support
- aerodynamic tests of the cooling towers surrounded by the industrial facilities with account of landscape

The SAYANO–SHUSHENSKAYA WATER POWER PLANT



- analysis of emergency
- development of design for emergency operating procedures
- scientific and technical support

The STADIUM of the FOOTBALL CLUB «SPARTAK», MOSCOW



- design
- bearing structures calculation
- laboratory control

The STADIUM of the FOOTBALL CLUB «ZENIT», ST. PETERSBURG



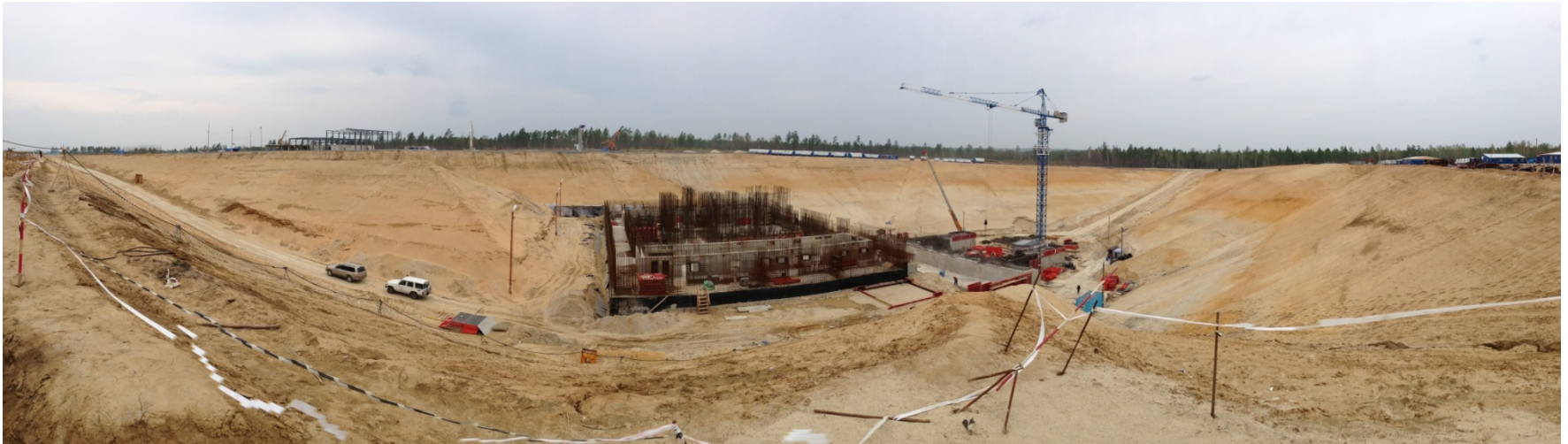
The CENTRE of the URBAN DEVELOPMENT INNOVATION CENTRE «SKOLKOVO»



- scientific and technical support
- construction supervision



COSMODROME «VOSTOCHNYY», LAUNCHING COMPLEX «SOUZ-2»



• construction supervision

**DEVELOPMENT of NEW SPACE-PLANNING and STRUCTURAL CONCEPTS
for HIGH-RISE BUILDINGS in RESTRAINED URBAN CONDITIONS**





Moscow State University of Civil Engineering

Thank you for your attention!