

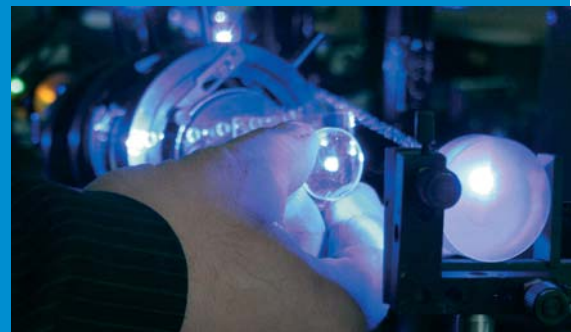


**SAMARA** UNIVERSITY

Samara National  
Research University

FROM DREAMS  
TO ACCOMPLISHMENTS

**Samara National Research University (Samara University) is one of the leading institutions of higher education in Russia. In 2015, it amalgamated collectives from the aerospace (SSAU) and classical (SamSU) universities, becoming the rightful heir to their illustrious achievements and traditions.**





896— the number of different institutions of higher education Russia had by December 2014.

21 Russian universities emerged from the competitive selection for the right to take part in "Project 5-100", including:

5 federal universities (out of 10),

12 national research universities (out of 29).

Since 2009, Samara University has been listed among Russia's 29 national research universities.

As of 2013, it has been included in the program for improving the competitiveness of Russian universities among the world's top science-and-education centers (Project 5-100).







The science-and-education activity of Samara University encompasses aerospace technologies, engine building, and modern methods of information processing, as well as the fundamental technical and natural sciences and the humanities.

Today, the academic structure of Samara University consists of:

**8**  
institutes

**15**  
faculties

**102**  
departments

Total student body — 16 000. Also studying at Samara University are 525 graduate students and 1 000 students doing course-work in continuing professional education.

**16 000**  
students

**525**  
graduate students

**1 000**  
students of continuing professional education

The study process is led by 1 373 instructors (including 164 professors and 523 associate professors, 250 doctors of science and 785 masters of science).

**1 373**  
instructors

**164** professors  
**523** associate professors  
**250** doctors of science  
**785** masters of science

Students can choose from 298 academic programs, including 131 bachelor's degree programs, 18 specialist's degree programs and 149 master's degree programs.

**298**  
academic programs

**131** bachelor's degree programs  
**18** specialist's degree programs  
**149** master's degree programs

The scientific research structure of Samara University consists of:

**11**  
scientific research institutes

**45**  
scientific research laboratories and groups

**43**  
scientific research centers and research-and-development centers

**7**  
collective use centers



Samara University is one of the most dynamically-developing Russian institutions of higher education. In recent years, the university has been systematically improving its indicators in the Russian and international rankings.

QS University  
Rankings:  
Emerging  
Europe  
and Central  
Asia  
(QS EECA)

QS Top  
Universities  
BRICS

THE World  
University  
Rankings

RAEX  
Russian  
Universities  
Ranking

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**2015**

2015 — joins the top-150 ranking of the best universities in Emerging Europe and Central Asia.

**2016**

2016 — climbs more than 30 positions to join the top-110 best universities.

**2014**

2014 — makes its debut on the list of the best BRICS institutions of higher education, joining the group of universities in positions 151–200.

**2015**

2015 — University's position remains unchanged.

**2016**

2016 — University's position remains unchanged.

**2016**

2016 — Samara University is included for the first time ever in the ranking of the world's best universities, as surveyed by the British journal Times Higher Education. The university joins the group of universities in positions 801–980.

**26<sup>th</sup>** place

26th place in the overall ranking (first joined the ranking in 2012 in 35th place).

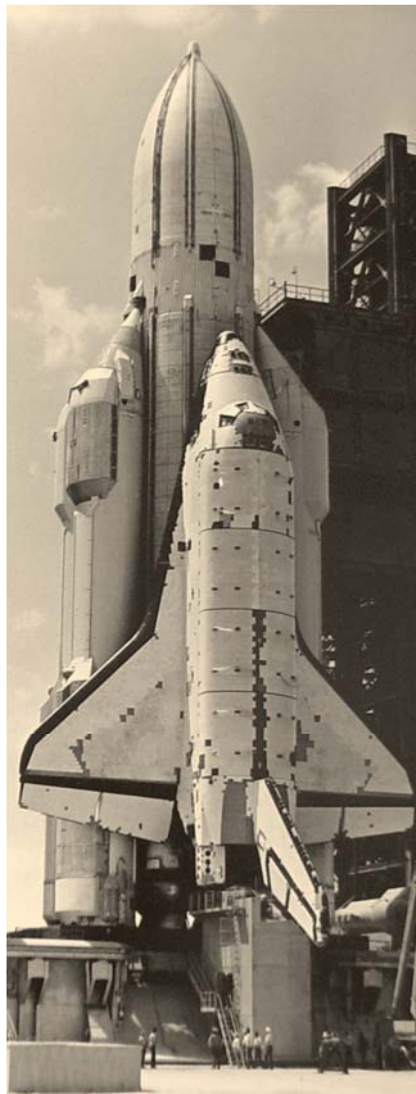
**15<sup>th</sup>** place

15th place in the category "employer demand for graduates."

**18<sup>th</sup>** place

18th place in the group of Russian universities with the highest level of R&D activity.

For many years, Samara University has been inextricably linked to the overall industrial and economic development of the region, which is one of the leading domestic and global centers of aerospace technologies.



## 1942

The Aviation institute, which in 2015 became the heart of today's Samara University, opened in October 1942. By that time, the city had emerged as the evacuation center for roughly 30 aviation-industry enterprises and organizations fleeing wartime hostilities. It was the site of mass production of the Ilyushin Il-2 Sturmovik (ground-attack aircraft), which went on to become the single-most produced military aircraft design in aviation history. The Kuibyshev Aviation Institute (KuAI, with Kuibyshev referring to the former name of Samara) became the foundry for the engineering corps for these enterprises.

## 1945

In the post-war years, KuAI was the scene of advanced research-and-development work on the production of breakthrough prototypes of aviation equipment, including the first jet-fighters and bombers, as well as their propulsion systems.



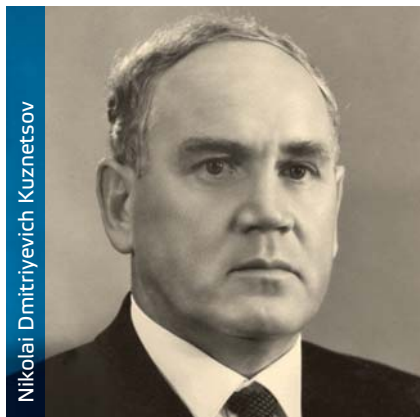
## 1957

In the post-war years, Samara emerged as the cradle of space exploration: it is here the legendary Vostok rocket was manufactured, which was used for launching of the world's first-ever manned spaceflight. Since 1957, KuAI has been training specialists for the development of space-rocket equipment. The Institute's scientists, specialists and graduates have taken part in the design and production development of the country's first domestically-produced R-7 family of rockets, the Vostok, Molniya and Soyuz carrier rockets, a rocket-and-space complex for manned flights to the Moon and the Energiya-Buran system, developed programs for the MIR orbital complex, and participated in many other projects, including international endeavors.

# THE UNIVERSITY AND SAMARA REGION



Nikolai Dmitriyevich Kuznetsov



Dmitri Ilyich Kozlov



## 1958

In the late 1950s, KuAI initiated the creation of industry-specific R&D laboratories, which lent powerful impetus to the advancement of university-based scientific pursuits. The institute's work involved the recruitment of prominent scientists and industrial workers. Among them — the principal designer of aviation and rocket engines Nikolai Kuznetsov, as well as a leading Soviet and Russian designer of space-rocket equipment, the chief engineer of the legendary R-7 rocket, Dmitri Kozlov.



## 1969

September 1969 saw the opening of Samara (then Kuibyshev) State University (SamSU). It was to provide training for scientific manpower in the natural and social sciences, as well as the humanities. The formation of academic schools at SamSU unfolded with support from the Moscow, St. Petersburg and Saratov State Universities.

## 1992

In 1992, KuAI was reorganized into the Samara State Aerospace University (SSAU).



## 2016

In 2016, SSAU and SamSU amalgamated into the Samara National Research University named after Academician S.P. Korolev (Samara University).

Today, Samara is the burgeoning home to all manner of cutting-edge space equipment. And not just for Russia, but also for Western European countries and the USA. This equipment includes rocket propulsion systems, Earth-orbiting satellites and, of course, the most reliable family of booster rockets in the history of space exploration — the Soyuz. In the second decade of the twenty-first century, the Soyuz has emerged as the only way to send relief crews to the International Space Station.



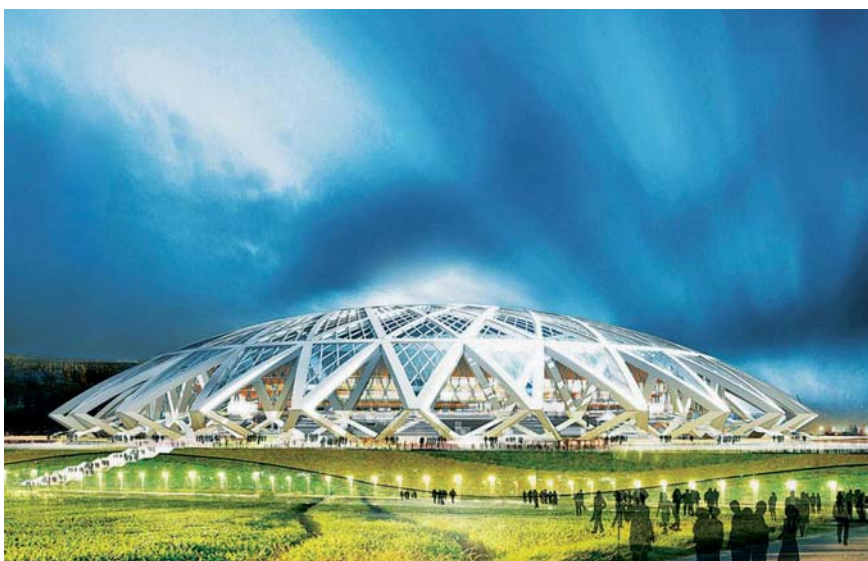


# Samara

Today's Samara is a welcoming and bustling megapolis, one of Russia's leading scientific, industrial, educational and cultural centers.



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## Gagarin Center

In 2018, Samara will be one of the host cities for the FIFA World Cup. A brand-new stadium is being built expressly for this purpose. Its design reflects the cosmic ambitions of the city and its inhabitants. In the environs surrounding the stadium, the new campus of Samara University will be built – the modern technopolis Gagarin Center. It will boast all of the conditions required for the development of science-intensive technologies and various academic research schools.





- Kurumoch International Airport is one of the largest in the country. Its annual passenger traffic stands at roughly 2.2 million people. Flights are operated by 44 Russian and foreign airlines.
- Samara Railway Station is the tallest railway-station complex in Europe. Its height, including spire, soars to a total of 101 meters.
- The city's surviving architectural heritage represents one of the most rich and vibrant ensembles in all of modern Russia. The dominant architectural styles are the Art Nouveau and Eclecticism of the late 19th – early 20th centuries, as well as the Post-Modernism of the 20th century.



- Samara regularly hosts Russian and international festivals, sports competitions and other events. In early July, the outskirts of the regional capital — Mastyukovskiye Lakes — are the annual gathering spot for the fans of guitar poetry. The song festival bears the name of Valeriy Grushin — a Samara University student who died in 1967 saving a group of drowning children.
- The Samara shoreline is by many accounts the best on the Volga. The city features 10 parks and gardens, over 20 parkettes and avenues, and a total of 17 squares, including one of the largest in Europe — Kuibyshev Square.
- Samara boasts roughly three dozen different museums: from the legendary Stalin's Bunker and Samara Space Museum to smaller private thematic collections.



- Samara's theater life is vibrant and full. The city has several dramatic repertory theaters, an opera theater and a ballet theater. It is a regular stop on tours by leading Russian and foreign theaters.
- Samara boasts a high number of original landmarks, from small sculptural forms to larger monuments and memorials, as well as several monuments to technical achievement.
- Samara is a multid denominational city of many faiths. It is home to Russian Orthodox, Catholic and Anglican churches, the Armenian Apostolic Church, mosques, a synagogue and other religious institutions and centers.





# SAMARA UNIVERSITY TODAY



## Student participation in research projects

Study at Samara University proceeds according to the principle "education through research."

Every year, more than 3,000 students take part in the scientific-research, experimental-design and technological-engineering projects unfolding at Samara University.

## Solid foundation for a successful career

Since its founding, Samara National Research University has trained over 65,000 employees for the Russian aerospace industry. Today, specialists with degrees from Samara University are working at virtually all of the leading aviation and space-rocket centers in Russia and around the world.

Our graduates are among the executive leadership at Irkut Corporation, Sukhoi Company, Progress State Research and Production Space Center, NPO Energomash, Gazprom Corporation, Sberbank Group, and others.

## Demand for our graduates on the global market

According to the portal linkedin.com, graduates of Samara University are pursuing successful careers not only in Russia, but abroad as well: in the USA, Canada, Great Britain, Germany, Israel, Australia, the Netherlands, the Czech Republic, Belgium and other countries of the far abroad.

These are the foreign offices and divisions of such companies as Airbus, Rolls-Royce PLC, Bombardier Aerospace, Google, Microsoft, Intel, Schlumberger, Biosense Webster, EPAM System, Honeywell, Alcatel-Lucent, Morgan Stanley, HSBC, and others.







## Existing group of orbital satellites

In cooperation with its strategic partner — Progress State Research and Production Space Center — Samara University is one of the select few research-and-education centers in the world to boast its own orbital family of small spacecraft intended for R&D purposes.

Functioning in orbit today are two “Aist” first-generation satellites and the “Aist-2” SSC for remote Earth observation. All of these spacecraft were created by specialists at Progress State Research and Production Space Center and scientists at Samara University with the active participation of students.



## On-site engineering-and-production centers

The grounds of the university campus are home to a functioning production-and-testing complex for the assembly and testing of small spacecraft (SSC) for remote sensing and observation, created by Progress State Research and Production Space Center.

The campus already boasts a fully-operational center for the development and testing of nano-satellite systems. It encompasses laboratories that make it possible to solve the vast array of tasks involved in the development and testing of nano-satellite systems according to the CubeSat 1U-3U standard and their subsystems.

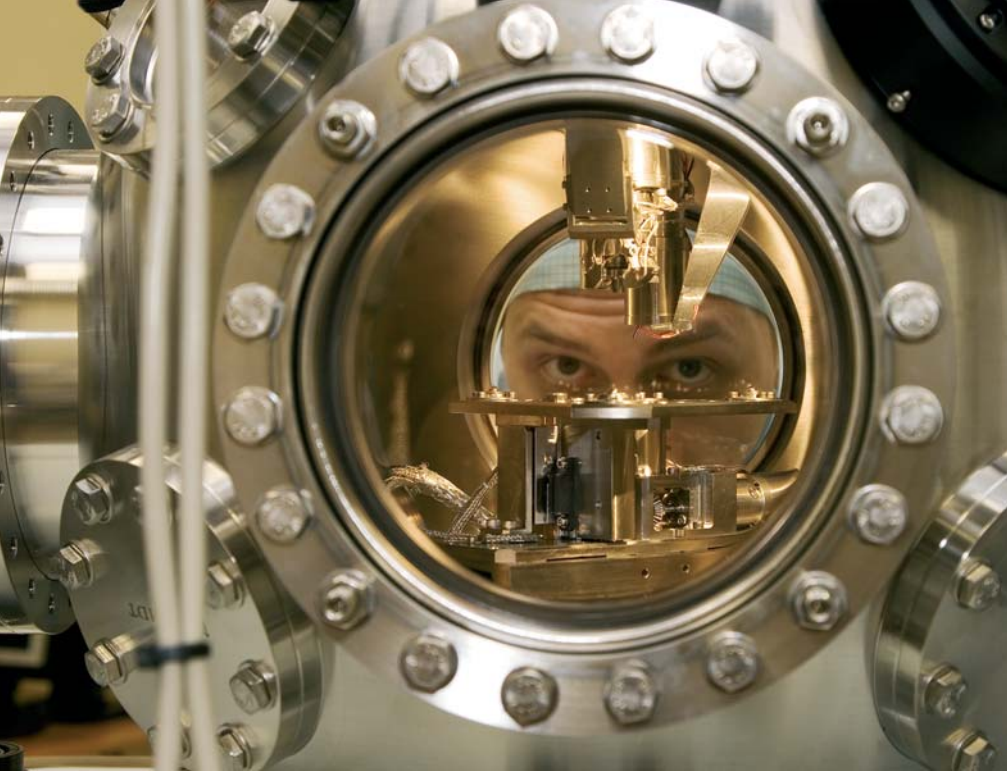


## Partnership with high-tech companies

Thanks to our close integration with the leading industrial and research centers, our students and graduates can bring their ideas and advanced concepts to life — design a spacecraft, assemble it, launch it into space, and then control it in orbit. They create hardware for research satellites and take part in space experiments.







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## World-class research-and-education centers

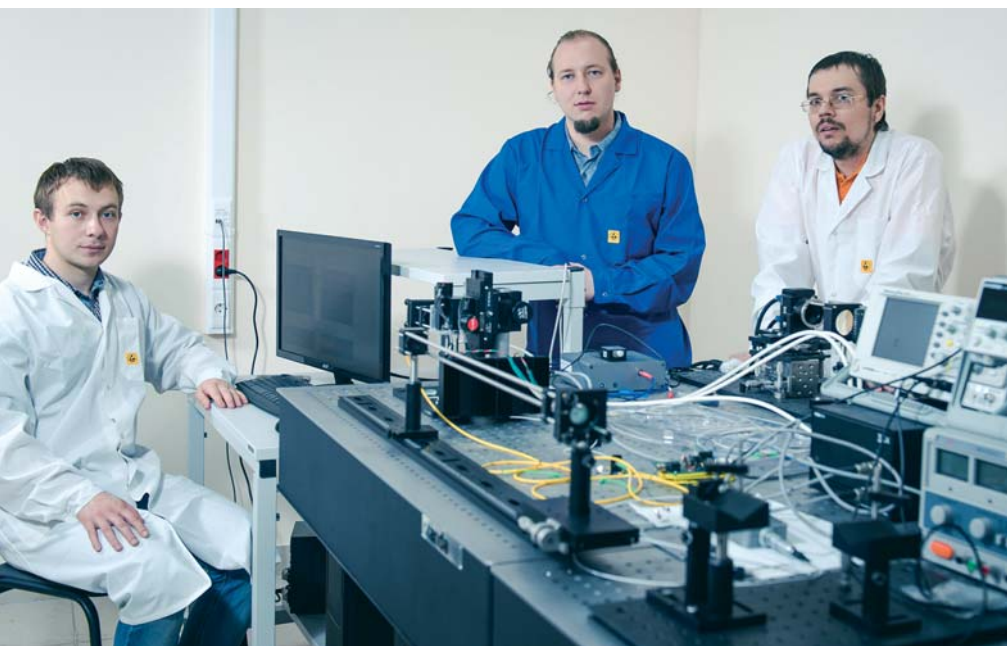
In June 2016, the leading research-and-education teams at Samara University were used as the basis for the formation of new interdisciplinary divisions — strategic academic units (StrAU):

- “Aerospace Engineering and Technology” (StrAU-1).
- “Gas-Turbine Engine-Building” (StrAU-2).
- “Nanophotonics, Emerging Technologies for Remote Earth Observation and Smart Geo-Information Systems” (StrAU-3).

These divisions have enough potential and resources to become world-class research-and-education centers and yield the kind of breakthrough results that support the university’s international competitiveness.



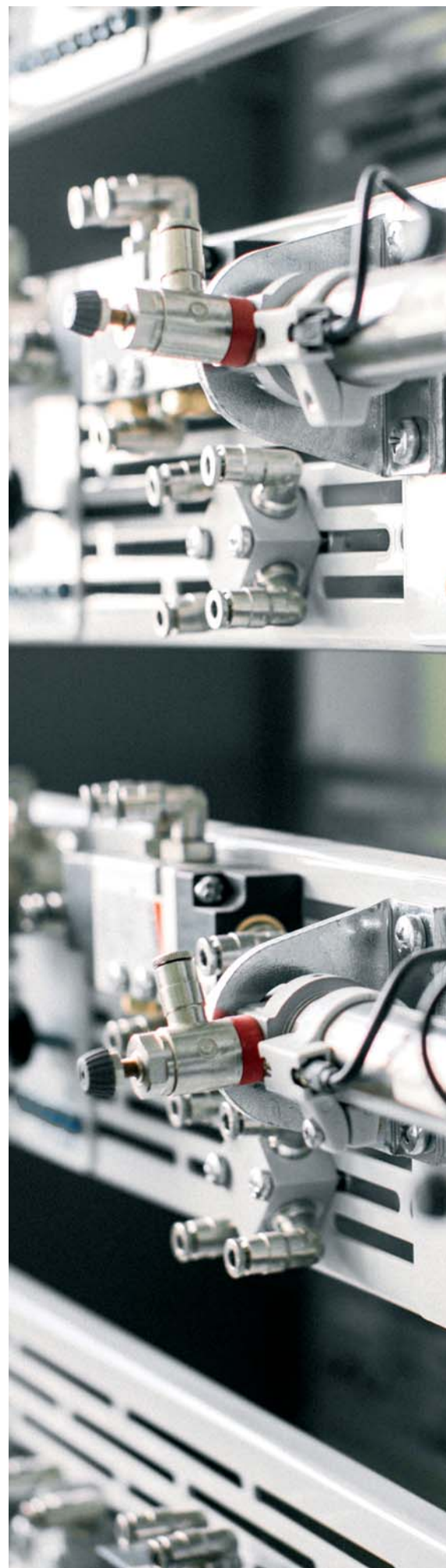




## Interdisciplinary research

Aside from its aerospace stream, Samara University also pursues scientific research and conducts the training of specialists in the field of cutting-edge biotechnologies, the creation of micro- and nano-devices for the next-generation of electronic and optoelectronic information systems, and the design of materials with pre-set properties.

Coursework at the university also entails the study of fundamental social processes, exposure to the theory and practice of the preservation of cultural and linguistic heritage, and training for teaching and research pursuits.





## Advanced campus

Samara University campus is favorably situated in the geographical center of Samara city. Student quarter comprises over thirty training and laboratory buildings, as well as a complex of student hostels for 4200 people. University students and employees have over ten sport complexes and gyms available (including two swimming pools), as well as open playgrounds and other recreational, social and leisure infrastructure.



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## Scientific and educational infrastructure

Samara University has over one hundred of operational scientific and research centers, laboratories, as well as shared knowledge centers equipped with the state-of-the-art machinery. The University has two supercomputer centers and one Big Data processing laboratory.



Samara University library is one of the largest in the region in respect of the book stock: it has over 2.3 mln copies of different editions. Apart from the large book stock, the readers have free access to scientific works indexed by the largest international databases Web of Science and Scopus, as well as magazines of the Elsevier, OSA, EBSCO publishing houses, and different electronic library systems.

The access may be granted not only from the stationary PC, but from the portable devices as well via unified Wi-Fi network operating throughout the campus.





## Museums and points of interest

Educational scientific and technical Aviation Engines History Centre named after N. Kuznetsov (AEHC) has one of the world's largest collection of aviation and rocket engines. They represent the inventions of all the Russian and some of the foreign design bureaus.

Samara University Botanical Garden situated within the campus is a state-recognized natural sanctuary comprising over 3.5 thousand species of higher plants.

Since 1953, Samara University has had its own operational training aerodrome. Currently there are 25 different models of aircrafts and helicopters stationed there. The crown jewel of the training airport fleet is the Soviet supersonic passenger aircraft Tu-144. There are only 8 units of this aircraft model left in the world (of 17 ever built).



Students from 58 different countries study at Samara University.



## Partnership with leading universities

Main areas of the university's cooperation with 48 of the world's leading universities:

- academic mobility programs,
- inviting foreign researchers to teach at Samara University,
- double-degree programs,
- joint research.

The university cooperates with research-and-education structures in a wide array of countries around the world. Among them:

the USA  
Great Britain  
Germany  
France  
Brazil

India  
China  
Finland  
Spain  
Sweden

Hungary  
Portugal  
Poland  
Latvia  
Kazakhstan

Moldova  
Slovenia  
Croatia  
Malaysia  
and others





## Joint laboratories

Samara University has created joint laboratories with the following foreign universities:



University of Stuttgart (Germany)



Freiberg University of Mining and Technology (Germany)



Technical University of Munich (Germany)



University of Houston (USA)



Purdue University (USA)



Northwestern Polytechnical University (China)



University of Ljubljana (Slovenia)



Lappeenranta University of Technology (Finland)

## Work at international organizations

Samara University participates in the work of a number of major international organizations. These include, among others, the International Astronautical Federation and the UN Committee on the Peaceful Uses of Outer Space (COPUOS).



## Participation in international student forums

Since 2011, Samara University has been partnering with two French organizations — the Institute for Aeronautics and Space Exploration (ISAE) and the National Center for Space Research

(CNES). At issue here, among other things, is the participation by the student design office at Samara University in the annual CNES contest and C'Space festival — one of whose main

events is a competition involving the launch of experimental student rockets.



## Participation in international research programs

Samara University is pursuing a project involving creation of the SamSat-QB50 nano-satellite for the European QB50 research mission, which focuses on studying the space-time model of the Earth's thermosphere.

The QB50 project is being implemented under the auspices of the Von Karman Institute for Fluid Dynamics (Belgium) and encompasses 37 different universities from more than 20 world countries.

The Samara University satellite was the sole Russian participant in this mission and was included in a grouping consisting of 50 nano-satellites.







**SAMARA UNIVERSITY**

Samara National Research University

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