



EURAXESS Country in Focus: Switzerland

Small in size, but big in reach

Switzerland is a small country of 8.8 million inhabitants in the middle of Europe, well known for its excellent chocolate and high-precision watches. But there is much more to Switzerland than this. With a quarter of the population holding a foreign passport, 66% of whom are EU citizens, Switzerland is one of the most international and multicultural countries in the world.

The Swiss also see themselves as pioneering innovators. In 2022, Switzerland topped the Global Innovation Index ranking for the twelfth time in succession. Perhaps related, the Swiss are also very proud of their higher education standing with a number of recognised institutions. Swiss universities score well in the Times Higher Education World University Ranking. The Swiss Federal Institute of Technology Zurich placed 11 on the 2023 list, making it the best-ranked continental European university. Meanwhile, six out of ten students in Switzerland are enrolled at one of the world's top 200 universities.

And a fun fact: Albert Einstein, a Swiss citizen since 1901, was awarded the **Nobel Prize** in Physics in 1921. He joins a venerable list of 25 scientists with Swiss citizenship who have received Nobel Prizes in the natural sciences to date. Measured against the size of the population, this is a world record.

1. Introduction to the national research landscape

Facts and figures

Switzerland has several types of **higher education institutions** (HEIs) tailored to meet the needs of their respective target groups. These include two federal institutes of technology (FIT) – ETH Zurich and EPFL in Lausanne – and ten universities of applied sciences and arts (UASAs). There are also 19 universities of teacher education (UTE), and four research institutes that belong to the ETH Domain: the Paul Scherrer Institute (PSI), the Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), the Swiss Federal Laboratories for Materials Science and Technology (EMPA) and the Swiss Federal Institute of Aquatic Science and Technology (EAWAG).

Moreover, there are several other institutions active in higher education, such as the Swiss Federal Institute of Sport Magglingen (SFISM) and the Geneva Graduate Institute, which together offer a comprehensive and complementary range of studies. Most HEIs are state-funded and publicly accredited. The universities offer bachelor's, master's and PhD degrees, and focus on fundamental research. UASAs offer bachelor's and master's degrees more oriented towards scientific and professional education and carry out mostly applied research. UTEs offer practice-oriented training in various subject areas at primary and secondary levels; their research mostly touches on educational and learning processes and related subjects. All university types offer a wide range of courses in continuing education.

Swiss HEIs attract **researchers from all over the world**. Nearly 70% of PhDs and scientific collaborators registered at Swiss HEIs are international. At universities, 50% of professors come from abroad. Regarding the scientific outputs, 70% of publications are the result of international collaborations.

The **framework conditions for research and innovation** in Switzerland are considered to be very good. Political stability, security and quality of life are excellent by international standards. Other outstanding features are the well-developed, continuously modernised infrastructure, high quality of state institutions, high level of digital competitiveness, and flexible education system.

Around **3.2 % of GDP** is spent on research and development, with the private sector accounting for around two-thirds of this expenditure. In 2022, Switzerland filed a total of 9 008 patents with the European Patent Office, making the country the global leader for the number of patent applications per capita. In absolute terms, Switzerland ranks seventh worldwide.

Between 2016 and 2020, Switzerland ranked first with 8 015 **scientific publications** per year and per million inhabitants in relation to population size. In the same timeframe, the research areas most strongly represented



in the publications in Switzerland were: clinical medicine (27% of the total), life sciences (23%), and physics, chemistry and earth sciences (22%, combined).

2. Centres of excellence

Swiss HEIs are renowned for conducting excellent research according to their profiles and the disciplines offered. Here, the National Centres of Competence in Research (NCCR) stand out as an example of excellence. NCCRs are a well-established federal funding instrument for long-term, strategically important research in Switzerland. They are internationally recognised for knowledge and technology transfer, promoting equal opportunities, and supporting the careers of young researchers. Funding is provided for research projects of the highest quality, with a particular emphasis on interdisciplinary and innovative approaches.

NCCRs receive federal government support to the tune of SFR 4-5 million per year, which is supplemented by contributions from the HEIs involved, competitive third-party funds raised by the research groups, and contributions from industry. Each NCCR runs for a maximum of 12 years.

The NCCR series that started 2020 are focused on the following topics:

- NCCR AntiResist: New approaches to combat antibiotic-resistant bacteria
- NCCR Dependable Ubiquitous Automation: New approaches to the control of complex automated systems
- NCCR Evolving Language: The origins and future of language
- NCCR Microbiomes: Microbial communities in health and environment
- NCCR SPIN: Spin qubits in silicon
- NCCR Suchcat: Sustainable chemical processes through catalysis

Swissnex

Swissnex is the global network connecting Switzerland and the world in education, research and innovation. Its mission is to support the outreach and active engagement of partners through the international exchange of knowledge, ideas, and talent. Partners can be researchers, entrepreneurs, artists, etc. from Switzerland and the respective country where Swissnex is located.

The network regularly holds events of interest to researchers.

Euresearch

Euresearch is the Swiss guide to European research and innovation, providing information and guidance on cooperation and funding opportunities offered by Horizon Europe – the current EU framework programme (FP) – and other initiatives.

Euresearch conducts events and activities, for example training in proposal or application writing, or introductory information on Horizon Europe.

3. Where can you get a research job or funding from?

In Switzerland, research funding is awarded on a competitive basis according to qualitative assessment criteria. The private sector is a crucial actor for both R&I jobs and as a source of funding.

Around two-thirds of research and development activities in Switzerland are financed and carried out by large corporations, such as Novartis or ABB, but also by SMEs and start-ups. Many of these companies are internationally active. Their work is primarily dedicated to applied research and development and to translating knowledge into marketable innovations. In doing so, they often work together with HEIs, especially universities of applied sciences.

Check out the jobs database on www.euraxess.com where a lot of Swiss companies put their open research positions.



Moreover, since 1987, participation in EU research framework programmes has been central for researchers in Switzerland. As a **non-associated third country**, this means applicants based in Switzerland can participate in most collaborative FP projects.

Learn more on Switzerland's opportunities, including the funding of transitional measures in [Horizon Europe and Euratom](#). Also read the [policy background on Switzerland's association](#) with EU R&I. information about

Switzerland is a member and partner of **research infrastructures, research infrastructure networks and initiatives of international R&I cooperation**. For example, it is member of the European Space Agency (ESA) as well as host state and member of the European Laboratory for Particle Physics CERN in Geneva. As a result, Swiss R&I actors have access to, among other things, cost-intensive research infrastructures for conducting experiments as well as scientific data and diverse knowledge.

Each year the Swiss Confederation awards [excellence scholarships](#) to promote international exchange and research cooperation between Switzerland and over 180 other countries. The scholarships are aimed at young researchers from abroad who have completed a master's degree or PhD and at foreign artists holding a bachelor's degree.

The federal government's [bilateral cooperation programmes](#) aim to intensify research and innovation cooperation with Europe and North America, and other countries that have a significant potential for scientific and technological development. These programmes consist of two complementary instruments: joint research projects with the BRICS countries as well as with Argentina, Japan, South Korea and Vietnam, and Leading House pilot activities with promising regions.

The Confederation is responsible for providing research funding through **two federal agencies**: the [Swiss National Science Foundation](#) (SNSF) which primarily funds research aimed at gaining general knowledge (basic research); and [Innosuisse](#), the Swiss Agency for Innovation Promotion, which supports science-based innovations, companies and organisations, as well as the transfer of knowledge and technology transfer (KTT) between research and industry.

An important role in KTT is also played by the [Swiss Innovation Park's](#) six centres located across the country. It facilitates collaboration among companies, start-ups, and HEIs looking to find solutions to some of the world's most pressing challenges.

4. Where can you get more information?

Find [funding opportunities and calls](#) for innovation projects with international partners.

The Confederation also provides funding to the institutions and research institutes within the [ETH Domain](#), a close-knit network comprising ETH Zurich, ETH Lausanne (EPFL), and the four research institutes [EAWAG](#), [WSL](#), [EMPA](#), and [PSI](#).

Information about the most important funding instruments, calls for joint research projects, and mobility programmes showcasing scientific and technological cooperation opportunities between Switzerland and the rest of the world can be found on the [Research Swiss](#) website.

The [My Science](#) portal for research and innovation provides news, information and includes relevant job offers.

A compact overview of funding opportunities can also be found on the [Swiss EURAXESS](#) portal. And more news and information about living, working, studying and the international research landscape in Switzerland can be found in the [information and assistance](#) section of EURAXESS.

Please watch this [video](#) and check out a typical [career story](#) as part of your preparations for carrying out research in Switzerland. They will help to explain the most important aspects when arriving.

You can find the **contact details of all the EURAXESS Centers in Switzerland** here:

<https://www.euraxess.ch/switzerland/switzerland-network>



Facts and figures on Switzerland

Surface: 41 300 km²

Population 8.8 million

Life expectancy: 83.1

GDP: 77 240 US\$