



UNIVERSITÉ
DE GENÈVE

PRESS RELEASE

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A new chair in quantum communication in Geneva

UNIGE and Constructor University announce the creation of a joint chair in quantum communication. The chair is to become a part of Geneva Quantum Centre aimed at strengthening Switzerland's position as a major hub in quantum science and technology.

A chair dedicated to quantum communication is being created in Geneva. The result of a partnership between University of Geneva (UNIGE) and Constructor University (CU) based in Bremen and Schaffhausen - which was signed on Wednesday 30 November in Geneva - this chair will be positioned at the crossroads of fundamental research and applied research in this cutting-edge field of quantum physics. By pooling the expertise of researchers from both institutions, this new chair promises major advances and innovations, particularly in the field of secure information transfer. This first collaboration between UNIGE and Constructor University is part of a broader vision shared in a Memorandum of Understanding signed in 2021 that will reinforce the newly created Geneva Quantum Centre (GQC).

Building bridges between research, incubation, industry and teaching: this is the purpose of the new chair in quantum communication created in Geneva and headed by Professor Wolfgang Tittel. The chair, which is the result of a partnership between University of Geneva (UNIGE) and Constructor University (CU) will focus its activities on quantum information technologies, such as data transfer, quantum memories and cryptography.

"This collaboration with Constructor University enables UNIGE to further sustain and support its longstanding history in quantum technology research. We are thrilled to merge our shared vision in establishing an internationally recognized quantum chair with the goal to advance academic offerings and explore applications of these fascinating technologies across the field," noted Prof. Yves Flückiger, Rector of UNIGE.

"Partnership with UNIGE is the first step of building Constructor University's global institute of advanced studies. We invite other universities, institutions and individual professors worldwide to collaborate in solving the most pressing world challenges of today. Constructor University chooses Geneva to further develop its quantum research operations, as Geneva is already a hub for quantum science and technology in Switzerland, with Geneva Quantum Centre (GQC) of UNIGE being its major actor," commented Dr. Serg Bell, Founder of Constructor University and Chairman of the Board.

High resolution pictures

The new chair is based at University of Geneva, within the Faculty of Science. Constructor University will cover 50% of the operating costs. It will also provide an initial investment of 1.5 million francs to finance a new laboratory dedicated to its activities. The creation of this chair is the first step in this collaboration which commits UNIGE and Constructor University for a period of ten years. UNIGE and Constructor University plan to create other specific chairs dedicated to quantum physics in the years to come.

Shared expertise

Quantum physics research, a field of expertise of UNIGE and Constructor University, has led in the past to numerous technological innovations such as computing, mobile phones and satellite navigation. This field of research is now driving a second revolution, particularly in the field of information: researchers are currently exploiting quantum properties to create telecommunication networks that allow data to be transferred in an ultra-secure manner. These same properties are being used to develop detectors for light particles (photons) of unprecedented sensitivity.

Among the world leaders in the field, the UNIGE is the first institution to have carried out quantum communications outside the protected environment of the laboratory, using optical fibres. It has also enabled the creation of the largest private company in the field, ID Quantique, active in cryptography and founded by physicists Nicolas Gisin, Hugo Zbinden and Grégoire Ribordy.

Constructor University focuses on eight research areas, including quantum technology, software engineering, cyber protection and robotics. Founded in 2019, it already has an extensive network of partners in industry and academia. Its purpose is to create a unique ecosystem where the world's leading experts in computing, physics and business come together to find innovative solutions to global challenges.

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About the University of Geneva

The University of Geneva was founded in 1559 by Jean Calvin and Théodore de Bèze and it ranks amongst the top 1% universities in the world. It enjoys worldwide recognition and develops an ever-strengthening international network, building upon its unique situation at the heart of International Geneva, a world capital for multilateralism. As a research-intensive institution, UNIGE has been awarded numerous prizes, including Nobel prizes and Fields medals, and is an active member of the European League of Research Universities (LERU). UNIGE focuses on multidisciplinary approaches to face today's challenges such as the digital revolution and the sustainable development goals. UNIGE welcomes about 19'000 students coming from nearly 150 different countries in its nine faculties and thirteen interdisciplinary centres embracing Sciences, Medicine, Humanities, Economics and Management, Social Sciences, Law, Theology, Psychology and Educational Sciences, as well as Translation and Interpreting. UNIGE fulfils three missions: education, research and knowledge sharing.

About Constructor group

Constructor Group is a global institution dedicated to creating knowledge through science, education, and technology. Our integrated, self-sustainable ecosystem focuses on the five fundamental technology needs expected to contribute to solving the current challenges of the world: general intelligence, quantum technology, intelligent materials, hybrid reality, and life engineering.

Our knowledge ecosystem combines extensive education offers covering the entire learning lifecycle from K-12 to post-graduate programs and courses for executives, highly efficient research capacities, and commercial operations for our technology breakthroughs.

The Constructor ecosystem comprises Constructor University, a non-profit, research-oriented private university located in Bremen, Germany, and an institute in Schaffhausen.

Several ventures market our technology innovations: Alemira and Learning focus on advanced solutions in Educational Technology, executive education, and consulting services. Rolos delivers a platform boosting research productivity and develops MI for robotics and driverless mobility. Capital and Start Garden further strengthen our ecosystem by offering funding and start-up incubation capacities.