Impact Report 2020

Excellence Scholarships
Nurturing outstanding talent.
For business, science and society.
Many thanks!

This extraordinary year has been a challenge for us all – our Excellence Scholars included. For Luc Schnell, for example, who studies high energy physics and is involved with three different organisations for young talent at secondary school level. He demonstrated flexibility and developed online formats for the Swiss Physics Olympiad within a very short space of time.

The crisis surrounding coronavirus is also having a huge impact on university life. Not all students’ projects could be implemented within the planned time frame, for example because the necessary infrastructure was inaccessible for certain periods. One of the consequences of this is that some scholarships had to be extended, which is why your support is needed more than ever! Only when taken as a whole, can the many individual contributions from donors and partners take their full effect – providing optimal support to outstanding talent for the economy, science and society.

I am always delighted to encounter former beneficiaries, particularly when they themselves have become supporters of the programme. We wanted to give you a chance to meet some of them, and you will find a selection of 2010 recipients presented at the end of this report. You are jointly responsible for the fact these outstanding individuals are where they are today, doing what they do!

Sarah M. Springman
Rector of ETH Zurich
Patron of the Excellence Scholarship & Opportunity Programme
One of my most memorable experiences during my studies was working on the “adero” focus project, the first two-wheeled delivery robot that can deliver goods autonomously within buildings. In just ten months, we developed the robot in an interdisciplinary team – a great opportunity to gain my first project experience. A two-wheeled robot must be self-stabilising. I initially worked on this technical control issue before focusing on the area of “path planning”, which involves considering how the robot will find its way autonomously through changing environments. I learned a great deal during this time, both technically and in terms of soft skills. It was a great feeling to see our robot move around for the first time in the shell we had designed. Currently, the ETH spin-off “Sevensense” is working on the second generation of adero, and it will soon be in use at Zurich Airport for Jelmoli, delivering orders from the online shop to pick-up points.
Luc Schnell
Excellence Scholar 2019
Department of Physics
(Master’s in High Energy Physics)

Get to know more Excellence Scholars in a series of short video portraits.

Staying flexible

I am involved with a range of different organisations that support talented secondary school students. Each of these organisations was affected in its own way by the coronavirus crisis and the lockdown. I helped by ensuring that the programmes were able to continue in an adapted form. Through my responsibility for Switzerland’s involvement in the Research Science Institute (RSI), a six-week summer course for talented secondary school students at MIT in Boston, I helped our candidate to adapt his project in line with the new situation. As a jury member of “Jugend debattiert” (Youth Debate), I helped to align the competition structures with an online format. And finally, as a member of the organising committee for the Swiss Physics Olympiad, I helped move the event online under the new conditions. All in all, this has been a challenging but extremely rewarding time for me!
Excellence Scholar, app developer, entrepreneur – at the age of just 24, Larissa Laich has already achieved a great deal. Her curiosity and enthusiasm for her subject have guided this young computer scientist since her first attempts at programming in school to the completion of her Master’s degree at ETH Zurich.

Larissa Laich loves climbing. Looking for an app for her Apple Watch to log her climbs, she noticed that there were none available. Jogging and swimming activities were easy enough to record with a smartwatch, whereas climbers had to enter their routes and statistics manually in a logbook. This was simply unacceptable for the Master’s student at ETH Zurich’s Department of Computer Science, so she went ahead and developed her own app.

Laich was not alone in her undertaking – together with her fellow pupil Frederik Riedel, she had been developing apps since her school days. So the two computer scientists started looking for ways to use watch sensors to automatically record the number and speed of their climbs, as well as the altitude they covered. Making sure the app worked reliably called for technical skills in the area of signal processing, a challenge that Laich was well able to master. Less than two years later, her Redpoint app was featured on the Apple website for the launch of a new Apple Watch model.

Inspiration from Silicon Valley

Larissa Laich first encountered computer science at the age of 15 at her secondary school near Stuttgart. “We got to programme a Lego robot in our lessons,” she remembers. For fun, she then started developing her first apps for iOS with Frederik Riedel.
At the Worldwide Developers Conference (WWDC) in California, Laich was able to meet some big names from Silicon Valley – including Apple CEO Tim Cook.

“I got to know plenty of motivated people on the Excellence Scholarship & Opportunity Programme. It really is a great community.”
“We were able to use the apps we had programmed on our own devices. That was really motivating,” says Laich.

This new hobby was to occupy them for a good while to come, and just before graduating from secondary school, they were both awarded a Worldwide Developers Conference Scholarship from Apple, a programme through which the tech giant invites gifted secondary school pupils and students to its annual conference. In between their exams, the two friends travelled to California where they got to know some of the Apple engineers and met various big names from Silicon Valley. “At the WWDC, we saw the kind of ambitious and passionate people who work in computer science,” says Laich. For her, the decision to study computer science was made, and she went on to study software engineering at the University of Stuttgart. She continued to develop apps with Riedel, and in 2015 the friends created the company Frogg GmbH. The start-up’s portfolio consists primarily of educational apps. “We programmed the apps we needed ourselves,” says Laich on the motivation behind Frogg.

A high standard of teaching in Zurich

Following her Bachelor’s degree, Laich decided to embark on a Master’s degree in Computer Science at ETH Zurich, and was successful in her application for an Excellence Scholarship. Alongside her studies and her start-up, Laich completed a series of internships during both her Bachelor’s and Master’s degree programmes, including experience with renowned firms such as Google and Apple.

Laich’s decision to attend ETH Zurich was based on a range of factors, with the university’s excellent reputation, its research areas, personal contact, a love of the city of Zurich and proximity to her home all having a part to play. The prestige of ETH, but also the high standard of teaching, helped Laich in her applications for various coveted internship positions. “Among the big tech firms in particular, for example, Professor Angelika Steger’s Algorithms Lab is a great bonus,” says Laich, adding that the demanding course content was good preparation for the tasks set in interviews and in everyday work. “An ETH degree is a highly prestigious qualification,” she says. “But the time I spent at ETH, and the people I met here, are even more valuable.”

Contacts all over the world

Laich completed her Master’s degree at the end of 2019. She has not ruled out a doctorate at a later date, but for now has taken a position as a Software Engineer at Oculus in Zurich. In parallel to this, she wants to expand Frogg GmbH and recruit more staff – with a view to developing an Android version of Redpoint, for example. The success of Frogg is based in no small part on a strong network: “We’re not professional networkers as such, we simply get to know interesting people through our projects,” she explains. That includes the Apple Entrepreneur Camp, a two-week event run by Apple in California for promising start-ups, which Frogg attended in 2019. “I also got to know plenty of motivated people at ETH and in the Excellence Scholarship & Opportunity Programme. It really is a great community,” says Laich.

The young computer scientist is also involved in helping others to meet new contacts, and is part of the organisational committee for the Women in Data Science Zurich conference. “It’s important to see successful women in computer science,” she says.

Laich has never had any reason to doubt her choice of career. “I find computer science extremely fascinating,” she says. “On top of this, we get daily emails from all over the world with feedback about our apps. It’s unbelievably motivating to see how my work reaches people in faraway countries like Japan, Australia and the USA.”

Original text by Anna Ettlin
Department of Computer Science:
http://u.ethz.ch/kYm2I
Ten years later

In 2010, 28 Excellence Scholarships were awarded. What paths have those talented scholarship recipients taken since, and what are they achieving today? We’d like to introduce you to a few of them here.

**Annina Bracher**, Switzerland

Started a Master’s degree in electrical engineering and information technology in 2010 (awarded ETH Medal)

Master’s degree in electrical engineering from Princeton University

Doctorate in electrical engineering and information technology at ETH (awarded ETH Medal)

Internship at ABB in Bangalore on the topic of the “Smart Electricity Grid”

Graduate programme at Swiss Re

Currently Senior Solutions Manager at Swiss Re

**Michel Frei**, Switzerland

Started a Master’s degree in architecture 2010, exchange year at the Harvard University Graduate School of Design during studies

Previous vocational training as a structural draughtsman and basic studies in economics and law at the University of St.Gallen (HSG)

During studies, member of the editorial team of the architectural journal “trans” of ETH Zurich, later author in the area of architectural criticism

Currently Project Director and Associate with the architecture firm Herzog & de Meuron

**Sayed-Rzgar Hosseini**, Iran

Started a Master’s degree in computational biology and bioinformatics in 2010

Doctoral studies at the Department of Evolutionary Biology and Environmental Studies, University of Zurich

Research Associate at the Cancer Research UK Cambridge Institute

Now a Postdoctoral Fellow in cancer research at the European Bioinformatics Institute (EMBL-EBI) in Hinxton near Cambridge (UK)
Laura Corman, France

Started a Master’s degree in physics in 2010 (awarded the Willi Studer Prize)

Doctoral studies at the Laboratoire Kastler Brossel in Paris

Postdoctoral Researcher at the Institute for Quantum Electronics at ETH Zurich, management of a team of doctoral and Master’s students

Now an R&D Systems Engineer at X-Rite Pantone in Regensdorf, a company that specialises in colour management solutions

Anastasios Tsiavos, Greece

Started a Master’s degree in civil engineering in 2010 (awarded the SGEB Master’s prize)

Doctoral studies in civil engineering; research and teaching assistant at ETH

Civil and Earthquake Engineer at Henauer Gugler AG

Postdoctoral Researcher on the SAFER project (Seismic Safety and Resilience of Schools in Nepal) at the University of Bristol, investigating a low-cost strategy for the seismic protection of structures in developing countries

Currently Lecturer at the Institute of Structural Engineering at ETH Zurich, teaching the new course “Seismic Evaluation and Retrofitting of Existing Structures” (rated 4.8/5 by students in the spring semester of 2020)

Kaspar Etter, Switzerland

Started a Master’s degree in computer science in 2010

Co-founder of the ETH spin-off Synacts in the field of digital identity

Former staff member and then Head of Engineering at the ETH spin-off Shift Cryptosecurity, which manufactures a hardware wallet for cryptocurrencies

Seminar leader for computer science with the Swiss Study Foundation

Member of Global Shapers Zurich, a World Economic Forum initiative

Initiator of the “Superintelligence” lecture series on the opportunities and risks of artificial intelligence

Currently an IT security specialist and freelance author at ef1p.com
What can a partnership with the Excellence Scholarship & Opportunity Programme achieve? Hariolf Kottmann, Executive Chairman ad interim of the special chemicals company Clariant, explains why such a commitment is attractive for both sides.

The Clariant Foundation has been supporting ETH’s Excellence Scholarship & Opportunity Programme since 2016 – why?

Hariolf Kottmann: The Clariant Foundation is a pillar of our corporate citizenship activities: as a company with a sense of responsibility, we support organisations, institutions and projects all over the world. Nurturing scientific talent is a matter that is very close to my heart. It enables us to share our enthusiasm for research, our related expertise and our conviction that science helps to create a better world. Naturally, we are also interested in making the younger generation aware of Clariant, with a view to recruiting the best talent.

What is the strategic importance of finding outstanding talent – the kind promoted by the Excellence Scholarship & Opportunity Programme – when it comes to Clariant’s success?

Clariant’s success is based on the people who work for us and with us. In this respect, the strategic importance of finding outstanding talent cannot be overestimated. The “race for talent” between companies is becoming increasingly intense as a result of demographic developments. If our talent promotion activities help us convince young people to join us and tackle current global challenges such as climate change, the future of mobility and feeding the world’s population with innovative solutions, then this is a win-win situation for us all. Thanks to their outstanding training, ETH graduates are excellently qualified and particularly attractive for us.

A group of Excellence Scholars were able to visit the Clariant Innovation Center in Frankfurt as part of an excursion. How was this contact with the scholarship students for you? Unfortunately, I was unable to take part in the excursion for scheduling reasons. It was hosted by our Chief Technology Officer Martin Vollmer, who afterwards told me of the students’ high level of enthusiasm and extraordinary motivation. We were particularly impressed by the young people’s clear dedication to shaping a sustainable future. Sustainability is an integral part of our DNA, and as such one of our strategic pillars. For us, the fact that we share the same goals as these young talents reassures us that supporting ETH Zurich is the right thing to do.

“Nurturing scientific talent is a matter that is very close to my heart,” says Hariolf Kottmann, who holds a doctorate in chemistry and is Chairman of the Clariant Foundation and Trustee of the ETH Foundation.
Women and men

Around one-third of Excellence Scholars are female – over the last ten years, the proportion of women has averaged 34%, while the proportion of women among all Master’s students at ETH Zurich is 31%.

Nationality of scholarship students

32% of all Excellence Scholars come from Switzerland, 41% from other European countries and around 17% from Asia.

Excellence Scholars by department

Every year, the programme provides support to talented individuals in the top 2 to 3 percent of their year group. The largest number of scholarship students – 86 in total (around 16%) – studied at the Department of Mechanical and Process Engineering followed by the Departments of Computer Science, Information Technology and Electrical Engineering and Civil, Environmental and Geomatic Engineering, with a total of 56, 54 and 52 Excellence Scholars respectively.
Fostering exceptional talent

ETH Zurich awards Excellence Scholarships to particularly gifted students for the duration of their Master’s programme. These scholarships cover study and living costs and include a waiver of study fees, enabling students to concentrate fully on their studies. The funding, however, is not just an investment in talented individuals: the scholarship recipients have excellent prospects of holding key positions in business, science or politics, or founding their own companies, thereby letting their knowledge and skills flow back into society. This programme is made possible by donors.

www.ethz-foundation.ch/en/esop

The Excellence Scholarship & Opportunity Programme is supported by more than 4,700 alumni, as well as friends of ETH Zurich and the following partners:


We would particularly like to thank all those who make or have made it possible to support outstanding talent by means of a legacy or a bequest:

Margrit Anliker-Rüedi (†), Robert Bleibler (†), Hans Item (†), Reto Jenatsch (†), Marc A. Kolpin (†)

ETH Zurich Foundation
Weinbergstrasse 29
8006 Zurich
T +41 44 633 69 66
E info@ethz-foundation.ch

www.ethz-foundation.ch