Impact report 2025

Funding talent for science, industry and society

Excellence Scholarships I ETH Scholarships I Pioneer Fellowships

ETH Foundation

Many thanks!

A scholarship is an act of trust. It shows that an institution believes in a young person and their potential. A committee – be it a commission or a panel of expert – has taken the time to review a candidate's talent and projects and concluded that they stand out and are worthy of support. We've heard on many occasions that a scholarship or a Pioneer Fellowship is a true confidence booster. This alone adds to its value.

But for our students to receive the support they need to excel, we need people beyond the university to believe in them too. That's why we would like to extend our heartfelt thanks to you, our generous donors. You play a vital role at key moments in a talented young person's journey – whether through your contributions to our Excellence or needs-based scholarship programmes, or through your support of young entrepreneurship.

In the pages that follow, you'll see just how far your impact reaches: from personalised cancer treatments for children to more sustainable agriculture and first-class young researchers in quantum science. As a donor, one of the most rewarding aspects of championing young talent at ETH is not only reading about them but engaging with them in person too. Join us at our "Meet the Talent" event (more on p. 9) where donors and recipients can celebrate what they have achieved together and plan their next groundbreaking endeavours.

Günther Dissertori
Rector

Vanessa Wood
Vice President for Knowledge Transfer and Corporate Relations

By funding new talent at ETH Zurich, you support …

… outstanding Master’s students: the Excellence Scholars

Our country depends on first-class specialists. By attracting exceptional young people from Switzerland and around the world to study for a Master's degree at ETH Zurich, the Excellence Scholarship & Opportunity Programme (ESOP) is an essential instrument in the competition for the world’s greatest talent. Each year, the scholarships are awarded to students ranking among the top two to three percent of their year. They receive a full scholarship, which covers their study and living costs during their entire Master's programme. Due to increasing student numbers, the demand for Excellence Scholarships has grown: the goal is to be able to award 60 Excellence Scholarships per year.

… bright minds with limited financial resources: needs-based scholarship holders

For some young people, the dream of studying at ETH is only possible with a scholarship. Over 100 people are supported in this way every year, the requirements being that they provide regular proof of their academic progress and that they complete their studies within a reasonable period of time. The needs-based scholarships ensure that no one is excluded from studying at ETH on the basis of their financial situation if they have all the necessary qualifications. This is all the more important as ETH studies are time-consuming and often do not allow students to pursue a part-time job. Society as a whole benefits from the programme because it enables more highly qualified and sought-after specialists to be trained.

… budding young entrepreneurs with drive and ambition: Pioneer Fellows

For young scientists, it’s often a long and rocky road from the initial idea to creating a marketable product. After all, setting up your own company requires not only courage but also sufficient seed capital, a strong network and access to urgently needed infrastructure. That is why a jury of experts awards 10 to 15 Pioneer Fellowships every year. ETH Zurich would like to further expand the programme so that even more young ambitious researchers can receive up to CHF 180,000, coaching sessions and the opportunity to develop their research to the point of commercial application. The aim is to bring highly innovative products and services of societal value to market as quickly as possible.

The right mix

Former Excellence Scholar Arianna Arpagaus is developing personalised therapies for children with leukaemia at the research centre of the University Children’s Hospital Zurich – patient-focused, precise and driven by dedication.

Patient-centred research is enabled by the proximity of the paediatric research centre to the University Children’s Hospital Zurich main building.

“Today, around 80 per cent of children diagnosed with leukaemia can be cured,” says Arianna Arpagaus. “With our work, we want to help ensure that one day, all children with leukaemia can be cured.” A former recipient of an ETH Excellence Scholarship, Arpagaus now conducts research at the paediatric research centre of the University Children’s Hospital Zurich. She is part of the group led by Beat Bornhauser and head of oncology Jean-Pierre Bourquin, which focuses on optimising therapies for children with leukaemia.

Tailored treatment recommendations

The team’s research is highly personalised and patient-oriented. Hospitals across Europe send blood samples from their young leukaemia patients to Zurich. “The samples are from children whose cancer couldn’t be cured by conventional methods and medications. We test these samples with a wide range of drugs,” the researcher explains. The group works with drugs that are already available on the market as well as those not yet licensed. Up to a hundred different agents can be tested on a single sample using novel, specially developed leukaemia cultures. “Of those, perhaps twenty show potential for treatment. We discuss the results and share them with the clinicians treating the patient,” Arpagaus says, describing the process. “We have a large cohort of samples that have already been tested and compare them with the current case. We’re also building up a database to track how a disease develops in treated patients over time in order to better evaluate long-term outcomes.” The clinics can use the information from the research centre to fine-tune treatments, optimise the medication mix or apply for their patients to take part in clinical trials of a drug that has not yet been approved.

“Being so closely involved in developing new treatment approaches is incredibly exciting.”

Crossing the Gotthard

Arpagaus developed an interest in biology and health research during her Gymnasium years. She grew up in the Italian-speaking canton of Ticino and, after finishing school in Lugano, chose to make the move to Zurich. “There aren’t many options for studying biology in Ticino, so I had to cross the Gotthard,” she says. She chose the Bachelor’s programme in Health Sciences and Technology at ETH because of its strong focus on patient-centred content. Learning everything in German proved a challenge at first: “The start was tough. It took time to get used to the language and find my feet in a new city.” Today, she speaks not only Italian, Romansh, French, English and German, but even Swiss German – helped in part by a scholarship from the Swiss Study Foundation, awarded for her outstanding Matura project. The scholarship gave her access to regular events that helped her connect with German-speaking students.

Towards the end of her Bachelor’s studies, Arpagaus heard about the Excellence Scholarship programme and, along with her close friend Lorena Gregorio, applied for one of its coveted spots. They were both delighted when learning they’d both been accepted. “It was a huge relief for me that my parents didn’t have to support me during my Master’s. That really motivated me,” she says. She’s also convinced that the scholarship helped her when applying for jobs later on.

Driven by curiosity

However, her Master’s studies in Molecular Health Sciences didn’t unfold quite as she had expected. The Covid-19 pandemic began shortly after the programme started, and she completed her degree in the middle of lockdown – with the graduation ceremony held two years later. After graduating, she joined the scientific staff in Professor Isabelle Mansuy’s neuroepigenetics lab, and continued her research on stress-related epigenetic changes across generations that she’d started during her Master’s thesis. “Epigenetics is a fascinating field – it's about everything that is hereditary without being directly related to the genetic sequence. In other words, how our environment and lifestyle affect things like weight, health and other traits in both ourselves and future generations,” she explains. But her curiosity soon drew her closer to patients. The position at the University Children’s Hospital Zurich, which bridges research and applied medicine, offered the perfect next step. “Personalised medicine holds enormous potential, especially in oncology. Being so closely involved in developing new treatment approaches is incredibly exciting,” Arpagaus says.

To recharge, she turns to nature. Her great sporting passion is orienteering – not on foot, but on a bike. Before her studies, she competed in European and World Championships as a member of the Swiss national team. These days, she enjoys the sport as a hobby. But there are certainly parallels to be drawn between her sport and research: “In orienteering, it's not the fastest who wins, but the one who finds the right path in a complex environment,” she says. “This also applies to finding solutions in research.”

Success of the Excellence Scholarships

2007 (launch of the programme) to 2024:

755 outstanding students from 71 countries supported

236 from Switzerland and 310 from the rest of Europe

Excellence Scholarships 2024/25

01 Gustavo Aguiar Martins, BR, Computer Science

02 Ambroise Aigueperse, FR, Data Science

03 Jumana Akhter, BD, Environmental Engineering

04 Charlotte Arn, CH, Architecture

05 Ema Borevković, HR, Computer Science

06 Junzhe Cao, CN, Spatial Development and Infrastructure Systems

07 Gerard Castro López, ES, Mathematics/Applied Mathematics

08 Wang Hin Duncan Chan, CN, Integrated Building Systems

09 Anahita Darvish, US, Mechanical Engineering

10 Maximilian Eberlein, CH, Robotics, Systems and Control

11 Alejandro Escalera Ledermann, CH, Environmental Sciences

12 Valentina Espitia Mendoza, CO, Earth Sciences

13 Paul Fischill, AT, Computational Science and Engineering

14 Kristóf Zoltán Floch, HU, Robotics, Systems and Control

15 Viktor Fukala, CZ, Computer Science

16 Ádám Gyula Gábriel, HU, Robotics, Systems and Control

17 Elena Gmür, CH, Health Sciences and Technology

18 Boris Goranov, BG, Computer Science

19 Amélia Graber, CH, Environmental Sciences

20 Omoefe Merveille Grant-Oyeye, IE, Science, Technology and Policy

21 Strahinja Gvozdic, RS, Mathematics/Applied Mathematics

22 Lea Holter, AT, Cyber Security

23 Filip Hulek, CZ, Chemical and Bioengineering

24 Daniel Isler, CH, Interdisciplinary Sciences

25 Mio Itschner, CH, Food Science

26 Julia Kalinowska, PL, Biology

27 Erenay Karacan, TR, Quantum Engineering

28 Urs Keller, CH, Pharmaceutical Sciences

29 Theo Lequy, DE, Physics

30 Lena Libon, DE, Data Science

31 Wen Yi Yvonne Ly, CH, Architecture

32 Francisco Moreira Machado, BR, Computer Science

33 Jana Moos, CH, Health Sciences and Technology

34 Clara Nörenberg, DE, Mechanical Engineering

35 Maxwell Awinikagise Nsoh, GH, Agricultural Sciences

36 Sampurna Pattanaik, IN, Landscape Architecture

37 Janna Pintó Mercadal, ES, Biology

38 Otto Grøn Roepstorff, DK, Statistics

39 Niclas Scheuer, DE, Mechanical Engineering

40 Peter Schmitt, DE, Mechanical Engineering

41 Maria Schnuck, DE, Quantum Engineering

42 Sebastian Schweizer, CH, Geomatics

43 Angela Spadea, CH, Chemistry

44 Jonas Spiller, DE, Physics

45 Matej Svaral, SK, Management, Technology and Economics

46 Ábel Levente Tóth, HU, Physics

47 Pin-Yuan Tseng, TW, Energy Science and Technology

48 Mert Ünal, TR, Landscape Architecture

49 Sarah Verreault, CA, Computer Science

50 Harish Karthick Vijay, IN, Integrated Building Systems

51 Elia von Salis, CH, Mathematics/Applied Mathematics

52 Benedikt Wahl, DE, Biomedical Engineering

53 Natalie Wende, DE, Materials Science

54 Cedric Wenger, CH, Civil Engineering

55 Jara Wilensky, US, Physics

56 Max Wipfli, CH, Electrical Engineering and Information Technology

57 Dingxi Zhang, CN, Computer Science

58 Thomas Zimmermann, CH, Computational Biology and Bioinformatics

A stimulating network

An Excellence Scholarship is more than just financial support. It provides access to an inspiring community of talent in which the students not only motivate one another but where students and donors benefit from being connected too.

The relationships built among Excellence Scholars often extend well beyond their Master's studies – one even led to a wedding. But even without such pleasant exceptions, the scholarship recipients deeply value the personal and interdisciplinary scientific exchange. They introduce each other to new ideas and methods, pose critical questions and discover opportunities to collaborate.

The community officially comes together each September, when the Rector welcomes the new generation of Excellence Scholars. Twice a year, they take part in "LabXchange", a format where the students share insights into their work at ETH. In the 2024/25 academic year, former Excellence Scholar and current doctoral student Giulia Amos greeted the new cohort with a presentation on her volunteer work for Cybathlon, a sporting event that showcases cutting-edge assistive technologies. Clara Nörenberg, meanwhile, demonstrated to her fellow scholars a solar racing car she helped develop at the Innovation Park Zurich.

Excursions are organised to allow the students a look inside exciting companies – often programme partners or ETH spin-offs. These organisations, in turn, welcome the opportunity to meet ETH's talented new researchers. One group visited Dätwyler in Altdorf, where they learned about innovations in elastomers and food and beverage packaging solutions. To enable the scholars to meet with private donors and foundations, the "Meet the Talent" is held. At the latest edition in April 2025, the scholars and the ETH Foundation were delighted to welcome around 400 guests and strike up conversations. If you've not yet experienced this annual highlight held in ETH Zurich's main building, we encourage you to watch the recording and save the date for the next one: join us on 18 March 2026!

See video of this year's "Meet the Talent"

Experience the impact of your support: at the annual "Meet the Talent" event, funded students show donors the projects they're currently working on.

Between building site and campus

For Samuel Arm, working on construction sites was not enough. He wanted to help shape them too – hence his decision to study architecture. An ETH scholarship cleared some, though not all, of the obstacles from his path.

“I went to Gymnasium because I had good grades. During the holidays I always had jobs on building sites, which I really enjoyed. This is why, after getting my Matura, I did only a short apprenticeship as a painter – I didn’t need to attend vocational school. I was interested in everything that happened on site, and realised I wanted to take on a leading role in construction one day. That’s when I thought about studying architecture. Having grown up in Utzenstorf near Burgdorf, the idea of moving to Zurich was exciting and I saw studying at ETH as a huge opportunity. But after my parents separated, their financial situation was tight. It was clear that, despite some savings in the bank, it would be very difficult for me to afford university without a scholarship. Thankfully, I was awarded an ETH scholarship.

A competitive environment

At first, I was completely overwhelmed. Being catapulted from the construction site to Hönggerberg was an intimidating experience. I hadn’t realised how competitive the architecture programme at ETH would be. In the first semester I often wondered whether I really belonged there. But gradually I made friends, learned a lot, and started to really enjoy the course. The period leading up to the final submissions twice a year – during which we were on campus almost 24/7 – was always extremely stressful. But presenting your finished project at the end was cool.

What I hadn’t anticipated were the extra costs involved in studying architecture, i.e. for models, printing plans and trips. On top of already limited finances, this meant I had to work full-time during the semester holidays. Many of my fellow students had six weeks to study before the August exams. I was revising late into the night after work. However, it still wasn’t enough to pass all the exams, so I had to retake some blocks. During my Master’s, I got over this problem by choosing courses that required papers rather than doing the summer exams. This helped, and in 2024 I was finally able to graduate.

For fairer conditions

From a distance, the sums awarded through an ETH Scholarship may not seem that big. But the few thousand francs can take a huge amount of pressure off a student and allow them to focus properly on their studies. They help create not equal, but more equal conditions for those who want to earn a degree. And in broader societal terms, they help make sure that the people who graduate are those with the right mindset and character – not just those who can afford it.

At the start at ETH, I first had to almost free myself from my practice-related background, as the focus was set much more on conceptual thinking. But now, in my professional life, I benefit from both. My background really helps me when I’m dealing with tradespeople on site. At Studio Lima, where I work today, I get to be involved in the kinds of projects that interest me: architecture that’s not just about investment returns, but about the people who will use the buildings one day.”

Key figures of the ETH scholarships 2024/25

Around 120 young people supported by a scholarship

With amounts from CHF 600 to CHF 16 800 a year

Booming ideas lab

Thanks to private donations, ETH Zurich's Student Project House has grown steadily since it was founded in 2016. In the past year alone, 13 percent of all ETH students made use of its facilities – that's more than 3,100 makers and innovators.

Did you know that companies as different as Tethys – a spin–off specialising in underwater drones – and Fabas, a startup producing bean-based proteins, began their journey at the Student Project House (SPH)? ETH Zurich's creative hub, with one location near the main building and another on the Hönggerberg campus, received a generous donation in 2024 from the Georg H. Endress Stiftung. This support enabled ETH to expand the facilities to include a Life Sciences Makerspace – a milestone that's given chemistry and biosciences students more opportunities to build their social and method-specific skills, follow their curiosity and develop their own ideas.

The Georg H. Endress Stiftung's support continues the success story made possible by many other generous donors, including the Asuera Stiftung, Baugarten Stiftung, Inger and Dr. Norbert Bischofberger, Ernst Göhner Foundation, Fondation Alcea, Franke, Dipl. Ing. Walter Fust, the Georg und Bertha Schwyzer-Winiker Stiftung, Petra König Pirola, Plastic Omnium, Stiftung e–na'bel, the Trilogos Fonds and Georg Wacker.

However, the beacon of project-based learning, experimenting and inventing is set to shine even brighter: upcoming goals include the launch of a state-of-the-art Food Lab to foster innovation in sustainable foods and an expansion of the Digital Makerspace.

Student Project House 2024 in figures

510 projects were assisted

86 per cent aimed to benefit society or the environment

986 students received coaching or SPH project support

50 volunteers offered students their assistance

Many thanks!

Supporting talented students with Excellence Scholarships, ETH Scholarships and Pioneer Fellowships is only possible thanks to the commitment of private individuals and partners. To all of you – more than 7,000 donors – we extend our sincerest thanks. Together, you are giving brilliant minds with bold ideas the wings to fly.

For an overview of our donors and partners:

The engineer reawakens

As a donor to the ETH Foundation and advisor to ETH spin-offs, Victor Bassili follows the latest technological developments with avid interest. Supporting the next generation of researchers brings his own eight years at the university full circle.

“My years at ETH were formative – ETH is part of who I am, and I feel part of ETH.”

What brought you to ETH in 1982?

I spent my childhood and youth in Egypt, Geneva and Vienna – my father worked for UNIDO, the United Nations Industrial Development Organization. He often mentioned ETH as a good option for my studies. I was interested in an interdisciplinary programme, so I eventually enrolled in chemical engineering at ETH Zurich.

And you stayed for eight years.

I enjoyed my studies so much that I decided to add on a doctorate. I’ve always been interested in the combination of technology and business, so alongside my doctorate, I also completed a postgraduate degree in technical business administration.

What stands out most in your memory from that time?

Chemical engineering was a small programme with only about twenty students, so we got to know each other quickly. Many of us were active in the student association – I myself was president. Most of our lectures were held in the CAB building on Universitätsstrasse 6, a place with a rich history that has seen several Nobel Prize winners over the years. You would often spot Vladimir Prelog, who won the Nobel Prize for Chemistry in 1975, in the Chemie-Bar. I must admit, it pains me a little that CAB is now home to computer science.

After ETH, you built a career in industry and consulting, with roles at Shell, McKinsey, Ciba and BASF, and later working for yourself. How did your ETH studies benefit you in your professional career?

Since I didn’t pursue a technical career, I made little use of the subject matter itself. But I did benefit from the working methods I learned – the ability to proceed systematically and to dive deeply into a topic.

You donate regularly to support talented young researchers at ETH. What motivates you?

There are several reasons. First, I want to give something back. My years at ETH were formative – ETH is part of who I am, and I feel part of ETH. Second, I see it as an investment in the future. Switzerland’s industry is evolving, and ETH is a key factor in ensuring that success stories continue to be written. Supporting promising startups also means supporting potential employers. I want my children to have the opportunity to work in engineering professions here in Switzerland, if that’s what they choose to do. There’s also another dimension: the engineer within me has reawakened now that I give him more attention. As far as technology goes, we’re living in an exciting era, full of disruption and rapid evolution. I satisfy my curiosity for these topics at events like those organised by the ETH Foundation.

You advise ETH startups, in either official or informal roles, and occasionally invest in them. How did that come about?

In 2017, ETH had a pavilion at the World Economic Forum and I joined a trip there. Over lunch I met two young founders who had launched a startup just two weeks earlier. They had an interesting product for AI-driven procurement optimisation, but no industrial contacts – that’s where I could step in. I still support that company, GenLots, from time to time. PharmaBiome is a startup I met at an ETH Foundation event and was impressed. They were closing a bridge financing round, and I was able to rally enough people in my network to cover the final gap. And I had a similar experience with Fabas, a startup from the Student Project House. I often say: if you want to invest in more mature startups, you can do that through the stock exchange. But if you’re interested in getting involved early and locally, ETH startups are a great choice.

Learn more about companies founded at ETH Zurich:

Current Pioneer Fellows

Giuseppe Antoniazzi
FibroTech Solutions: technology for detecting fibrosis

Fibrosis is a condition in which excessive collagen deposits cause hardening and scarring of tissue which, in turn, can impair organ function. Current diagnostic methods often fail to detect the disease at an early stage or monitor it effectively. A chemical probe developed by FibroTech enables earlier diagnosis and aims to improve the effectiveness of treatment.

Friederike Biffar and Timo Küster
AITHON Robotics: drones for inspection and maintenance

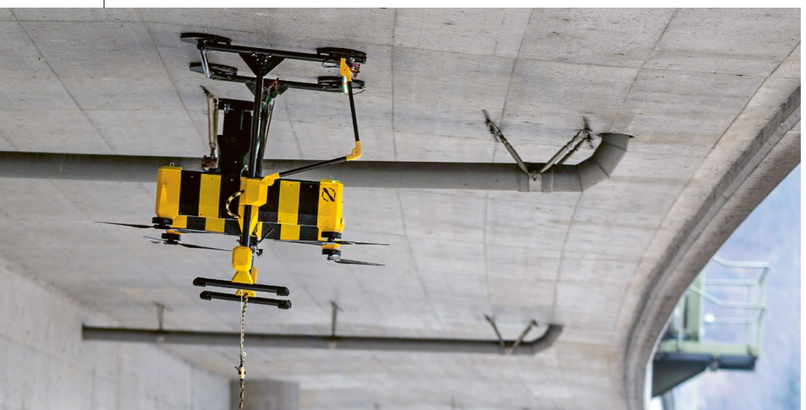
Faster, safer and more cost-effective inspections and maintenance help reduce infrastructure operating costs. AITHON's drone system replaces the need for scaffolding, road closures and aerial work platforms, taking over tasks like core drilling, sensor installation and concrete testing. Hazardous work at height is eliminated and the service life of infrastructure is extended.

Lukas Bircher
TALPA-Inspection: automated corrosion inspection

Using conventional drones and robots equipped with a new sensor technology, TALPA-Inspection enables the automated detection of corrosion damage in reinforced concrete structures such as tunnels and bridges. Damage can be identified early, allowing for targeted, cost-effective repairs and the safe and long-term usage of the infrastructure.

Kyriakos Alexandros Chondrogiannis
Builtstop: modern technology to protect ageing buildings

Modern cities face the challenge of renewing ageing infrastructure to mitigate damage from natural hazards like earthquakes. Builtstop offers a technology specially designed to protect such endangered buildings. Attached to existing structures, the NegSV device effectively dampens vibrations – and Builtstop plays its part in preserving our cultural heritage.



Börte Emiroglu
Immunosponge: smart wound dressing

Chronic wounds are slow to heal, often due to persistent inflammation that further damages tissue. Börte Emiroglu is developing an innovative dressing that acts like a sponge: it creates a balanced healing environment by absorbing and removing inflammation-promoting molecules, making treatment more effective and affordable.

Giorgia Greter
Baxiva: vaccine for urinary tract infections

More than half of women worldwide experience a urinary tract infection at least once in their lives. Most are caused by E. coli, a bacterium becoming increasingly resistant to antibiotics. Giorgia Greter is developing an innovative vaccine that protects against infection, reduces antibiotic use, and will potentially improve the health of millions of women.

Hao Liu
Lumios: precise tissue models

Lumios aims to develop a light-based 3D printing platform for producing accurate human tissue models. These models – of muscle or nerve tissue, for example – are set to improve the efficiency and reliability of preclinical testing. This will enable life-saving therapies to be developed more quickly and cost-effectively and potentially reduce the need for animal testing.

Marie Perrin
REEcover: rare earth recovery from e-waste

From computers and smartphones to wind turbines and electric cars, today's economy depends on rare earth elements. Yet their extraction is geopolitically and environmentally problematic. Marie Perrin has developed a nature-inspired process that recovers europium from old fluorescent lamps, offering hope for a long-awaited method to recycle rare earth metals.

Massimo Saini
CAPTAIM: personalised cancer therapies

Massimo Saini is working on an advanced liquid biopsy technology that uses modern blood tests to deliver crucial information for tailored cancer treatments. Especially for patients with hard-to-reach tumours, it offers a less invasive and more accurate alternative to conventional biopsies, improving the effectiveness of treatments.

Martin Stadler
QENDRA: key technology for quantum research

While quantum computers advance, and the first applications are within reach, their control systems are becoming increasingly complex. So far, quantum computers based on trapped ions or neutral atoms have been inadequately served by current commercial solutions. Martin Stadler has developed a scalable and reliable control system specifically designed for the computers.

Rik Ubaghs
Arago Labs: more precise tumour surgeries

In the treatment of patients with malignant brain tumours, the complete surgical removal of cancerous tissue is critical. Arago Labs' novel procedure and surgical navigation system enables precise, cellular-level visualisation of tumours during the operation – allowing for better decisions on what tissue needs to be removed.

Lilly van de Venn
HT–DISCOVER: more precise gene therapies

One of the major challenges in genome editing is "off-target effects" – unintended changes to the genome that may compromise the safety and effectiveness of gene therapies. Lilly van de Venn has developed a highly precise and efficient method for detecting such mutations, helping to build trust in the safety of gene therapies.

Tansel Baran Yasar
Aeternus Neurotechnologies: implants for neurological health

One in eight people suffers from neurological disorders such as epilepsy, depression or dementia. Severe cases often require invasive implants. Tansel Baran Yasar's ultra-flexible brain implants are minimally invasive and provide a high-resolution, stable interface between brain and machine – helping to improve patients' quality of life.

Success since the launch in 2010

More than
150 Fellowships awarded

More than
90 companies founded by Fellows

Combatting weeds with high-tech

Robotics is the solution to some of agriculture's biggest challenges: such is the conviction of Aurel Neff, co-founder of ETH spin-off Caterra. We spoke to the entrepreneur, whose aim for 2026 is to lease out a total of forty robots.

What problem is Caterra solving?

Organic farms that don't use herbicides are looking for technological alternatives to costly manual weeding. On top of that, farmers are finding it increasingly difficult to hire people willing to do this kind of work. Our solution is a robot that autonomously removes weeds using a laser. Our technology is also attractive for conventional farms. The herbicides they use tend to slow the growth of their vegetables, but if they could save time by not damaging their crops during growth, the benefit would be huge – especially in Switzerland, where the frost-free period is relatively short. And herbicides are under pressure: every year, another is banned. It's likely that most of them will be phased out eventually.

Will we see robots in fields everywhere in a few years' time?

Some companies focus on mounting lasers to tractor trailers. Our project is a bit more complex and needs more expertise – we're not just working on lasers, but also on autonomous navigation, software and safety questions. But if we succeed, a robot is the best and most cost-efficient solution. The key challenge is: how robust can we make our robot, and how long will that take?

What does your location at the ETH facility in Lindau, Zurich Oberland, offer you?

We benefit from having an office with a workshop next to a vegetable field, and good transport links. We also benefit from knowledge exchange, for example with ETH doctoral students in plant sciences. It's also extremely valuable being so close to the Strickhof agricultural competence centre, where farmers are trained. Whole classes of students come to visit our robot and give us feedback.

> "The key challenge is: how robust can we make our robot, and how long will that take?"

How big is the market for Caterra?

In Switzerland, we have about 200 farms of a critical size producing organic vegetables. They're our most obvious customers – some might even use up to a dozen robots. Then there are fruit and herb growers, as well as conventional farms too. We've also had many enquiries from France, Italy, Austria and Germany.

Where are your robots already in use, and under what terms?

We've currently leased out ten robots, which are weeding vegetable fields across Switzerland. Farms can test the robot for a year at a cost of around 60,000 francs, including support. The robot works day and night, in all weather, except when it's extremely muddy. And it helps solve the labour shortage I mentioned, with many farmers struggling to find enough people to do the weeding.

What has support from donors meant for your journey?

Thanks to the Pioneer Fellowship, my co-founder Patrick and I were able to focus on the project for a full year – developing ideas, building prototypes, conducting market research. The coaching that came with the programme was also incredibly helpful. We're slowly starting to generate revenue now, but robotics takes time. We're still doing research, and the team is working extremely hard. Customer acquisition is no problem – we've got a long waiting list. What we need is to keep developing, developing, developing.

What have been the highlights in the tough everyday life of a young startup?

One high point was definitely the first time the new robot worked through the night without any intervention. But the absolute best moment so far was signing the final robot lease agreement for 2025. The fact that customers gave us their money for something they hadn't even seen yet – that was an incredible vote of confidence.

Support the Pioneer Fellowship programme:

Making an impact

Carla Ferradini wins awards

Physics Excellence Scholar Carla Ferradini had reason to celebrate twice: she not only received the Willi Studer Prize 2024 as the top graduate in her Master's programme, but her thesis also won her the Inspire Potentials award from ETH Zurich's Quantum Center. The award aims to attract outstanding female students to quantum science – and in Carla Ferradini's case, it has worked: she is now a doctoral student in Renato Renner's Quantum Information Theory group at ETH Zurich.

Snake-inspired robot impresses

Thanks to support from a Pioneer Fellowship, the ETH spin-off RoBoa is about to launch a snake-like robot designed to simplify inspection and rescue operations in hard-to-reach places. The project, which originated in ETH Zurich's Autonomous Systems Lab, won the 2024 Swiss Technology Award in the "Inventors" category and received CHF 150,000 from the Venture Kick funding programme in spring 2025. The young entrepreneurs plan to use the funding to develop pilot projects with their first customers.

Assistant professorship for Michelle Frei

In July 2024, Michelle Frei took up a professorship in Chemical Biology and Molecular Imaging at ETH Zurich. An interdisciplinary researcher and recipient of countless prizes and awards, her career had already been boosted by ETH Foundation donors from the start: in 2014/15, she was supported by an Excellence Scholarship. Following positions at EPFL and the Max Planck Institute for Medical Research, she most recently worked as a postdoctoral researcher at the University of California, San Diego.

Sallea secures $2.6 million for clean meat

ETH spin-off Sallea, which was supported by a Pioneer Fellowship, announced in October 2024 that it had closed a $2.6 million funding round to advance the production of cultivated meat. The company's innovative 3D scaffolding is designed to enable food manufacturers to produce steaks and fillets without raising live-stock. Behind the venture are three female co-founders, including former Excellence Scholar Nicole Kleger.

Winner of the 2024 "Female Innovator of the Year" award: former Excellence Scholar, Nicole Kleger (seated right, with her two co–founders), today CTO of Sallea.

Risk capital and funding for cooling technology

Apheros, an ETH spin-off founded by former Pioneer Fellow Julia Carpenter, continues to make headlines. The company, which develops novel metal foams for cooling electronic devices, secured CHF 1.6 million in a funding round led by Swiss VC firm Founderful in August 2024. Just a few months later, Apheros was able to announce that it had received a further CHF 1.1 million from Innosuisse, the Swiss Innovation Agency.

The Lake Lucerne Navigation Company (SGV) also uses fuel produced by ETH spin-off Synhelion.

Synhelion: getting things moving

Since 2024, Synhelion has been successfully producing renewable synthetic fuels at its DAWN facility. To demonstrate the usability of their solar fuels, the cleantech company is currently supplying a variety of vehicles – including a steamboat in the fleet of one of its pioneering customers, the Lake Lucerne Navigation Company, and a Harley Davidson owned by ETH Professor Aldo Steinfeld, the visionary behind the technology. Synhelion is now scaling up its technology to produce commercially viable volumes of solar fuel – for clients such as SWISS, the Lufthansa Group and the AMAG Group. Co-CEO Philipp Furler was a Pioneer Fellow in 2016.

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More space for creativity and entrepreneurship

Construction for the new innovation centre is scheduled to begin in 2029.

With its planned Centre for Students and Entrepreneurs, ETH Zurich is creating a pioneering space where talented young students can explore their ideas, develop entrepreneurial skills and work together on finding answers to the challenges of tomorrow. The new building on the Hönggerberg campus will be an inspiring hub for students, researchers, start-ups, and members of the business and public community – a place where innovation is lived and breathed.

The Centre will bring together existing initiatives under one roof, including the Student Project House, the ETH Entrepreneur Club, ETH Entrepreneurship and a range of ETH spin-offs that are currently spread across different locations. This consolidation will create a unique ecosystem that actively fosters interdisciplinary collaboration, creative thinking and entrepreneurial drive. Workshops, modern workspaces, event venues and communal areas will provide the ideal setting for turning ideas into reality – from the first sketch to a market-ready product. But the Centre will offer students far more than just infrastructure: it will be a place of empowerment, giving them the space, resources and networks they need to realise their full potential.

Thank you

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We look forward to hearing from you

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