

student
support
program
Impact Report
2021-2022

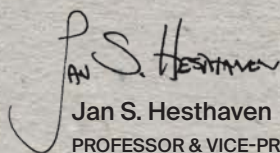
Dear Reader, It's that time of the year again! A time to celebrate our students and share, in their own words, what gets them jumping out of bed in the morning, who most inspires them, what drives Anna or Elias to share their knowledge as Peer to Peer tutors, or, participate in MAKE projects like Alec and Amaëlle, or, how being awarded an Excellence Fellowship has changed Leonardo's and Ludovica's lives.

Thanks to its success, the Student Support Program has expanded its reach to ignite, attract and equip talents and support students at every stage of their educational journey. We Inspire curiosity and passion for science in children still at school with the Coding Club for Girls and the Euler course; Attract students to study at EPFL with the continuation of Master Excellence fellowships and the awarding of Excellence fellowships for students at Bachelor level for the first time! And finally, Equip, which not only allows students opportunities for more hands-on experience but also broadens their transversal skillset to better prepare them for their professional lives.

In our third celebration of the Student Support Program, join us to delve into the lives of 13 students who have benefited from participating in this key EPFL program. I hope, like me, you will be inspired by their creativity, their drive to pave the way in developing new solutions to challenges faced by our society whether it is developing tailored prosthetics to enable children to take part in a wider variety of sports, or tracking and creating solutions to tackle space debris.

One thing is clear, this program which began as a celebration of EPFL's 50 years, has now become so much more, it has become a celebration of our shared future too. I hope you will find our student's stories as inspiring as I do, happy reading!

With warm regards,

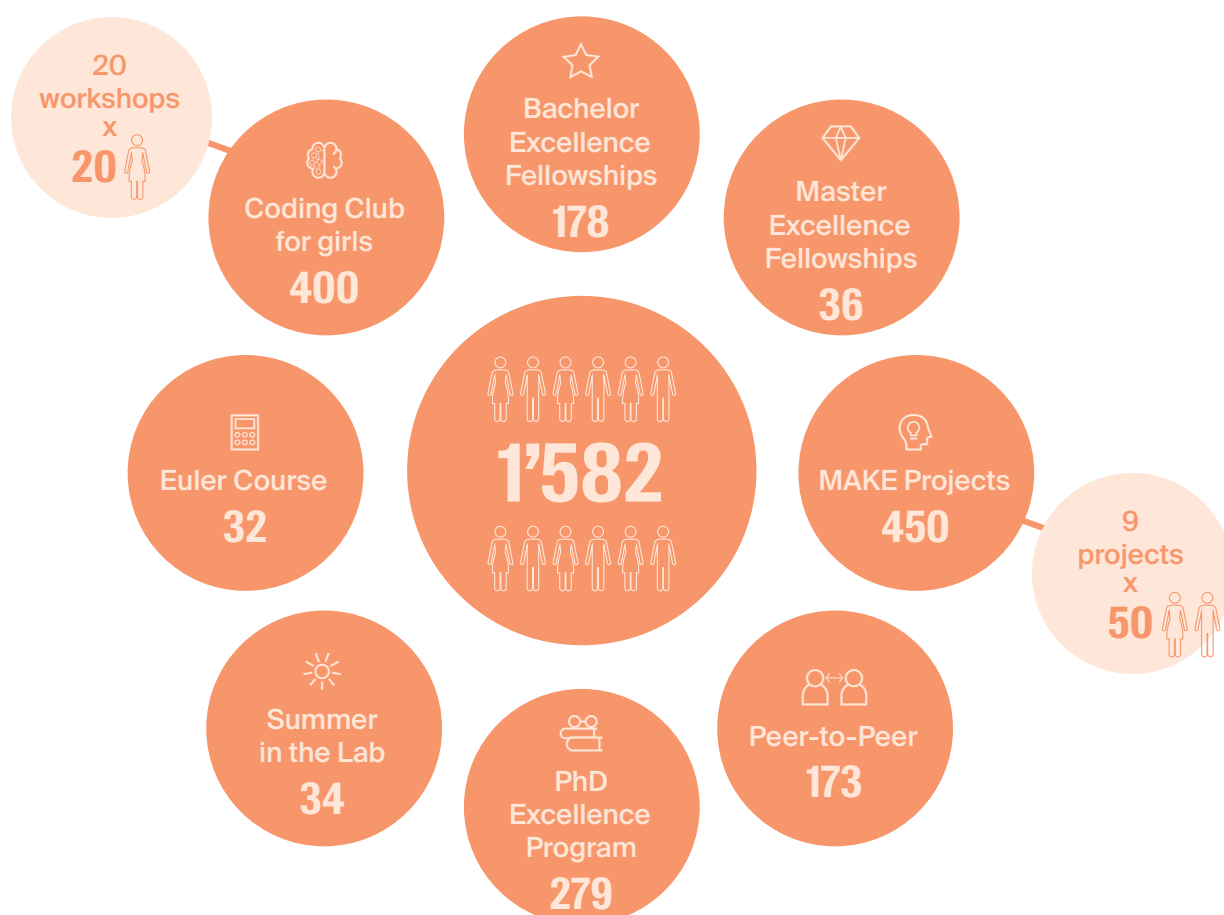


Jan S. Hesthaven
PROFESSOR & VICE-PRESIDENT OF ACADEMIC AFFAIRS

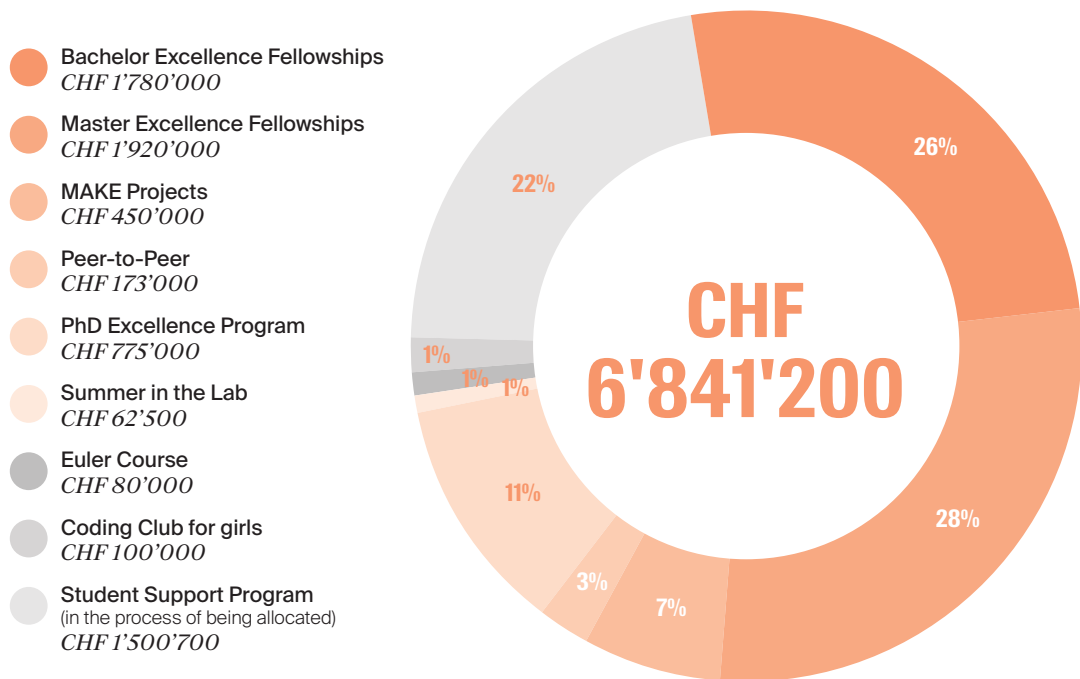
<u>Facts & figures</u>	4
<u>Ambassadors</u>	6
<u>Scholars</u>	8
<u>Tutors</u>	14
<u>MAKE Projects</u>	18
<u>Donors</u>	28
<u>Thank you</u>	30
<u>A word from the President</u>	31

Our donors and partners support **1582 beneficiaries** through the Student Support Program initiatives.

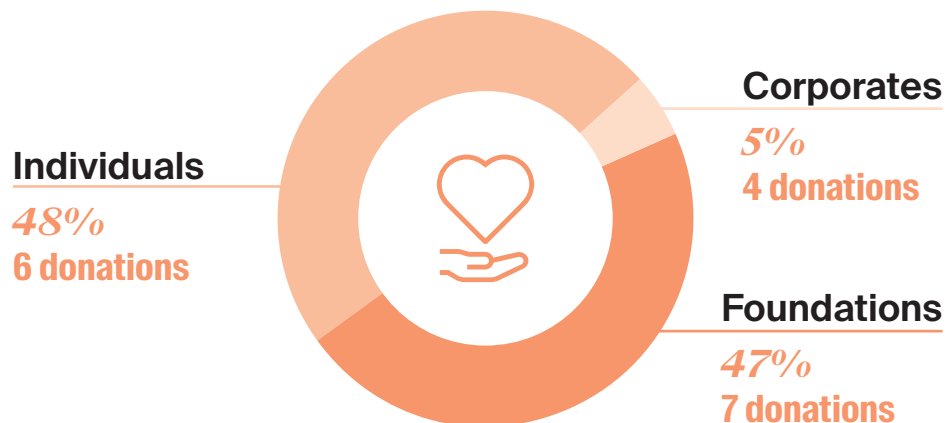
Beneficiaries



Donations received to date



Donations



Alumni



> 1/3 of the number of donations are associated with alumni and represent > 50% of the total amount raised to date

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Scho- lars



LUDOVICA, LEONARDO and PHILIPP were considering EPFL for quite some time, but it is thanks to the Excellence Fellowship that they were able to make their dream come true – pursuing their master’s degree at one of the world’s most renowned institutions of science and technology. They were attracted by the location of the campus overlooking the Alps, EPFL’s facilities and programs – Digital Humanities for Ludovica – and the extensive infrastructure and high-tech equipment for Leonardo. Philipp was drawn by the many opportunities to do hands-on practical work, a hallmark of EPFL’s reputation. What’s more, the fellowship allows them to focus on their studies, enabling them to live on campus with a healthy balance between study and their other interests.

Ludovica Schaerf

Excellence Fellowship Basil Panzer Trust



Without the Excellence Fellowship, Ludovica would never have known the joys of applying Artificial Intelligence to her first love; classical paintings and art history. Her research at EPFL has brought about concrete results, not least of which having world-famous art historian Bernard Aikema as an external examiner for her thesis defence.

AGE
23

COUNTRY OF ORIGIN
Italy

BACHELOR'S
Computer Science
and Humanities

MASTER'S
Digital Humanities

FAVOURITE ARTIST
Robert Rauschenberg

As a child growing up in the centre of Rome, Ludovica wanted to be an FBI agent. But not just any agent, she wanted to fight cyber criminals. By high school, that dream had evolved somewhat: "I wanted to apply computer science to something in the humanities or social science," says Ludovica, who after doing a Bachelor in Computer Science at Amsterdam University College has now managed to combine her two passions. Today, she is about to submit her thesis to complete her Master's degree in Digital Humanities. Her thesis supervisor in Amsterdam was an EPFL alumnus who had done his PhD in the program. "That's how I found out to my surprise that such a thing existed!" she exclaims.

When asked when she was happiest, a wry smile comes over Ludovica's face. "During the first Covid lockdown in March 2020, the following six months were the best of my life. We didn't know what would happen to our families back in Italy where the pandemic was very bad at the time. We (the students) bonded together and created a very close-knit community. Where everyone helped each other. There was a huge sense of solidarity. 900 students locked in dorms. It ended up being the richest time of my life. It was a unique place in a unique time." Her second year at EPFL made up for the first which was marred by the pandemic. Joy returns to her voice: "Now I really like it. I'm always on campus. It feels like this small town where you have your whole life."

When asked about her favourite place on campus, Ludovica replies without the slightest hesitation: "The couches on the first floor of BC [i.e. the School of Computer and Communication Sciences]. It's my favourite building, so full of light, so colourful, and the couches are so colourful too," she explains. Ludovica enjoys studying where there is the constant din of life happening around her – especially after the silence of the pandemic.

Broaching the topic of her Master's thesis, sheer delight returns to her voice. "It's basically about using Artificial Intelligence to show art historians where to look for patterns that show how artists influenced one another, which is exactly what they need for their work." Her interest in Digital Humanities stems from her number one passion: visual arts. Her research involves looking at data a lot, but in this case data refer to 340'000 of some of the most beautiful existing paintings. "I can hardly think of a better way to spend my time, so I've really enjoyed the four months I spent on my Master's project," she says with a huge smile.

**Marrying Art
History and
Artificial
Intelligence**



VIDEO-INTERVIEW
OF LUDOVICA

go.epfl.ch/ssp-video6

Although she still does not know where she will go, her Master's at EPFL has led to an epiphany: "I will stay in academia as long as I can. If I can spend four more years doing a PhD and continue feeding my passion for art through my research, I'll do it, of course!" she muses. EPFL has shown her that she can "shoot for the stars at all times. The level of research and resources means that one can really reach high."

This fall, Ludovica will do an internship in Zürich with a company that does art recognition with artificial intelligence, and she will then search for a PhD program. Because EPFL looks into Digital Humanities from a science perspective, she's more than happy to come back. "If I can do what I love and contribute in a practical way to the work of art historians, why wouldn't I?" she says, genuinely pleased at the prospect.

Leonardo Cele' EPFL Excellence Fellowship



The Excellence Fellowship has enabled Leonardo Cele' to pursue his passions – microengineering – and more specifically, seeing and understanding how things are made and their practical applications in the real world. It has also allowed him to maintain a balanced life, complete with friends, climbing and movies, a rare luxury at his young age.

AGE
23

COUNTRY OF ORIGIN
Italy

BACHELOR'S
Electrical Engineering

MASTER'S
Microengineering

INSPIRED BY
Leonardo da Vinci

As a child growing up in Pavia, a small city south of Milan, young Leonardo first dreamt of being a chef and then a pianist but by the age of 12, he had already turned to engineering and physics. "Maths and physics were not so difficult for me, so it was an easy choice," he reflects. Leonardo fell in love with the EPFL campus after visiting his brother in previous years, who was doing his Master's at the time. "It's really a completely other world from Pavia – so beautiful, so wide open, so international. That's when I told myself that I could really get used to this." Thanks to the Excellence Fellowship, he is able to live on campus, which he appreciates greatly, as it contributes to the balance he has struck in his life. "I think the campus is a super self-sufficient and beautiful ecosystem. It's a really good atmosphere in which to learn and grow." And his favourite place on campus? "Right next to the Sports Centre. Where the view of the mountains all the way to the Valais is breathtaking. It's really impressive!" Leonardo loves living in Switzerland.

As he ends the first year of his Masters, Leonardo has found plenty to be passionate about in microengineering. "Advanced additive manufacturing includes state-of-the-art 3D printing techniques. During the course, professionals came in and explained how the technology we were studying is used for bioprinting or for aerospace applications." Seeing how these technologies are put to use in the real world is what fascinates and motivates Leonardo. Thus, it is no surprise that after his Masters he sees himself

Balance is
everything

going into the industry. His Masters fellowship made it possible for him to come to EPFL and work in the Center of MicroNanoTechnology. “It’s a huge plus to have this amazing infrastructure and all of the high-tech equipment you need to do your work.” What is clear is that Leonardo is very passionate about the engineering process. He wants to learn what’s behind the manufacturing, to see how things are made. What is his dream at the moment? “To work in Switzerland on some of these practical applications. If I get to do that, EPFL will have given me that opportunity. It’s huge.”

Despite his penchant for old movies, Leonardo is happy to be living nowadays. “I don’t believe in nostalgia.” And goes on to evoke Woody Allen’s film, “Midnight in Paris”, in which the protagonist travels back in time to the roaring 20s, only to discover that some of his heroes of that time would rather live in the 19th Century. “You need to make the most of what you have in the “here and now” and be happy. What’s most important, is to be aware and live in the present moment – in order to recognize those fleeting moments when you are happy.” He goes on to explain that this concept can be found all over literature. Leonardo’s favourite writers are the Russian novelists of the 19th Century: “Gogol or Dostoevsky. Not only is their writing timeless, but they contributed to the fall of the Tsar and the Russian Empire.”



VIDEO-INTERVIEW OF LEONARDO

go.epfl.ch/ssp-video4

What talent would Leonardo like to have most? “Being able to be passionate about everything, but I think it’s more like a superpower. Which brings us to the subject of his idol, who by chance happens to be his namesake: “Leonardo da Vinci. Now there was a guy who was passionate about everything, and he kept it up, right to the end. He was ahead of his time, and had like 10 professions and was super talented at everything he did.” As Leonardo says, a passion like that is a superpower. This young man has a superpower of his own – a balanced life. And what’s more, he is totally aware of it and commits all his efforts to preserving it at all costs. After all, it’s the secret of his success.



Philipp Weder

EPFL Excellence Fellowship



It was the emphasis on practical experience that attracted Philipp to do his Master's at EPFL after a Bachelor at ETHZ. His true calling: becoming a researcher. He wants to work with other researchers to be less dependent on fossil fuels.

AGE
24

COUNTRY OF ORIGIN
Switzerland

BACHELOR'S
Mathematics

MASTER'S
Computational
Science and
Engineering

FAVORITE AUTHOR
Hermann Hesse

Growing up in Au, a stone's throw from Austria in the canton of St. Gallen, Philipp first dreamed of becoming a firefighter or a journalist. In high school he was not fond of maths, but at the age of 16 he met a passionate physics teacher who turned him towards the sciences. "What really fascinates me about physics is that it not only helps us understand the world around us, but enables us to look into the future," he says enthusiastically. After a year of physics at ETHZ, he decided to switch to mathematics: "I was fascinated at how precise mathematics is and how it provides answers rather than creating new questions." One quickly sees in Philipp a man on a mission. Curious by nature, Philipp was fortunate to be raised in a family where "everyone did what they were most interested in".

After an enriching exchange year at the Ecole Polytechnique in Paris for the final year of his Bachelor's degree, Philipp entered the Computational Science and Engineering program at EPFL where he is finishing the first year of his Master's program: "It's the interface between maths, computer science and physics. You have to transform a problem that cannot be worked out on paper into a problem that a computer can solve."

He goes on to describe the countless ways in which these solutions can be implemented to noble ends in physics, engineering, chemistry or even biology.

Philipp is where he belongs – finding solutions to hard problems. When asked what it felt like to first arrive on the EPFL campus, emotion fills his voice: "After two very complicated years of Covid where I did two internships almost entirely from home, I arrived on campus for the 'Welcome Day' and it was incredible! The President welcomed us and it felt like a roller coaster; we went from zero to 120 km/h in just two seconds." It was a new beginning for Philipp, who was reunited with friends from his year at Ecole Polytechnique in Paris, within this very particular liberating vibe. When asked to name his favorite place on campus, Philipp answers without hesitation "The Agora (Place Cosandey).

It's always full. I meet up with my friends and we eat in the sun. It's a moment to take a step back from classes and projects. It's also a time to joke a bit, to support each other. I think you can get a good sense of EPFL's student culture there."

**A man on
a mission**

As for the excellence fellowship, Philipp appreciates the freedom it gives him: “I can focus completely on my studies and live on campus. It's a huge advantage.” He also gives his time to the community: “I'm part of the TEDxEcublens association,” he says with a note of pride. “I just came out of a meeting planning for the event that will be taking place in October and I can't wait for it to happen!” Philipp can barely hold his enthusiasm. He's the same when talking about the spirit that reigns at EPFL: “Here everyone wants to move forward, test new theories. Everyone wants to do things that no one has ever done before. It's amazing.”

To the question “What societal challenge would you like to solve?” he answers without hesitation: “To get rid of all fossil fuels. Just the fact that we burn liters and liters of diesel and kerosene daily drives me crazy!” When we turn the conversation to his notion of happiness, Philipp is unequivocal: “Ikigai. A Japanese word that means that which gives life meaning, a reason to be on the planet.”



Tu- tors



By all accounts, the first year of university at EPFL is a real challenge for most students. The vital support that tutors provide can truly make the difference between success and failure. The experience of both benefiting from and/or becoming tutors themselves has transformed the lives of ANNA, ELIAS and LÉA. A natural teacher who has already been a tutor for 4 years, Anna can never get enough of these moments when the eyes of a student sparkle and lead to a breakthrough. Elias credits the tutors for the success he has achieved as a student. Léa enjoys the stimulation of continually switching from one student's challenge to another during the 2-hour tutoring sessions. All three cherished the human contacts tutoring provided them during the long pandemic months, both for themselves and the students who relied on them. In the following pages you will explore their stories and how tutoring has been an enriching experience for them.

Anna Chamot



Inspired since high school by enthusiastic teachers, Anna is pursuing her dream of becoming a university professor of Life Sciences. She has been working as a tutor for 4 years and is assisting students on an impressive range of courses, including biology, chemistry, linear algebra and numerical analysis.

Born to teach

AGE
25

COUNTRY OF ORIGIN
France

BACHELOR'S
Life Sciences
Engineering

MASTER'S
Life Sciences
Engineering,
specialty
neuroengineering

FAVORITE BOOK
Brave New World,
Aldous Huxley

Anna grew up in a large brood on the family farm in Haute-Savoie, where she dreamed of becoming a veterinarian. After studying biology in high school, “I wanted to become a biologist to study living organisms.” Anna was most inspired by her life sciences teachers in high school. “Their classes were very interesting and they were true educators. I told myself that I wanted to know everything about these subjects and, above all, to be able to teach them like they did.” Thus Anna's trajectory towards becoming a university professor began.

When asked why she became a tutor, Anna answers without hesitation: “It was a no-brainer for me. I helped children with their homework in primary school, in middle and high school, so it was logical to continue at EPFL.” It comes indeed “rather naturally” to her and teaching fits her like a glove. “I saw that tutors really made the difference for first-year students. The professor handles the theoretical part, although some professors also do exercises in class. Everything related to the implementation of the theory is done during the exercises with the tutors. That is where a lot of students gain a real understanding of the subject.” What she appreciates most in a professor is “when they are passionate about their field as everything falls into place – they know how to better explain, are more patient with the questions, and even tell some anecdotes: and that’s how you can get a better grasp on the subject.”

When asked about a societal challenge she would like to solve, the first thing that comes to her mind relates to tutoring: “Generally all students should have access to tutoring when they want and/or need it. If a student wants to learn anything, there would be a structure dedicated to just that, like at EPFL, but at all levels of education.” How does she like to spend her free time? “I don’t need to spend time, it goes by quickly enough on its own. But since you’re asking me, my main hobby is thinking. I don’t get bored because I always have interesting ideas running through my head.” At the time of our meeting, Anna is about to begin her exams to complete the first year of her Master’s program. But no sleepless nights for this serene and well-organized young woman. And after her Master’s? “A doctorate, so I can become a professor.” Of course.

Elias Myers



Ever since he visited the campus at age 10, Elias knew he wanted to study at EPFL. He is now happily and proudly completing the second year of his bachelor's degree, while acknowledging that it hasn't always been easy.

AGE
22

COUNTRY OF ORIGIN
Switzerland

BACHELOR'S
Communication
Systems

SCIENTIFIC IDOL
Alan Turing

Elias has worked very hard over the past few years to get to where he is today. He had a great role model in his grandfather, who left the Troubles in Northern Ireland to become an electrical engineer and, eventually, deputy director at CERN. Elias started programming at the age of 13 and was already dreaming of attending EPFL then. He participated in the Euler competition (a mathematics course offered by EPFL for high potential children) but did not succeed. "So, I've come to take my revenge," he says with a grin. In addition to his job as a tutor, Elias works at the IT Service Desk of the CHUV (Vaud University Hospital). A young man with many interests, he is also involved in the AgePoly (EPFL's main student association) as a treasurer of the "Students 4 Students" Commission. "Every year we organize a free preparation week for students before the start of the school year. The idea is to replace these extremely expensive privately-led preparatory weeks, which are out of reach for many people." It seems that Elias has become an excellent time manager since his arrival at EPFL, as he is also part of the EPFL Rocket Team (MAKE project) and will soon receive his certificate after a decade of classical guitar courses at the Geneva Conservatory.

The long game

The tutoring system has had a profound effect on Elias's life: "Tutors have changed my view of subjects I didn't like at all." After doing poorly in his first year in an analysis course, he repeated the course and the year. His tutors then introduced him to that same subject from a completely new angle and he liked it so much that he has now become a tutor himself for the same course. Tutoring for Elias is a natural way to give other students the same opportunities for success that he has enjoyed. In terms of what he has gained from tutoring, he mentions listening, explaining, summarizing, and social skills. "There are people who are ashamed to admit that they did not understand your explanation. You have to observe and adapt. It's a delicate dance sometimes, but a very rewarding one – more than I ever thought it would be." There are also difficult and very human aspects to tutoring: "It hurts me to see students failing a subject, when they worked and tried very hard. As a student that had to repeat a year, I see myself two years ago and it's tough."

Elias has known many remarkable moments during his time at EPFL, but there is one that stands out. "After failing my first semester and doing the MAN (mise à niveau), I was with my family in the mountains when I got my mark, and it was good! I felt like I had finally earned my place at EPFL." Curious by nature, Elias will soon broaden his horizons thanks to the EPFL exchange program: "For the third year of my Bachelor's, I'm going to Waterloo, in Canada. I'm very curious to see how things are done elsewhere as I've heard that it's quite different!" What else is on the horizon for this young man? "I would love to come back to EPFL for a Master's degree in cybersecurity, which has been my goal all along." Elias always had a long-term vision and it works for him.

Léa Dreyfus



Léa has always dreamed of becoming a great scientist. She found her focus, physics, at EPFL. Within her community, she plays an active role in mentoring her fellow physics students.

AGE

21

COUNTRY OF ORIGIN

France

BACHELOR'S

Physics

MASTER'S

Physics
(Particle Physics)

FAVORITE MUSIC

Movie soundtracks

Léa comes from a long line of scientists. But she is the first woman in her family to pursue physics. That said, she is a free spirit and her very first ambition was to become a crane operator. "I grew up partly in Paris, and as a child, when we drove past the cranes, I thought it must be great to be up there alone with a beautiful view of the city," she recalls. Now, she is dedicated to particle physics and she is loving it. At age 21 only, Léa has already spent 4 years at EPFL and is finishing the first year of her Master's program. It was in the second year of her physics Bachelor's that she discovered tutoring thanks to older friends who recommended it as they had found the experience enriching. "I like being the intermediary between the corrected paper and the student. I enjoy bringing another perspective while helping them to reach the desired rationale." When asked about a memory during her 3 years of tutoring that stands out, she pauses. "During the first Covid lockdown, everyone was depressed. I took on my role as tutor on a video conferencing platform between 5 and 7 p.m., I was in contact with students that was precious for everyone involved at the time. It was always the best part of my week." Despite these lovely online exchanges, Léa is very happy to be back to in person tutoring. "You have to juggle several people and several different exercises. The sessions are really challenging and I love it!"



VIDEO-INTERVIEW OF LÉA

go.epfl.ch/ssp-video3

Lea enjoys being part of a scientific community and takes an active role in mentoring her fellow physics students. She is president of the Association of EPFL Students in Physics and served two years on the Section's Faculty Council. "Supporting my physics community is important to me. I'm happy to do it. We organize conferences and drinks. It's really fun." Although her scientific interests are many, she is focusing on her Master's in experimental particle physics. "It's research on the particle detection data generated at CERN." She goes on to explain that this type of research answers fundamental questions in physics. "Why did the Big Bang happen? Why is the universe composed of matter and not antimatter? Many questions that are at the root of everything: it's quite exciting." Léa will soon be doing an internship at CERN.

Unlocking
the mysteries
of the
universe

What does the future look like for this promising young scientist, who, when she's not studying, tutoring or running the physics association, plays guitar, cooks and does crochet? "If I want to be a physicist, it's clearly as a PhD." For now, however, Léa is satisfied to keep passing on the flame. "I want to increase outreach and communication about the amazing physics we do."

MAKE pro- jects



MAKE projects pose daunting challenges to EPFL students, while providing transformative experiences and transversal skills. KARL, JULES, LUCA, JÉRÉMY, HUGO, ALEC and AMAËLLE give us a glimpse into these hands-on projects within an interdisciplinary team. Whether the goal is to remove tons of carbon from the environment, catalogue 'space junk', create tech solutions for people with disabilities or an assistive home robot, these projects have provided some participants with a springboard to their future careers. Students discover inner-personal resources that they had no idea they possessed, pushing past obstacles and operating well beyond their primary area of expertise. In the following portraits you will discover an innovative learning environment through the eyes of these resilient and forward-thinking students.

[AgriFood](#)

[Asclepios](#)

[Carbon Removal](#)

[Design for Sustainability](#)

[EPFL Assistive Technologies Challenge](#)

[EPFL Horological competition](#)

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TO FIND OUT
MORE ABOUT
MAKE PROJECTS



bit.ly/3jGLABG

Carbon Removal



Capturing and storing 5 tons of CO₂ per day for a full year, right on the EPFL campus – this is the objective of the Carbon Removal MAKE project. Karl, the initiative's founder, will also lead the Carbon Team in Elon Musk's XPRIZE Carbon Removal competition over the next 3 years, which offers a \$100M purse, the largest prize incentive in history.

Karl Khalil

AGE
20

COUNTRY OF ORIGIN
Lebanon

BACHELOR'S
Microengineering

MAKE PROJECTS
AND STUDENT
ASSOCIATIONS
Carbon Removal,
Rocket Team,
Spacecraft Team,
Asclepios, Blockchain
Student Association

INSPIRED BY
Elon Musk

Karl is an overachiever. He always has been. Recently however, given the success of the Carbon Team he founded back in September 2021, his achievement has been taken to a whole new level. When describing the moment he learned that he would be able to work on carbon removal, as his job, one can feel how emotional he is about it: "I met with the EPFL start-up unit and they offered me a grant so I could work full-time on the Carbon Team after graduation. I couldn't believe it! I was going to be able to take carbon removal to the next level, to unlock its full potential, this is so awesome!" As he is finishing his third and final year of Bachelors in Microengineering, a Masters is what most people would do next, just to be on the safe side. But that's not Karl's style. "I can do a Masters or more afterwards or at any time in the future. But this opportunity comes once-in-a-lifetime and it might be my chance to make the greatest contribution I can to humanity: helping to mitigate climate change."

Karl has never done anything by half measures: growing up in Lebanon, his biggest dream was to become a professional basketball player. By adolescence, he was the captain of a junior team in a Division One Club, which, had he forgone university, could have led him to realizing that dream. Nowadays however, he plays basketball at EPFL once a week for fun and, in the rest of his spare time he leads the Carbon Team to help solve the climate crisis. How did Karl end up on this ambitious path? He says to have been initially inspired by his French teacher: "Everything I believe in life is better thanks to him. He broke down the walls I had built around myself to feel safe and he constantly pushed me out of my comfort zone," remembers Karl. And then there is his idol, Elon Musk. "His philosophy is what motivates me to shoot for the stars. The idea that our number one concern must be to preserve consciousness, meaning to ensure that the human race endures, calls to adopting a multi-planet approach and seeing the universe as the answer. We must widen our ideas of where the solutions for our survival could be found." As you may have guessed, solving the climate crisis is only one of Karl's primary interests.

A hands-on
philosopher

Despite his tendency towards deep philosophical thought, Karl is above-all a hands-on type of guy. This might explain why he has been a part of no less than 4 MAKE projects and a student association in his not quite three years at EPFL, sometimes working on 3 such projects simultaneously. "In my first year, I built rockets with the Rocket Team and did Asclepios, A student-led analog space mission," says Karl.

He was also the leader of the flight software on the Spacecraft team, and a committee member of the Blockchain Student Association. “But I’m not interested in cryptocurrencies; more, in the idea of decentralized blockchain applications, like for example, helping places like Lebanon with governance by using decentralized tools,” he adds. In all of these endeavors, despite his young age, Karl quickly took on leadership roles. What has he learned through all his hands-on MAKE experience? “My goodness, where to start?! If I focus on the Carbon Team, it is management skills! I was leading the project alone and so I had to manage all aspects, from administration and hiring, or choosing which tools to use for communicating, project management and how to organize apéros for the team.” Karl goes on to describe all the practical engineering skills he would never have acquired with just his regular course load and also all the transversal skills required for team management.

What might come after the Carbon Team besides contributing to finding concrete solutions to the climate crisis? Karl still dreams of becoming an astronaut. “Maybe one day...” he says, with a glint in his eye. Whatever Karl decides, not even the sky will be the limit for this incredibly talented, driven and hard-working young man.



VIDEO-INTERVIEW OF KARL

go.epfl.ch/ssp-video2



EPFL Space Situational Awareness (SSA) Team



Building a catalogue that contains information on each and every discoverable object orbiting the Earth to predict, and thus avoid, disastrous collisions. This is the objective of SSA, the project that brought together Jules, Luca and Jérémy (and two other teammates) on an odyssey of discovery and many (almost) sleepless nights.

Jules Eschbach

AGE
21

COUNTRY OF ORIGIN
France

BACHELOR'S
Physics

SCIENTIFIC IDOL
James Clerk Maxwell

Jules joined the project at an early stage, when it only existed as an idea. "It was during the first Covid lockdown over two years ago. I started the project with a friend in physics and we were really given free rein to run the show and recruit students," he says. Indeed, Jules likes this independence, but what's more, he believes wholeheartedly in the mission. "I really enjoyed the feeling of being a part of something that could have a real impact for the future."

For Luca, the stakes of "space junk" are considerable for humanity. "The number and size of space junk is increasing exponentially," he explains. "We're going to have to establish laws on what we do in space, however to do that we first need to have a clear understanding of the problem: how many objects are there, where they are, how they behave and, how they evolve. This information is already being used to warn operators of potential danger, adjust trajectories and avoid collisions."

**"Space Junk":
a planetary
challenge**



Luca Hartman

AGE
23

COUNTRY OF ORIGIN
Switzerland

BACHELOR'S
Physics

SCIENTIFIC IDOL
Albert Einstein

Jeremy, the SSA team leader adds: "The problem is that over the last decades this expansion has drastically increased, society has always been interested in conquering space, but we haven't been interested in the problems that this endeavor would create." He points to the danger of space debris: "If an object, however small, hits a space station, a satellite or an astronaut, the result can be catastrophic." He explains that such space debris travels at more than 25,000 km/h in lower Earth orbit.

All three young men are aware of the valuable skills they have developed through the SSA project. For Jeremy, it is mainly a question of "thinking critically, but in a different way than how we are taught to solve an exercise. In this instance, the solution is built, not found. It doesn't previously exist". Jules will retain above all teamwork, practical experience, the testing of ideas and programming. As for Luca, among the many skills he acquired were interpersonal skills and thorough research. "All of a sudden you have to interact with a lot of different people, for example the EPFL administration, or external companies and laboratories. We deal with problems for which no one around us has the answers. So, we do a lot of research and read scientific articles. It's super interesting."



Jérémy Salm

AGE
23

COUNTRY OF ORIGIN
Switzerland

BACHELOR'S
Physics

SCIENTIFIC IDOL
Isaac Newton



VIDEO-INTERVIEW OF LUCA

go.epfl.ch/ssp-video5

What do these three young men plan to do after their Bachelor's degree? Luca and Jérémy are interested in the academic world, while Jules is very attracted to the entrepreneurial aspect that he had the opportunity to get a feel for with this project. What they have in common, besides this exceptional enterprise, is their greatest wish: to find meaning in their work.

RoboCup



Mechanical engineering has been running through Hugo's veins since he was very young, at which age he was already building all sorts of things in his grandfather's garage. His journey at EPFL illustrates his desire to study in this field and implement engineering projects.

Hugo Penichou

AGE
21

COUNTRY OF ORIGIN
France

BACHELOR'S
Mechanical
Engineering

SCIENTIFIC IDOL
James Dyson

Hugo's favorite hobby has always been to create things from scratch with his own hands. "I love making things, both mechanical and electronic. I don't know what else I could have done for a living," he says. Although he came to this realization on his own, he is inspired by people like James Dyson, the inventor and industrial designer who created the bagless vacuum cleaner. "He built over 5,000 prototypes over five years before getting it right! I admire the idea of persevering even when you've run out of resources."

When asked about his favorite place on campus, the theme of product development comes up again. "I really like the SPOT. It's the brand-new building dedicated to mechanical and electronic prototyping that opened in spring 2022. It's very cool." Hugo's fondness for making things both in and out of school is evidenced by his participation in two MAKE projects – SP80 and the EPFL Spacecraft Team. He explains that SP80 is the fastest sailing boat in the world. "With EPFL Spacecraft Team, we are working on nano-satellites to analyze the atmosphere at very high altitudes." Hugo enjoys the entrepreneurial aspect of these projects as well as their research and development dimensions.

RoboCup, Hugo's latest MAKE project, aims at creating a robot to assist with home chores.

When asked what drew him to this project, Hugo seems a bit conflicted. "I think the idea is very interesting and I wanted to try my hand at robotics." He goes on to explain that while the project was exciting at first, the challenges quickly became overwhelming. "In the beginning, you can let your imagination run wild because you don't have time constraints while you are developing a working prototype. Then the harsh reality sets in." So what were some of these challenges? "You have to be very careful not to over-engineer. You tend to be too eager to apply the theory, the beautiful concepts of the ideal world, but you quickly realize that, in the real world, you need resources, and their availability is limited." Despite the difficulties, Hugo is aware of how much he has learned through his participation in MAKE projects. "You always have to do things as simply as possible, and try not to skip any steps. Making things simply takes time!" These projects have also given Hugo concrete skills for his future career. "It prepares you for the research and development processes when making a product, and it teaches you how to divide tasks well and respect others' skills. We all have our strengths, and the secret is to use everyone's strengths to the best of one's ability in order to benefit the whole mission."

A love for
building
things



EPFL Assistive Technologies Challenge



The objective of the “EPFL Assistive Technologies Challenge” (ATC) team is to develop tailored solutions for people with disabilities to overcome a daily challenge and improve their lives. For Alec and Amaëlle, this project represents a human adventure that has changed the course of their lives.

Alec Chevrot

AGE
24

COUNTRY OF ORIGIN
France

BACHELOR'S
Mechanical
engineering

MASTER'S
Mechanical
engineering with a
minor in biomedical
technologies

FAVORITE MUSIC
French pop

For as long as he can remember, Alec always wanted to make things, to work with his hands and create a tangible end product. In the second year of his bachelor's degree, he decided to create a new MAKE project with three other people, “an enterprise related to biomechanics, which did not yet exist at EPFL.” With this goal in mind, he was introduced to the co-founders of the HackaHealth association, who aspired to implement a similar project. He joined the association of which he is the president since the summer 2022. The association organizes hackathons around projects proposed by people with disabilities. A first edition took place in 2020 with a focus on bachelor projects. The ATC 2022 edition involves 20 students and 5 “Challengers” (users) who will see their daily lives enhanced in a meaningful way. “The first person I worked with was a little boy I met on Facebook. He wanted a prosthetic to be able to hold a pole, for skiing,” he recalls. Alec is finishing his Master's this year and seems to be able to stretch time. He co-founded a start-up some 18 months ago with two other people aiming at making forearm prosthetic devices dedicated to play sports. “We have a sleeve that goes around the forearm and at its end, you can attach different modules depending on the sport you want to play.”

Amaëlle joined ATC as part of a semester project for her Master's. To the question of who inspired her to follow this path, she answers without hesitation: “It was Alec. I also launched a start-up with friends from this MAKE project, and he is a mentor in the field of biomechanics applied to disabilities; an example of what one can make possible.” Through his MAKE project, Alec has learned a lot about things that are outside the context of academic courses: “how to really listen and hear the person you have in front of you, understand them, understand their needs.” Creating design specifications with them, knowing how to iterate and adapt to their needs as they evolve. As for the start-up, the learning curve for the future is vast: “You're supposed to know how to manage a complete product development, manage the budget, place orders, anticipate deadlines and obstacles. It's on a whole new level.”

When talking about the highlights of his MAKE journey, Alec recalls, “For the first visit to the first Challenger, we had planned to stay for an hour! We ended up staying for five, had lunch together, and talked a lot, which helped break the ice. The human side is very enriching” Add to that all the touching moments he will never forget. “Every time we get videos from the users where we see the kids riding their bikes, swimming, kayaking, it's just wonderful.” In addition to the technical challenges, Alec and Amaëlle are aware that one of the biggest challenges is managing user expectations.

Transforming
lives



Amaëlle Bidet

AGE
22

COUNTRY OF ORIGIN
France

BACHELOR'S
Microtechnology

MASTER'S
Robotics with a minor
in neuroprosthetics

FAVORITE MUSIC
Urban pop

Amaëlle has always wanted to have a positive impact on the lives of those around her. “First I wanted to be a midwife, then I wanted to study political science and finally I decided to go into engineering because I wanted to have a more direct impact and be able to participate in innovation.” She shares Alec's desire to use her hands to create something real. Although she didn't see herself as an entrepreneur at first, Amaëlle became one with the start-up she created following her “transformative” experience with ATC – again in the field of disability. She beams when she tells the story of her initial financing: “It opened up a field of possibilities that seems almost infinite. While it was only a small amount, our project was legitimized, validated.” To this day, the entrepreneur despite herself finds it hard to imagine doing anything else.

And after their master's? Both want to continue their entrepreneurial adventures. Amaëlle may consider a PhD, but whatever she does, leaving her start-up is out of the question. Regardless of what the two young engineers decide to do, this MAKE project has played an integral role in realizing their dream of practicing a profession that has a positive and direct impact on the lives of others.



VIDEO-INTERVIEW
ALEC ET AMAËLLE

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Do- nors

The generosity of our community of committed donors has continued to make a significant difference to our students' lives. We are truly thankful to the following donors and partners, the alumni who responded to our first call for donations, as well as those who wish to remain anonymous, for their trailblazing support.

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Thank you

“Your support is the spark that allows us to pursue our passion through the MAKE projects. Thank you.”

“I would like to thank the donors for allowing me to be ‘just’ a student, having not to worry of anything but studying. Thanks to my scholarship, I met many friends who become close as well as bright professors and teachers. I can thus confidently call EPFL my second home.”

“I feel hugely grateful for the donor's support: indeed, being given the opportunity to study freely is an enormous privilege and thanks to my fellowship, my time at EPFL has been a truly inspiring experience.”

“Thank you for your tutoring support! In addition to helping me better understand the subject, providing motivation, guidance and support, tutors are essential to helping students succeed.”

“I believe the scholarship was what allowed me to study at EPFL. At the time of starting my Master studies, my financial independence was important to me else I would have been a huge weight on my family's financial situation, should I not have received it. I am really thankful to have had this opportunity and that so many other people are able to have it too!”

“The MAKE projects helped us to better understand our impact on society by being able to better address the needs of everyone. We are truly grateful for this. Thank you.”

“Being involved in a MAKE project was an opportunity to broaden my vision on how to handle such an interdisciplinary project. It allowed me to develop skills that nicely complement my training. Thank you.”

“Working for a MAKE project was a great opportunity to learn about the latest innovations in both research and technology. I loved being part of a dynamic team that is passionate about space! Thank you for giving us this opportunity!”

“Working in a group with other students passionate on a topic of our choice is a real privilege. I learned a lot about how a large team works and how to manage a long-term project. This is really a unique opportunity. Thank you!”

“Thank you for giving us the opportunity to teach and create such a valuable exchange with other students.”

“I thank external stakeholders for supporting MAKE projects, it is a great opportunity for students to learn how to develop solutions to problems which is the aim of any engineer.”

“I would like to warmly thank the donors. Their contributions help support the tutoring program, which brings so much to all EPFL students, both tutors and students.”

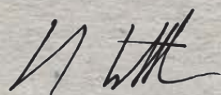
A word from the President

What a privilege it is to gain insight into the lives of those students who have benefited from the Student Support Program. I am sincerely grateful to our community of donors who have supported over 1,500 students. We had great expectations when we launched this project three years ago and I am filled with pride when reading about what our students have achieved so far, and, the great promise they demonstrate for the future.

As our campus has come back to life after a challenging pandemic period, it's been a real pleasure to feel the incredible energy and hear the hum of activity as students, professors and staff have returned to classrooms and lecture halls. The strength of the community spirit which got us through a once in a lifetime period cannot go without acknowledgment. I would like to thank our loyal partners, ambassadors, professors, staff, and, our engaged alumni for their incredible energy and vitality. You all play an important role in inspiring a new generation of responsible and creative leaders, thank you.

The Student Support Program builds on our school's strong foundations so that students have the knowledge, confidence and necessary tools to develop their full potential. The broad diversity of our student's interests, passions and talents demonstrated in this third edition of the Student Support Program Impact Report, is both humbling and exhilarating.

Thank you once again for your support. I cannot wait to see what the future holds.



Martin Vetterli
PROFESSOR & PRESIDENT

EPFL

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If you would like to know more about the Student Support Program, please contact Catherine Janssens at catherine.janssens@epfl.ch or check out our website:



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